



Exploration of Local Wisdom of West Borneo in Chemistry Learning for Cultivating National Character

Agung Hartoyo¹, Hairida^{2*}

¹ (Elementary Education, Tanjungpura University, Indonesia).

² (Chemistry Education, Tanjungpura University, Indonesia).

* Corresponding Author. E-mail: hairida@fkip.untan.ac.id

Receive: 17/12/2023

Accepted: 15/01/2024

Published: 01/03/2024

Abstrak

Kearifan lokal di Kalimantan Barat memiliki potensi besar untuk diintegrasikan dalam pembelajaran kimia. Dalam mengimplementasikan kearifan lokal pada pembelajaran kimia, diperlukannya pemahaman mengenai nilai-nilai budaya lokal yang berkaitan dengan ilmu kimia. Tujuan dari penelitian ini ialah untuk mengeksplorasi kearifan lokal Kalimantan Barat yang dapat diterapkan dalam pembelajaran kimia serta diharapkan dapat memberikan dorongan bagi pendidik kimia dalam mengimplementasikan kearifan lokal yang dituang pada rancangan pembelajarannya. Metode yang digunakan ialah deskripsi kualitatif dengan jenis penelitian literature review. Hasil penelitian diperoleh bahwa Kalimantan Barat memiliki kearifan lokal yang dapat diintegrasikan dalam pembelajaran kimia seperti penggunaan tanaman sebagai zat pewarna, obat tradisional, makanan tradisional, maupun budaya meriam karbit. Penanaman karakter dan nilai-nilai budaya lingkungan sekitar sebagai penguatan profil pelajar Pancasila melalui pengintegrasian nilai-nilai kearifan lokal merupakan langkah yang tepat.

Kata Kunci: Kearifan Lokal, Kalimantan Barat, Pembelajaran Kimia

Abstract

Local wisdom in West Kalimantan has great potential to integrated into chemistry lessons. In implementing local wisdom in chemistry lessons, an understanding of the cultural values related to the science of chemistry is needed. The purpose of this research is to explore the local wisdom of West Kalimantan that can be applied in chemistry lessons and to provide encouragement for chemistry educators to implement local wisdom in their lesson plans. The method used is qualitative description with a literature review research design. The research findings reveal that West Kalimantan has local wisdom that can be integrated into chemistry lessons, such as using plants as dyes, traditional medicines, traditional foods, and the culture of Meriam Karbit (carbit cannon). Cultivating character and environmental cultural values as reinforcement for the profile of Pancasila students through integrating of local wisdom values is an appropriate step.

Keywords: Local wisdom, West Borneo, Chemistry Lessons

Introduction

Local wisdom is an invaluable asset possessed by a community. Local wisdom is defined as knowledge believed and preserved by a community closely related to its culture and customs, which can include natural and human potentials, norms, and the traditions of a particular region [1]. Local wisdom is a concept, habit, daily activity, culture, geography, basic knowledge, and excellence that develops within the scope of the local community to maintain the harmony of nature. Local wisdom reflects the cultural identity of a community that impacts the development of knowledge and serves as an alternative solution to global challenges (Hairida & Setyaningrum, 2020). Local wisdom plays a role as a means to address the living needs of the community and to preserve local culture against foreign cultures [3]. Therefore, local wisdom can be interpreted as knowledge about ideas, habits, local excellence related to culture, norms, and traditions to preserve inherited traditions.

West Borneo is rich in local wisdom that refers to the cultural heritage of ancestors. However, with the rapid advancement of technology and the influence of foreign cultures, the values of local culture in West Borneo are eroding among the younger generation [4]. Therefore, it is important to pay special attention to the understanding of local culture in West Borneo among the younger generation through education by incorporating components of local wisdom into the learning process. Local wisdom can be implemented in various subjects in schools as a means to enrich and contextualize learning [3]. Based on the research of Hairida & Setyaningrum (2020), the implementation of local wisdom in science education, in particular, has not been comprehensive. This is because the learning that takes place tends to focus on concepts and general knowledge often

taken from global or national contexts. Additionally, the student's lack of concern for the surrounding environment, their limited creativity in connecting assignments to their surroundings, and their lack of responsibility for the tasks assigned are factors that affect the local excellence directly related to the local area being overlooked [2], [5].

