



Literature Studies: Integration of Ecological Citizenship in Education and Public Awareness



Anggun Lestari^{*}, Afandi, Eka Ariyati

Biology Education Study Program, Faculty of Teacher Training and Education, Tanjungpura University

^{*}Email: anggunlestari221@gmail.com

DOI: <https://doi.org/10.33369/pendipa.9.3.672-681>

ABSTRACT

The worsening environmental crisis in the 21st century demands citizen awareness and responsibility in maintaining the balance of the ecosystem. Ecological citizenship is an approach that emphasizes the role of individuals in understanding, preserving, and managing the environment in a sustainable manner. This study aims to analyze various approaches in integrating the concept of ecological citizenship into education as well as raising public awareness. The method used is a literature study by analyzing as many as 23 scientific articles from various journals through the Google Scholar search menu on the Publish or Perish (PoP) application. The results of the study show that education plays an important role in building ecological awareness both through formal, non-formal, and community-based education. Technological approaches such as Virtual Reality (VR) and digital platforms have proven effective in increasing ecological understanding, while social movements and environmental policies have also strengthened the implementation of this concept. However, there are still challenges such as low community participation, lack of policy support, and limited resources. Therefore, a collaborative strategy is needed between governments, educational institutions, and communities to strengthen effective and sustainable ecological citizenship.

Keywords: Ecological Citizenship; Education; Public Awareness.

INTRODUCTION

Humans are living beings who are highly dependent on the availability of natural resources. As an integral part of the ecosystem, humans live their lives under the influence of natural phenomena and laws. But on the other hand, human activities also have a great impact on the balance of the environment. This mutual relationship creates a dynamic that continues to develop, where humans are not only influenced by the environment, but also contribute to shaping changes in the ecosystem along with the development of civilization (Sukarna, 2021).

Humans, as intelligent and adaptable beings, have the ability to improve their quality of life and pursue overall welfare. Yet, they often act without fully considering the consequences for the environment (Sukarna, 2021). Over the past two decades, intensive exploitation of natural resources has caused widespread environmental degradation. Major challenges today include water, air, and soil pollution, deforestation, and

climate change, all posing significant threats to human survival and the sustainability of ecosystems (Santoso et al., 2024).

The worsening environmental crisis in the 21st century demands a higher awareness of every individual to be responsible for the environment. This lack of awareness is one of the main factors causing various ecological disasters. To overcome complex environmental problems, individuals who have an understanding and concern for ecosystem sustainability are needed. One of the solutions that can be applied is wise environmental management based on an understanding of the impact of human activities on nature (Zulfa et al., 2016).

Every individual as a citizen has rights as well as responsibilities in maintaining environmental sustainability and balance. The main right that must be accepted by every citizen is access to quality education and a decent and dignified life. On the other hand, citizens also have an obligation to obey and comply with all

applicable laws and regulations as a form of active contribution to maintaining the order and sustainability of the country (Izzati & Novitasari, 2023).

Education as a cultural action is not limited to classroom learning, but covers various levels, both formal, informal, and informal. Educated citizens contribute to the progress of the nation through the formation of mentality, character, and integrity that support a harmonious and prosperous life (Nurdiansyah & Komalasari, 2023). The right to education also includes environmental learning, such as the concept of ecological citizenship which is one of the approaches to be applied in increasing environmental awareness and carrying out its obligations, namely individual responsibility in preserving nature.

Ecological citizenship is related to the status, rights, and participation of citizens in protecting the environment (Crane et al., 2008). By applying this concept, individuals not only have an awareness of the importance of the environment, but are also active in various ecosystem preservation efforts. According to Godrej (2012), ecological citizenship emphasizes the responsibility and active involvement of individuals in maintaining a balance between humans and the environment. The implementation of this concept not only has a positive impact on the ecosystem, but also contributes to the creation of social justice and the well-being of the global community.

Although the concept of ecological citizenship offers solutions to environmental problems, its implementation still faces various obstacles, such as lack of integration in the education system, lack of policy support, and low community participation in efforts to protect the environment. To overcome these obstacles, a multidisciplinary approach is needed that includes the integration of environmental education in the curriculum, community-based programs, and policy support that encourages environmentally friendly behavior.

The urgency of this article lies in the increasing global environmental crisis that requires the active involvement of all elements of society, including the world of education, in forming a more responsible mindset and behavior towards the environment. Without

awareness and active participation from the community, environmental conservation efforts will be difficult to achieve optimally. The purpose of this study is to review various scientific articles related to approaches and strategies in integrating the concept of ecological citizenship into education and raising public awareness to form more environmentally responsible individuals.