Chemistry learning is closely related to real-life situations, and its knowledge is acquired through the principles of the scientific method, including observation, verification, and experimentation [6], [7]. Chemistry learning has three characteristics: microscopic, sub-microscopic, and symbolic. These three characteristics are expected to be mastered by students enable them to implement chemical knowledge in their daily lives [8]. Chemistry is a subject that can be integrated with local wisdom in terms of culture, such as the use of natural dyes, traditional food processing techniques, and the use of medicinal plants. Integrating learning with local excellence that is closely related to daily life can provide meaningful learning experiences, thereby enhancing students' learning motivation [9].

Based on the research findings [10], [11], it is concluded that linking learning with local wisdom can enhance scientific literacy skills and critical thinking skills needed in the era of Industry 4.0 and Society 5.0. The integration of local wisdom in learning aligns with one of the characteristics of the independent curriculum, namely Culturally Responsive Teaching (CRT) or learning based on culture. Character-based education is highly suitable to be implemented alongside local wisdom [12]. Therefore, integrating local wisdom into chemistry learning aligns with the direction of the Pancasila student project in the independent curriculum, shaping the character of the students.

Based on the above description, it is clear that integrating local wisdom into chemistry learning can develop a deeper understanding of the student's local culture, enrich perspectives, and fostering an appreciation for cultural diversity in West Borneo. Therefore, a study on local wisdom in chemistry learning is needed as an effort to create contextual learning by emphasizing the cultural heritage values of West Borneo. This research aims to explore the local wisdom of West Borneo that can be applied in chemistry learning, thereby shaping the character of the students.

Method

This research employs a qualitative descriptive method, specifically a literature review. A literature review is a theoretical study derived from scientific research writings and other reference materials to serve as the foundation for research [13], [14]. The data utilized in this study are obtained from scholarly writings such as previous journal articles and other sources that support the exploration of local wisdom in West Borneo within the context of chemistry learning.

Results and Discussions

Local wisdom refers to the knowledge and practices developed by the local community over generations. It encompasses knowledge, practices, and values that the local community develops based on their experiences and needs in interacting with the environment, culture, and natural resources around them [15]. Local wisdom has specific characteristics that depict the uniqueness of one region compared to others. This distinctiveness is rooted in the experiences of human interactions with the environment, ecological systems, social relationships,

and cultural values [16], [17]. These characteristics make local wisdom a valuable source of knowledge for understanding, appreciating, and maintaining harmonious relationships among humans, nature, and culture in the local context of a region.

West Borneo is one of 38 provinces in Indonesia that has a rich variety of local wisdom, including in the field of chemistry. West Borneo is divided into three regional dimensions, namely coastal and islands areas, inland areas, and border areas [18]. Each of these regions has local wisdom that characterizes the area. The local wisdom of West Borneo in the field of chemistry based on the geographical division of the region can be explained as follows:

1. Coastal and Islands Region

Coastal and archipelagic areas consist of Pontianak City, Singkawang City, Mempawah Regency, Kubu Raya Regency, and Kayong Utara Regency [18]. One of the famous local cultural heritages is the weaving craft called corak insang. Corak insang is the regalia of the Pontianak Malay sultanate which describes the life of the Malay community along the Kapuas river [19]. The peculiarity of the gill pattern weaving is the variety of colors. In the context of chemistry, coloring and color binding or fixer on the fabric is a crucial stage in the manufacture of this craft, with the provisions of the dye is water soluble and has an affinity to the fiber [20]. The corak insang needs to undergo a color fixation stage to keep the color lasting. The fixation process involves a chemical reaction between the dye compound and a fixative agent, such as salt or acid [21]. Therefore, the local wisdom of Corak Insang has the potential to be used as a source of chemistry learning as a development of knowledge and character of students who are required to have an attitude of curiosity, responsibility and care for the surrounding environment.