RESEARCH METHODS

This research is a library research or literature study. According to Melinda & Zainil (2020), literature study is a research method that collects data and information from written sources such as books, scientific articles, journals, and relevant documents. It allows researchers to understand problems deeply through analysis of existing sources, forming a strong basis for scientific development. Literature studies involve examining references that support the research and serve as an initial step in research planning, enabling data collection without direct field observation (Nurjanah & Mukarromah, 2021).

This study utilizes secondary data as a source of information. According to (Sugiyono, 2022), secondary data refers to information obtained indirectly, namely through other parties or written documents. Meanwhile, Sidiq & Choiri (2019) stated that secondary data is obtained from results that have been collected by other parties, so researchers can simply analyze or reprocess the findings. In the context of this study, the secondary data used came from scientific articles published in journals and proceedings at the national level.

Documentation techniques are used in the data collection process. According to Sidiq & Choiri (2019), this technique involves tracing information related to certain variables which can be in the form of scanned documents such as notes, transcripts, or books for in-depth analysis. In accessing secondary data, researchers use the help of the Publish or Perish (PoP) application, which functions to search and select reference sources from a number of databases such as Google Scholar and Scopus (Maulyda et al., (2022). The use of this application allows researchers to conduct literature reviews in a

more structured and efficient manner in the preparation of scientific articles (Saputro, 2022).

The data collection process is carried out through several stages. The first stage was an article search using the keyword "ecological citizenship" via Google Scholar on the Publish or Perish (PoP) application, yielding 720 articles. Screening was then done by selecting articles published within the last eight years and discussing ecological citizenship. In the final stage, the selection focused on articles relevant to supporting theories of ecological citizenship in

education and the community, resulting in 23 scientific articles.

RESULTS AND DISCUSSION

A total of 23 scientific articles discussing approaches and strategies in integrating the concept of ecological citizenship have been collected and analyzed. The results of the analysis of each article are presented in Table 1, with each article coded to facilitate analysis in the discussion.

Table 1. Results of article scientific analysis

Code	Article Title & Author	Goal	Research Results
A1	<i>Membentuk Kewarganegaraan Ekologis melalui Pendidikan Lingkungan berbasis Kegiatan Masyarakat</i> (Nurdiansyah & Komalasari, 2023)	Community	Community-based environmental education increases people's concern for their surroundings and helps shape ecological citizenship. Participation through planting, maintaining cleanliness, and mutual cooperation reflects civic engagement and shared responsibility.
A2	<i>Pendidikan Kewarganegaraan Ekologis sebagai Upaya Pembangunan Berkelanjutan (SDGs) di Indonesia</i> (Santoso et al., 2024)	Students and teachers	Civic ecological education in Indonesia still faces major obstacles. Teachers struggle with low participation from school members, curriculum inconsistencies that do not fully support environmental education, and limited government support in terms of policies and facilities.
A3	<i>Pendekatan Pedagogic dan Skema Pembelajaran Pendidikan Kewarganegaraan untuk Mempromosikan Kewarganegaraan Ekologi</i> (Artina & Amin, 2024)	Students and teachers	The right pedagogy strengthens ecological citizenship through place-based, problem-based, environmental justice, and participatory approaches, with six stages: inquiry, planning, engagement, participation, sustainability, and reflection.
A4	<i>Refleksi terhadap Kewarganegaraan Ekologis dan Tanggung Jawab Warga Negara Melalui Program Ecovillage</i> (Halimah & Nurul, 2020)	Community	The Ecovillage program increases ecological awareness but faces obstacles such as low participation and lack of environmental education. The main challenge is the community's mindset. Solutions include community-based education, government communication, curriculum integration, and support from stakeholders.
A5	<i>Implementasi Karakter Peduli Lingkungan Sungai Berbasis Kewarganegaraan Ekologis Melalui Program Adiwiyata di Sekolah Dasar</i> (Fahlevi et al., 2020)	Students and teachers	The Adiwiyata program integrates environmental awareness into the school's vision, mission, and curriculum. Extracurriculars (scouting, river cleanliness) and eco-friendly facilities (bins, waste treatment) support ecological citizenship, though further optimization is needed for sustainability.