Another local wisdom of the coastal area is the Meriam Karbit tradition held to welcome the month of Ramadan [22]. Calcium carbide or commonly called carbide is the main ingredient used as an explosive in the Carbide Cannon tradition by being triggered by fire and water to detonate it so as to produce an explosive sound [23]. The operation of the carbide cannon involves a chemical reaction called the carbide reaction or hydrolysis of carbide to produce acetylene gas which causes an explosion sound, and the carbide cannon can be connected to other chemical concepts such as redox reactions, handling in the use of chemicals, and reaction rates so that chemical learning is more meaningful and interesting because it is associated with the real world and preserves local wisdom.

2. Inland Region

The inland region consists of Kapuas Hulu Regency, Sintang Regency, Melawi Regency, Sekadau Regency, Landak Regency and Ketapang Regency [18]. The majority of the inland region is occupied by the Dayak tribe by utilizing plants as natural dyes in their daily lives such as weaving for clothing and food coloring [24]. The local wisdom of the Dayak Iban and Bidayuh tribes uses plants that grow in the forest as food ingredients, environmentally friendly natural dyes, traditional medicines, as well as cosmetics and crafts that have artistic value [25]. The availability of various types of plants in West Borneo has the potential to implement them in chemistry learning, for example by utilizing plants used by local communities as natural acid and base indicators [26], [27]. The utilization of local West Borneo plants such as cengkodok plants as natural acid and base indicators in chemistry learning can provide practical experience for students by conducting pigment extraction experiments from local plants and observing the color changes

that occur when acid and base solutions are added [28], [29]. With the utilization of the natural wealth of the West Borneo region integrated in learning, it can enrich the knowledge of students as well as a means of introducing local wisdom that is starting to fade so that students can appreciate biodiversity and local culture.

3. Border Region

The border region consists of Sambas Regency, Bengkayang Regency, Sanggau Regency, and Kapuas Hulu Regency [18]. Communities in the border areas of West Borneo have a rich knowledge of traditional medicinal plants that have been passed down from generation to generation from their ancestors [30]. The tradition in the Entikong area is to plant traditional medicinal plants in the yard of the house [31]. Examples of plants used by local people as medicinal plants include cat's whiskers, turmeric, pasak bumi, betel, pecah beling, red jerangau and etcetera [32]. Farming in home yards is a way for people to have easy access to meet the needs of traditional medicine. The utilization of traditional medicinal plants grown independently not only provides health benefits, but also enriches cultural heritage and maintains valuable ancestral knowledge. And learning that is linked to cultural values can increase learners' awareness of local wisdom and the importance of natural resources in maintaining human health and well-being. In addition, a well-known local wisdom in Sambas Regency is the use of conventional biotechnology in food processing. Based on research results [33]–[35] conventional biotechnology is very suitable as a local wisdom topic that can help students understand science subject matter and local excellence.

Local wisdom in the era of modernization as it is now experiencing erosion due to globalization and technological developments. Globalization

by foreign cultures often shifts pre-existing local values and practices, resulting in many young people adopting foreign cultural lifestyles, as well as reducing the uniqueness of local wisdom culture [36]. Therefore, contextualized learning is needed according to regional characteristics. Local wisdom is a contextual and real source, so that the learning applied does not refer only to the conceptual [6]. Based on research results Firdaus et al., (2021) chemistry learning based on local wisdom helps students to live the values of Pancasila as a concrete manifestation of the implementation of the Pancasila student profile in the aspect of global diversity so that the character of patriotism is embedded in students.