A6	Menciptakan <i>Kewarganegaraan Ekologis di Era Digital Melalui Kampoeng Recycle Jember</i> (Jannah, 2018)	Community	Kampoeng Recycle Jember builds ecological citizenship through eco-structures, eco-literacy, and eco-preneurship. Youth involvement, social media, and the internet boost participation in waste management and environmental conservation.
A7	Ecological Citizenship Based on Green Constitution through Environmental Education (Pudjiastuti et al., 2024)	Students, teachers and the community	The Green Constitution strengthens ecological citizenship by raising awareness of environmental rights and responsibilities. Challenges: limited education, weak law enforcement, and economic-environmental conflicts. Solutions: inclusive education, educator capacity building, and multi-stakeholder collaboration.
A8	<i>Gerakan Kewarganegaraan Ekologis sebagai Upaya Pembentukan Karakter Peduli Lingkungan</i> (Gusmadi & Samsuri, 2019)	Students and the community	The ecological citizenship movement involves post-mining reclamation, mangrove planting, opposition to mining and industrial forests, and waste care (cleanups, bins, recycling). Environmental care is fostered through school and community education, law enforcement, and social media campaigns.
A9	Engaging Learning for Environmental Awareness: Integrating Virtual Reality in Ecological Citizenship Education (Nugroho & Casmana, 2025)	Students and lecturers	Using VR in ecological citizenship learning improves students' understanding and awareness of environmental issues. Simulations of deforestation, pollution, and climate change build empathy and responsibility. Challenges: limited infrastructure, low lecturer skills, and weak curriculum integration.
A10	<i>Penguatan Kompetensi Kewarganegaraan Ekologis Melalui Pembelajaran Berbasis Web D'nature pada Mata Kuliah Pendidikan Kependudukan dan Lingkungan Hidup</i> (Rini et al., 2021)	Students and lecturers	The D'Nature website in PKLH learning improves students' understanding of ecological citizenship and conservation. Pre- and post-tests show significant gains, with high enthusiasm and participation. Challenges: limited lecturer interaction and access to technology.
A11	<i>Gambaran Kewarganegaraan Ekologis</i> (Putri et al., 2023)	Community	The people of Jakarta have fairly high environmental awareness but are reluctant to act. Some maintain cleanliness, but many wait for encouragement. Environmental damage comes from vehicle pollution, poor waste management, and lack of government socialization.
A12	<i>Penguatan Kewarganegaraan Ekologis Melalui Pemberdayaan Masyarakat dalam Pengelolaan Bank Sampah</i> (Subarkah et al., 2024)	Community	Community empowerment in waste banks boosts ecological awareness and welfare through the 5P strategy and 4 stages of ecological citizenship: knowledge, skills, attitudes, participation. Challenges: limited funds, resources, community involvement.
A13	<i>Hambatan Ecological Citizenship bagi Kelompok Dasawisma di</i>	Community	Implementation of ecological citizenship in the Dasawisma group is limited by low

	<i>Nagari Toboh Ketek, Padang Pariaman</i> (Anisa et al., 2025)		environmental knowledge, lack of land-use innovation, and imbalance of rights and responsibilities. Participation in gardening and cooperation remains low due to time constraints and limited collective awareness.
A14	<i>Strategi Kepala Sekolah dalam Penguatan Kewarganegaraan Ekologis</i> (Rustiya & Sutrisno, 2024)	Students and teachers	The principal's strategy includes an eco-based vision, ecological education, and programs like Clean Friday, tree planting, and waste management. Supported by the school community but hindered by littering and cultural differences.
A15	<i>Workshop Melukis Tema Literasi Budaya Sungai Berbasis Kewarganegaraan Ekologis Bagi Remaja di Kota Banjarmasin</i> (Sarbaini & Fahlevi, 2023)	Community	Ecological citizenship-based painting workshop raises youth awareness about river ecosystems. Participants were enthusiastic in learning to identify environmental problems and express concern through art. Painting exhibitions are also an educational medium for the community.
A16	Profile of Ecological Citizenship of the Deli Riverbank Community in Managing the Deli River (Rizki et al., 2023)	Community	Public awareness of ecological citizenship is low, with high water pollution from industrial and household waste. Participation in conservation is limited despite government efforts. Main obstacles are poor coordination and low collective awareness.
A17	<i>Penguatan Ecological Citizenship Kelompok Anti Tambang Pasir dalam Pemenuhan HAM Lingkungan pada Masyarakat Desa Selok Awar-Awar Lumajang</i> (Kemal & Setyowati, 2023)	Community	Anti-mining groups raise ecological awareness through the BISA movement, environmental education, and anti-mining campaigns. Supported by government and community, illegal mines were closed and rehabilitated with mangroves and sea spruce. People shifted to microbusinesses and tourist villages.
A18	<i>Sosialisasi Ecological Citizenship sebagai Suatu Urgensi Pembentukan Karakter Peduli Lingkungan Warga Negara</i> (Binsasi & Korbaffo, 2022)	Students and teachers	Socializing Ecological Citizenship increases teachers' and students' understanding of environmental care, reflected in the school's vision, cleanliness, and conservation habits. Challenges include limited initial understanding and weak environmental protection habits.
A19	<i>Kelestarian Lingkungan Hutan Berbasis Ecological Citizenship di Desa Sumberjo Kecamatan Widang Kabupaten Tuban</i> (Kurniasari & Suwanda, 2022)	Community	Despite efforts with seeds, logging, and socialization, ecological citizenship in Sumberjo Village remains weak due to low awareness (land clearing, littering, water exploitation), compounded by weak law enforcement and lack of community responsibility.
A20	<i>Penguatan Partisipasi Warga Banua Melalui Prinsip Ecological Citizenship pada Program Kampung Iklim untuk Mewujudkan Ketahanan Lingkungan Lahan Basah Berkelanjutan</i> (Suroto et al., 2021)	Community	The Climate Village program promotes wetland protection through education, cooperation, and partnerships. Strategies: capacity building, green technology, and community leadership. Challenges: limited funding, weak coordination, and weather factors.
A21	<i>Tingkat Kompetensi</i>	Teachers	PPKn teachers' ecological citizenship is

	<i>Kewarganegaraan Ekologis Guru Pendidikan Pancasila dan Kewarganegaraan di Sekolah Menengah Pertama</i> (Sarbaini & Fahlevi, 2023)		moderate to low, especially in pro-environmental attitudes and actions. Despite understanding environmental issues, teachers are less active in ecological practices. Main obstacles are limited training, curriculum, and integration of environmental education.
A22	<i>Penguatan Kewarganegaraan Ekologis Untuk Mewujudkan Ketahanan Lingkungan (Studi di Kampung Gambiran, Kelurahan Pandeyan, Kecamatan Umbulharjo, Kota Yogyakarta, Daerah Istimewa Yogyakarta)</i> (Sari et al., 2020)	Community	Strengthening ecological citizenship in Gambiran Village is done through river management, tree planting, waste management, WWTP, RTH, and alternative energy. It benefits the environment, society, and economy but is hampered by low public concern and limited youth involvement.
A23	<i>Konfigurasi Pendidikan Kewarganegaraan Ekologi Perspektif sosio-kultural (Gagasan Pembentukan Pendidikan Kewarganegaraan Kontium Maksimal di Indonesia)</i> (Mustikarini & Feriandi, 2020)	Community	Ecological citizenship education is applied through Corporate Citizenship, community activities using media, and local cultural approaches to instill ecological values. Formal environmental education remains limited and slow to show real impact.

The rapid progress of the world and technology today goes hand in hand with the demand for innovation that continues to grow in various sectors of life, ranging from economic, social, to cultural. In this context, education plays a very important and strategic role as the main means in shaping and improving the quality of adaptive and competitive human resources. Through a continuous education process, it is hoped that knowledge and skills can be honed and developed optimally, both at the individual and collective levels, so that they can be a strong provision in facing various challenges and dynamics that arise in the current era of globalization (Ni'mah, 2020).

One of the important aspects that needs to be developed through education is the awareness of ecological responsibility as part of the character of citizenship. Ecological citizenship emphasizes the responsibility of citizens in protecting the environment through an understanding of ecological issues, rights, and obligations in nature conservation (Jannah, 2018). However, its implementation is often hampered by the concept of liberalism that encourages the exploitation of nature for the benefit of individuals and power. This is contrary to the principle of ecological citizenship which prioritizes a balance between humans and nature.

To overcome these problems, education plays an important role in transforming society towards a sustainable lifestyle with ecological awareness as part of ethics and morals in managing the environment (Raus, 2017).

Based on the results of the analysis of 23 scientific articles, several similarities were found in the ecological citizenship approach. Most studies highlight the importance of education in shaping ecological awareness. If education is seen as a process of cultivation, then its role is not only limited to learning activities in the classroom. Therefore, education for citizens needs to be carried out at various levels, including formal, non-formal, and informal pathways (Nurdiansyah & Komalasari, 2023). Community participation is also a major factor in supporting the success of various environmental programs. However, the implementation of ecological citizenship still faces the same challenges, such as low public awareness, lack of policy support, and limited human resources and infrastructure.