Local wisdom-based learning aims to preserve cultural heritage and local products [35]. Research on the value of local wisdom in learning, especially science and chemistry, has been widely researched. However, the implementation of educators in integrating the potential of local wisdom in modules and learning media in the West Borneo area is still not widely implemented [2], [33], [34]. With the variety of local wisdom of West Borneo related to chemistry, there is a great opportunity to integrate it in chemistry learning. Local wisdom that is integrated in chemistry and science learning has a significant impact on student learning outcomes, research results Hairida et al., (2019) and Sapitri et al., (2020) prove that the implementation of local wisdom in chemistry and science learning has a significant impact on student learning outcomes. prove that the implementation of local wisdom in chemistry learning contained in lesson plans, teaching materials, LKPD, supplements, and practicum can improve learning outcomes and student creativity. This is because local wisdom in chemistry learning can provide meaningful and relevant learning

experiences for students, as well as increase understanding of the relationship between chemistry and everyday life which is closely related to the cultural heritage of ancestors.

Conclusions

West Borneo is rich in local wisdom that is relevant to chemistry learning, ranging from culture to customs. Integrating local wisdom in chemistry learning can be an alternative solution to the problem of character cultivation in chemistry learning by educators.

Bibliography

- [1] [1] I. M. Hasanah, M. Ramli, and L. Yunita, "Pengembangan Buku Pengayaan Kimia Digital Berbasis Kearifan Lokal Kabupaten Indramayu," *J. Inov. Pendidik. Kim.*, vol. 16, no. 2, pp. 75–84, 2022, doi: [10.15294/jipk.v16i2.32335](https://doi.org/10.15294/jipk.v16i2.32335).
- [2] [2] H. Hairida and V. Setyaningrum, "The Development of Students Worksheets Based on Local Wisdom in Substances and Their Characteristics," *J. Educ. Sci. Technol.*, vol. 6, no. 2, pp. 106–116, 2020, doi: [10.26858/est.v6i2.12358](https://doi.org/10.26858/est.v6i2.12358).
- [3] [3] Y. Khery, D. Rosma Indah, M. Aini, and B. Asma Nufida, "Urgensi Pengembangan Pembelajaran Kimia Berbasis Kearifan Lokal dan Kepariwisata untuk Menumbuhkan Literasi Sains Siswa," *J. Kependidikan J. Has. Penelit. dan Kaji. Kepustakaan di Bid. Pendidikan, Pengajaran dan Pembelajaran*, vol. 6, no. 3, p. 460, 2020, doi: [10.33394/jk.v6i3.2718](https://doi.org/10.33394/jk.v6i3.2718).
- [4] [4] M. L. B. B. Habaridota, "Pengembangan Bahan Ajar Tematik Berbasis Kearifan Lokal Kalimantan Barat pada Kelas III Tema 3 SD/MI Tahun 2019/20200," *J. Bid. Pendidik. Dasar*, vol.