Approaches to building ecological citizenship vary according to the goals and methods used. Technological approaches, such as the use of Virtual Reality (VR) and the D'Nature web platform (A9, A10), are used to improve students' and lecturers' understanding of environmental issues through interactive

simulations and web-based learning. Meanwhile, the integration of environmental education in schools is the focus of articles A2, A3, A5, A14, A18, and A21, which discuss the application of ecological citizenship in the curriculum, pedagogical strategies, and Adiwiyata programs.

The Adiwiyata program itself emphasizes two main principles, namely participation involving all school residents, and sustainability through environmental conservation efforts that are carried out in a sustainable manner (Indrianeu, 2020). In practice, the role of teachers is very important to improve students' competence in understanding and applying the concept of environmental sustainability. Ecological citizenship is not only the responsibility of PPKn teachers, but also all teachers, including science and biology teachers, to strengthen students' scientific understanding. Although limited resources are often an obstacle, teachers are still required to instill values and set simple examples, such as disposing of garbage in its place (Santoso et al., 2024).

Karatekin & Uysal (2018) also affirm that responsibility, justice, sustainability, and participation are important indicators of ecological citizenship. In the face of a complex ecological crisis, this approach is an important strategy to form a generation of agents of change. Humans as the main agents of change must act immediately, as ecological citizenship can be a real solution to address the global environmental crisis (Park & Kim, 2020). This is supported by ecological citizenship that is in line with the vision of the SDGs, especially in emphasizing environmental concern as part of sustainable development. Of the 17 goals, one of them is in Goal 13 which emphasizes the importance of handling climate change (Santoso et al., 2022).

Community-based environmental education, alongside schools, fosters ecological citizenship. Articles A1, A4, A6, A12, A15, A16, and A22 highlight programs like Ecovillage, Kampoeng Recycle, waste banks, and climate villages, promoting active community involvement in sustainability. Ecological citizenship is also reinforced through social movements and environmental policies, as shown in articles A7, A8, A11, A17, A19, and A20. Initiatives such as the Green Constitution, post-mining reclamation, and waste management demonstrate that

collective community action can drive environmental change.

Despite ongoing efforts, challenges in implementing ecological citizenship remain. Articles A13, A16, and A19 identify obstacles such as low public awareness, limited land-use innovation, and weak environmental law enforcement. Multidisciplinary and socio-cultural perspectives also play a key role. Article A23 shows that Corporate Citizenship and local values can educate people to care for the environment. The effectiveness of these approaches is reflected in varying ecological awareness across different groups.

The analysis shows varying levels of ecological citizenship awareness. High awareness occurs in communities active in environmental programs, like Kampung Hijau Yogyakarta and the Anti-Sand Mining Movement. Moderate awareness is seen in individuals who understand ecological concepts but are less active, such as participants in the River Literacy Workshop and school socializations. Low awareness is found in polluted areas with minimal participation, like the Deli River Community and Sumberjo Village, needing more education and involvement. Awareness is influenced by education, community participation, and economic status, with wealthier people being more environmentally active while those with limited resources focus on basic needs, often overlooking sustainability (Legionosuko et al., 2019).

The role of media and technology in building ecological awareness is increasing. The use of social media, documentaries, and digital campaigns has proven effective in reaching a wide audience and building collective awareness. Social media plays a role in disseminating environmental information and encouraging community participation in ecological actions. Digital strategies such as webinars, blogs, and educational content on YouTube and Instagram are increasingly popular as an interactive and accessible means of learning ecological citizenship. According to Jannah (2018), emphasizing that the more digital platforms that discuss environmental issues, it will open up greater opportunities to campaign for environmental care movements. With wide

access, social media and digital technology can be effective tools to support environmental education and raise awareness of ecological citizenship at various levels of society.

Some of the challenges in implementing ecological citizenship include the lack of continuous education, weak regulations, and the lack of supporting infrastructure. To overcome these challenges, strategies that have been discussed previously are needed such as raising awareness through community-based education, integrating ecological values in the curriculum, and collaboration between the government, the business world, and the community. Synergy between education, policy, technology, economics, and active community participation is essential in building a stronger and more sustainable ecological citizenship. With the various approaches used, although different in the method of implementation, the main goal remains the same, which is to increase public awareness and responsibility towards the environment. This is in line with the opinion of Smith & Pangsa (2008), ecological citizenship does not only focus on direct action, but also involves awareness and responsibility as citizens to actively participate in maintaining environmental sustainability through education, policy, and social engagement.

CONCLUSION

Ecological citizenship shapes environmentally conscious individuals through education, policy, and community participation. It is applied via curriculum integration, community programs, and technology use. Challenges include low public awareness, limited policy support, and scarce resources. Effective ecological citizenship requires synergy between government, schools, communities, and the private sector to enhance education, strengthen policies, and encourage participation. Sustainable efforts can instill ecological awareness in daily life, fostering a balance between humans and nature for environmental sustainability.

REFERENCES

Anisa, L., Muchtar, H., Moeis, I., & Bakhtiar, Y. (2025). Hambatan Ecological Citizenship bagi Kelompok Dasawisma di Nagari Toboh Ketek, Padang Pariaman. *JECCO: Journal*

of Education, Cultural and Politics, 5(1), 15–23.

Artina, F., & Amin, M. (2024). Pendekatan Pedagogic dan Skema Pembelajaran Pendidikan Kewarganegaraan untuk Mempromosikan Kewarganegaraan Ekologi. *Jurnal Humanitas Katalisator Perubahan Dan Inovator Pendidikan*, 10(3), 372–388.

<https://doi.org/10.29408/jhm.v10i3.26431>

Binsasi, H., & Korbaffo, Y. S. (2022). Sosialisasi Ecological Citizhenship sebagai Suatu Urgensi Pembentukan Karakter Peduli Lingkungan Warga Negara. *Beru'-Beru': Jurnal Pengabdian Kepada Masyarakat*, 1(1), 15–21.

Crane, A., Matten, D., & J, M. (2008). Ecological Citizenship and the Corporate. *Organization and Environment*, 21(4), 371–389.

Fahlevi, R., Jannah, F., & Sari, R. (2020). Implementasi Karakter Peduli Lingkungan Sungai Berbasis Kewarganegaraan Ekologis Melalui Program Adiwiyata di Sekolah Dasar. *Jurnal Moral Kemasyarakatan*, 5(2), 68–74.

<https://doi.org/10.21067/jmk.v5i2.5069>

Godrej, F. (2012). Ascetics, Warriors, and a Gandhian Ecological Citizenship. *Political Theory*, 40(4), 437–465.

Gusmadi, S., & Samsuri, S. (2019). Gerakan Kewarganegaraan Ekologis sebagai upaya Pembentukan Karakter Peduli Lingkungan. *Jurnal Ilmiah Pendidikan Pancasila Dan Kewarganegaraan*, 4(2), 381–392. <https://doi.org/10.17977/um019v4i2p381-391>

Halimah, L., & Nurul, S. F. (2020). Refleksi Terhadap Kewarganegaraan Ekologis dan Tanggung Jawab Warga Negara Melalui Program Ecovillage. *Jurnal Civics: Media Kajian Kewarganegaraan*, 17(2), 142–152. <https://doi.org/10.21831/jc.v17i2.28465>

Indrianeu, T. (2020). Model Sekolah Adiwiyata dalam Meningkatkan Kepedulian Warga Sekolah terhadap Lingkungan di SMP Negeri 10 Tasikmalaya. *Geography Science Education Journal (GEOSSE)*, 1(1), 14–20. <http://jurnal.unsil.ac.id/index.php/geossee/index>

Izzati, F. A., & Novitasari, N. (2023).