- 6, no. 2, pp. 178–184, 2022, [Online]. Available: <http://ejournal.unikama.ac.id/index.php/JBPD>
- [5] [5] A. Pamungkas, B. Subali, and S. Lunuwih, "Implementasi Model Pembelajaran IPA Berbasis Kearifan Lokal untuk Meningkatkan Kreativitas dan Hasil Belajar Siswa Implementation of Science Learning Model Based on Local Wisdom to Improve Creativity and Student Learning Outcomes," *J. Inov. Pendidik. IPA*, vol. 3, no. 2, pp. 118–127, 2017.
- [6] [6] A. N. Rahmatih, M. A. Maulyda, and M. Syazali, "Refleksi Nilai Kearifan Lokal (Local Wisdom) dalam Pembelajaran Sains Sekolah Dasar: Literatur Review," *J. Pijar MIPA*, vol. 15, no. 2, pp. 151–156, 2020, doi: [10.29303/jpm.v15i2.1663](https://doi.org/10.29303/jpm.v15i2.1663).
- [7] [7] A. Sanova, W. Syahri, Yusnidar, and Afrida, "Pelatihan Penyusunan Modul Kimia berbasis Kearifan Lokal bagi Guru SMA di Sungai Penuh Jambi," *J. Pengabd. UNDIKMA J. Has. Pengabd. Pemberdaya. Kpd. Masy.*, vol. 3, no. 3, pp. 561–567, 2022.
- [8] [8] D. Wahyudiati and Fitriani, "ETNOKIMIA : EKSPLORASI POTENSI KEARIFAN LOKAL SASAK SEBAGAI SUMBER BELAJAR KIMIA," *J. Pendidik. Kim. Indones.*, vol. 5, no. 2, pp. 102–111, 2021.
- [9] [9] C. Lesmana and Nurussaniah, "Integrasi Kearifan Lokal Kalimantan Barat dan ICT Berbasis Android dalam Media Pembelajaran Fisika," *J. Basicedu*, vol. 6, no. 2, pp. 2045–2054, 2022.
- [10] [10] B. Setiawan, D. K. Innatesari, W. B. Sabtiawan, and Sudarmin, "THE DEVELOPMENT OF LOCAL WISDOM-BASED NATURAL SCIENCE MODULE TO IMPROVE SCIENCE LITERATION OF STUDENTS," *J. Pendidik. IPA Indones.*, vol. 6, no. 1, pp. 49–54, 2017, doi: [10.15294/jpii.v6i1.9595](https://doi.org/10.15294/jpii.v6i1.9595).
- [11] [11] M. Syazali and U. Umar, "Peran Kebudayaan Dalam Pembelajaran IPA Di Indonesia: Studi Literatur Etnosains," *J. Educ. FKIP UNMA*, vol. 8, no. 1, pp. 344–354, 2022, doi: [10.31949/educatio.v8i1.2099](https://doi.org/10.31949/educatio.v8i1.2099).
- [12] [12] Suttrisno and F. Z. Rofi'ah, "Integrasi Nilai-nilai Kearifan Lokal Guna Mengoptimalkan Proyek Penguatan Pelajar Pancasila Madrasah Ibtidaiyah di Bojonegoro," *Pionir J. Pendidik.*, vol. 12, no. 1, pp. 54–76, 2023.
- [13] [13] M. Ridwan, S. AM, B. Ulum, and F. Muhammad, "Pentingnya Penerapan Literatur Review pada Penelitian Ilmiah," *J. Masohi*, vol. 02, no. 01, pp. 42–51, 2021.
- [14] [14] E. Simatupang and I. Yuhertiana, "Merdeka Belajar Kampus Merdeka terhadap Perubahan Paradigma Pembelajaran pada Pendidikan Tinggi : Sebuah Tinjauan Literatur," *J. Bisnis, Manaj. dan Ekon.*, vol. 2, no. 2, pp. 30–38, 2021.
- [15] [15] R. Njatrijani, "Kearifan Lokal Dalam Perspektif Budaya Kota Semarang," *Gema Keadilan*, vol. 5, no. 1, pp. 16–31, 2018, doi: [10.14710/gk.2018.3580](https://doi.org/10.14710/gk.2018.3580).
- [16] [16] L. E. Novianti, Hamzah, and B. Hariyadi, "Kearifan Lokal Pengelolaan Hutan Adat oleh Masyarakat Adat Tigo Luhah Kemantan Kabupaten Kerinci," *J. Ilm. Univ. Batanghari Jambi*, vol. 22, no. 1, p. 261, 2022, doi: [10.33087/jiubj.v22i1.1971](https://doi.org/10.33087/jiubj.v22i1.1971).
- [17] [17] H. A. Hasibuan, "Peran Modul Berbasis Kearifan Lokal Untuk Mendukung Pendidikan Merdeka Belajar," in *Prosiding Seminar Nasional Pendidikan Dasar*, 2022, vol. 1, no. 1, pp. 292–301. doi: [10.34007/ppd.v1i1.201](https://doi.org/10.34007/ppd.v1i1.201).