- Harmonisasi Hak dan Kewajiban Mewujudkan Warga Negara Bertanggung Jawab (Civic Responsibility). *Jurnal Kalacakra: Ilmu Sosial Dan Pendidikan*, 4(1), 1–6. <https://doi.org/10.31002/kalacakra.v4i1.7379>
- Jannah, R. (2018). Menciptakan Kewarganegaraan Ekologis di Era Digital Melalui Kampoeng Recycle Jember. *Journal of Urban Sociology*, 1(2), 14–26.
- Karatekin, K., & Uysal, C. (2018). Ecological citizenship scale development study. *International Electronic Journal of Environmental Education*, 8(2), 82–104.
- Kemal, K. P., & Setyowati, R. R. N. (2023). Penguatan Ecological Citizenship Kelompok Anti Tambang Pasir dalam Pemenuhan HAM Lingkungan pada Masyarakat Desa Selok Awar-Awar Lumajang. *Kajian Moral Dan Kewarganegaraan*, 11(1), 306–319. <https://doi.org/10.26740/kmkn.v11n1.p306-319>
- Kurniasari, H., & Suwanda, I. M. (2022). Kelestarian Lingkungan Hutan Berbasis Ecological Citizenship di Desa Sumberjo Kecamatan Widang Kabupaten Tuban. *Kajian Moral Dan Kewarganegaraan*, 10(1), 79–98. <https://doi.org/10.26740/kmkn.v10n1.p79-98>
- Legionosuko, T., Madjid, M. A., Asmoro, N., & Samudro, E. G. (2019). Posisi dan Strategi Indonesia dalam Menghadapi Perubahan Iklim guna Mendukung Ketahanan Nasional. *Jurnal Ketahanan Nasional*, 25(3), 295. <https://doi.org/10.22146/jkn.50907>
- Maulyda, M. A., Nurhasanah, N., Umar, U., Erfan, M., & Oktaviyanti, I. (2022). Workshop Implementasi Software Publish or Perish (Pop) Untuk Meningkatkan Kualitas Rujukan Tugas Akhir Mahasiswa Pgsd. *Jurnal Pendidikan Dan Pengabdian Masyarakat*, 5(4), 423–430. <https://doi.org/10.29303/jppm.v5i4.4314>
- Melinda, V., & Zainil, M. (2020). Penerapan Model Project Based Learning untuk Meningkatkan Kemampuan Komunikasi Matematis Siswa Sekolah Dasar (Studi Literatur). *Jurnal Pendidikan Tambusai*, 4(2), 1526–1539. <https://doi.org/10.31004/jptam.v4i2.618>
- Mustikarini, I. D., & Feriandi, Y. A. (2020). Konfigurasi Pendidikan Kewarganegaraan Ekologi Perspektif sosio-kultural (Gagasan Pembentukan Pendidikan Kewarganegaraan Kontium Maksimal di Indonesia). *JPK: Jurnal Pancasila Dan Kewarganegaraan*, 5(2), 54–64. <https://doi.org/10.24269/jpk.v5.n2.2020.pp54-64>
- Ni'mah, N. (2020). Peningkatan Hasil Belajar Pendidikan Kewarganegaraan melalui Metode Pembelajaran Inquiry Based Learning di Madrasah Tsanawiyah Negeri Palopo. *Didaktika: Jurnal Kependidikan*, 9(4), 463–468. <https://doi.org/10.58230/27454312.60>
- Nugroho, D. A., & Casmana, A. R. (2025). Engaging Learning for Environmental Awareness : Integrating Virtual Reality in Ecological Citizenship Education. *Journal of Moral and Civic Education*, 9(1), 36–47.
- Nurdiansyah, E., & Komalasari, K. (2023). Membentuk Kewarganegaraan Ekologis melalui Pendidikan Lingkungan berbasis Kegiatan Masyarakat. *Jurnal Ilmiah Pendidikan Lingkungan Dan Pembangunan*, 24(01), 42–49. <https://doi.org/10.21009/plpb.v24i01.31844>
- Nurjanah, N. E., & Mukarromah, T. T. (2021). Pembelajaran Berbasis Media Digital pada Anak Usia Dini di Era Revolusi Industri 4.0 : Studi Literatur. *Jurnal Ilmiah Potensi*, 6(1), 66–77. <https://ejournal.unib.ac.id/index.php/potensi>
- Park, W. Y., & Kim, C. J. (2020). The Impact of Project Activities on the Cultivation of Ecological Citizenship in a High School Climate Change Club. *Asia-Pacific Science Education*, 6(1), 41–69. <https://doi.org/10.1163/23641177-BJA00005>
- Pudjiastuti, S. R., Saryono, & Hardianto, L. (2024). Ecological Citizenship Based on Green Constitution through Environmental Education. *Jurnal Ilmu Pendidikan (JIP) STKIP Kusuma Negara*, 16(1), 132–140. <https://doi.org/10.37640/jip.v16i1.2088>

- Putri, M., Putri, C. T., Prahayuningtyas, F., Umboh, P. T. G., & Tumanggor, R. O. (2023). Gambaran Kewarganegaraan Ekologis. *Journal of Social and Economics Research*, 5(2), 551–560. <https://idm.or.id/JSER/index>.
- Raus, R. (2017). Student Teacher Ecological Self in the Context of Education for Sustainable Development: A Longitudinal Case Study. *Journal of Education for Sustainable Development*, 11(2). <https://doi.org/10.1177/0973408218779283>
- Rini, S., Alfiandra, Mariyani, & Erlangga. (2021). Penguatan Kompetensi Kewarganegaraan Ekologis Melalui Pembelajaran Berbasis Web D'nature Pada Mata Kuliah Pendidikan Kependudukan Dan Lingkungan Hidup. *Citizenship Jurnal Pancasila Dan Kewarganegaraan*, 9(1), 17–22. <http://e-journal.unipma.ac.id/index.php/citizenship/article/view/9066>
- Rizki, F., Berlian, R., Manurung, E., Amanda, F., Lidya, R., Wuwu, A. F., & Rachman, F. (2023). Profile of Ecological Citizenship of the Deli Riverbank Community in Managing the Deli River. *EDUMASPUL: Jurnal Pendidikan*, 7(2), 4045–4050.
- Rustiya, S. A., & Sutrisno. (2024). Strategi Kepala Sekolah dalam Penguatan Kewarganegaraan Ekologis. *Jurnal Ilmu Pendidikan Dan Kearifan Lokal (JIPKL)*, 4(2), 129–140.
- Santoso, R., Khotimah, K., Opeska, Y., Sasih, A. W., & Dewi, N. (2024). Pendidikan Kewarganegaraan Ekologis Sebagai Upaya Pembangunan Berkelanjutan di Indonesia. *Jurnal Citizenship: Media Publikasi Pendidikan Pancasila Dan Kewarganegaraan*, 7(2), 8–15.
- Santoso, R., Ratnawati, H., & Riyanti, D. (2022). Klusterisasi Tingkat Deforestasi: Ekologi Kewarganegaraan Indonesia. *Indonesian Journal of Conservation*, 11(1), 34–38. <https://doi.org/10.15294/ijc.v11i1.35941>
- Saputro, B. I. (2022). Analisis Sitasi pada Jurnal Berkala Arkeologi Menggunakan Aplikasi “Publish or Perish.” *Daluang: Journal of Library and Information Science*, 2(2), 23–30. <https://doi.org/10.21580/daluang.v2i2.2022>.
- 13114
- Sarbaini, & Fahlevi, R. (2023). Workshop Melukis Tema Literasi Budaya Sungai Berbasis Kewarganegaraan Ekologis Bagi Remaja di Kota Banjarmasin. *Jurnal Pengabdian Kepada Masyarakat*, 3(2), 148–153.
- Sari, S. C. W., Samsuri, S., & Wahidin, D. (2020). Penguatan Kewarganegaraan Ekologis untuk Mewujudkan Ketahanan Lingkungan (Studi di Kampung Gambiran, Kelurahan Pandeyan, Kecamatan Umbulharjo, Kota Yogyakarta, Daerah Istimewa Yogyakarta). *Jurnal Ketahanan Nasional*, 26(1), 87–107. <https://doi.org/10.22146/jkn.53816>
- Sidiq, U., & Choiri, M. M. (2019). *Metode Penelitian Kualitatif di Bidang Pendidikan*. Ponorogo: CV. Nata Karya.
- Smith, M. J., & Pangsa, P. (2008). *Environment & Citizenship: Integrating Justice, Responsibility, and Civic Engagement*. London: Zed Books.
- Subarkah, A. M., Cahyono, H., & Sutrisno. (2024). Penguatan Kewarganegaraan Ekologis Melalui Pemberdayaan Masyarakat dalam Pengelolaan Bank Sampah. *Qualitative Research of Business and Social Sciences*, 1(2), 75–86. <https://doi.org/10.18280/crobss.v1i2.6497>
- Sugiyono. (2022). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Sukarna, R. M. (2021). Interaksi Manusia dan Lingkungan dalam Perspektif Antroposentrisme, Antropogeografi dan Ekosentrisme. *Hutan Tropiki*, 16(1), 83–100. <https://e-journal.upr.ac.id/index.php/JHT>
- Suroto, S., Ari Nugroho, D., & Amelia Rafiah, R. (2021). Penguatan Partisipasi Warga Banua Melalui Prinsip Ecological Citizenship pada Program Kampung Iklim untuk Mewujudkan Ketahanan Lingkungan Lahan Basah Berkelanjutan. *PINUS: Jurnal Penelitian Inovasi Pembelajaran*, 7(1), 59–70. <https://doi.org/10.29407/pn.v7i1.16393>
- Zulfa, V., Max, M., Hukum, I., & Ilyas, I. (2016). Isu-Isu Kritis Lingkungan dan Perspektif Global. *Jurnal Green Growth Dan Manajemen Lingkungan*, 5(1), 29–40. <https://doi.org/10.21009/jgg.051.03>