- [18] [18] P. P. I. dan D. K.-B. PPID, "Gambaran Umum Aspek Geografis Kalimantan Barat," Pemerintah Provinsi Kalimantan Barat, 2017. <https://ppid.kalbarprov.go.id/?public=profil-daerah> (accessed Jun. 29, 2023).
- [19] [19] H. Firmansyah, I. Ramadhan, H. Wiyono, A. Eka, and T. Sastra, "Perkembangan dan pelestarian tenun Corak Insang khas Kota Pontianak," *Satwika Kaji. Ilmu Budaya dan Perubahan Sos.*, vol. 7, no. 1, pp. 12–20, 2023.
- [20] [20] H. A. Melati, Y. Ratih, and M. Kartika, "Pelatihan Teknik Pencelupan Dan Pengikatan Warna Benang Kepada Perajin Tenun Corak Insang Di Kota Pontianak," *Int. J. Community Serv. Learn.*, vol. 3, no. 3, pp. 138–144, 2019, doi: [10.23887/ijcsl.v3i3.15516](https://doi.org/10.23887/ijcsl.v3i3.15516).
- [21] [21] E. J. Bria, P. W. Bani, D. F. Hanas, E. N. Bano, and Y. Tefa, "Etnobotani pewarna alami kain tenun futus Suku Dawan di Kabupaten Timot Tengah Utara," *J. Biol. Udayana*, vol. 27, no. 1, pp. 95–108, 2023.
- [22] [22] A. I. Tawakkal, "Alfitrah Iqbal Tawakkal," *J. Pendidik. dan Pembelajaran Khatulistiwa*, vol. 7, no. 9, pp. 1–14, 2018.
- [23] [23] M. I. Handoko, "Perubahan Tradisi Permainan Meriam Karbit di Desa Tanjung Harapan, Kecamatan Singkep, Kabupaten Lingga, Provinsi Kepulauan Riau," 2014.
- [24] [24] E. K. Santa, Mukarlina, and R. Linda, "Kajian etnobotani tumbuhan yang digunakan sebagai pewarna alami oleh Suku Dayak Iban di Desa Mension, Kabupaten Kapuas Hulu," *J. Protobiont*, vol. 4, no. 1, pp. 58–61, 2015, [Online]. Available: <http://jurnal.untan.ac.id/index.php/jprb/article/view/8759/8723>
- [25] [25] S. W. Berlin, R. Linda, and Mukarlina, "Pemanfaatan Tumbuhan Sebagai Bahan Pewarna Alami Oleh Suku Dayak Bidayuh Di Desa Kenaman Kecamatan Sekayam Kabupaten Sanggau," *J. Protobiont*, vol. 6, no. 3, pp. 303–309, 2017.
- [26] [26] A. W. Wijayadi, L. A. Fitriyah, and N. Hayati, "Pemanfaatan Potensi Lokal Jombang Berupa Bunga Pacar Air Sebagai Indikator Alami," *Hydrog. J. Kependidikan Kim.*, vol. 8, no. 2, p. 116, 2020, doi: [10.33394/hjkk.v8i2.3124](https://doi.org/10.33394/hjkk.v8i2.3124).
- [27] [27] M. Mitarlis, U. Azizah, and B. Yonatha, "Pemanfaatan Indikator Alam Dalam Mewujudkan Pembelajaran Kimia Berwawasan Green Chemistry," *J. Penelit. Pendidik. IPA*, vol. 3, no. 1, p. 1, 2018, doi: [10.26740/jppipa.v3n1.p1-7](https://doi.org/10.26740/jppipa.v3n1.p1-7).
- [28] [28] T. Kurniati, "Pengujian Zat Warna Dari Ekstrak Buah Naga (*Hylocereus Polyrhizus*) Dan Cengkodok (*Melastomas Malabathricum*) Sebagai Indikator Alami," *AR-RAZI J. Ilm.*, vol. 5, no. 1, pp. 133–138, 2017, doi: [10.29406/arz.v5i1.648](https://doi.org/10.29406/arz.v5i1.648).
- [29] [29] A. Aril, M. Masriani, and H. A. Melati, "Development of pH Measuring Strip Test Based On West Kalimantan Local Plant," *EduChemia (Jurnal Kim. dan Pendidikan)*, vol. 7, no. 2, p. 267, 2022, doi: [10.30870/educhemia.v7i2.15252](https://doi.org/10.30870/educhemia.v7i2.15252).
- [30] [30] R. Y. Sari, E. Wardenaar, and Muflihati, "ETNOBOTANI TUMBUHAN OBAT DI DUSUN SERAMBAI KECAMATAN KEMBAYAN KABUPATEN SANGGAU KALIMANTAN BARAT Ethnobotany of Medical Plants in Serembai Village, Sub-District of," *Bul. Kebun Raya*, vol. 20, no. 1, pp. 1–16, 2017.
- [31] [31] P. Saptomo, Nafsiatun, E. Mintari, and M. Syafei, "Kearifan Lokal yang

- Mendukung Ketahanan Lingkungan Hidup di Kawasan Perbatasan Entikong (Indonesia)- Serawak (Malaysia)," in Prosiding Seminar Nasional seri 7 "Menuju Masyarakat Madani dan Lestari" , Diseminasi Hasil-Hasil Penelitian, 2017, no. November, pp. 476–486.
- [32] [32] T. Ginting, I. Ahyar, and S. Bintang, "Nilai Ekonomi Tanaman Obat di Taman Nasional Danau Sentarum (Economic Value of Medicinal Plants in Danau Sentarum National Park , West Kalimantan)," *J. Ekon. dan Pembang. Indones.*, vol. 18, no. 1, pp. 22–34, 2017, doi: [10.21002/jepi.2018.02](https://doi.org/10.21002/jepi.2018.02).
- [33] [33] V. Oktavianty, H. Hairida, R. Muharini, M. Masriani, and I. Lestari, "Pengembangan Suplemen Bahan Ajar Berbasis Kearifan Lokal pada Materi Bioteknologi Konvensional," *Edukatif J. Ilmu Pendidik.*, vol. 4, no. 5, pp. 6715–6723, 2022, doi: [10.31004/edukatif.v4i5.3285](https://doi.org/10.31004/edukatif.v4i5.3285).
- [34] [34] E. Kartina, H. Hairida, M. Masriani, R. Muharini, and I. Lestari, "Pengembangan LKPD Bioteknologi Berbasis Kearifan Lokal pada Pembuatan Ikan Peda Bilis Bulu Ayam," *Edukatif J. Ilmu Pendidik.*, vol. 4, no. 6, pp. 8167–8177, 2023, doi: [10.31004/edukatif.v4i6.3983](https://doi.org/10.31004/edukatif.v4i6.3983).
- [35] [35] N. Haryani, L. Hadi, and R. Rasmawan, "Pengembangan Modul Zat Aditif Berbasis Kearifan Lokal Pengolahan Makanan Masyarakat Desa Karimunting," *J. Educ. Dev.*, vol. 10, no. 3, pp. 43–50, 2022.
- [36] [36] I. Nurasiah, A. Marini, M. Nafiah, and N. Rachmawati, "Nilai Kearifan Lokal: Projek Paradigma Baru Program Sekolah Penggerak untuk Mewujudkan Profil Pelajar Pancasila," *J. Basicedu*, vol. 6, no. 3, pp. 3639–3648, 2022, doi: [10.31004/basicedu.v6i3.2727](https://doi.org/10.31004/basicedu.v6i3.2727).
- [37] [37] R. N. Firdaus, S. Mulyanti, and N. Alawiyah, "Pembelajaran Kimia Kuliner Khas Betawi bagi Pelajar secara Mandiri sebagai Usaha Pelestarian Kearifan Lokal," *Chempublish J.*, vol. 6, no. 2, pp. 103–117, 2021.
- [38] [38] R. D. Sapitri, S. Hadisaputra, and E. Junaidi, "Pengaruh penerapan praktikum berbasis kearifan lokal terhadap keterampilan literasi sains dan hasil belajar," *J. Pijar Mipa*, vol. 15, no. 2, pp. 122–129, 2020, doi: [10.29303/jpm.v15i2.1342](https://doi.org/10.29303/jpm.v15i2.1342).
- [39] [39] H. Hairida, F. Arifiyanti, V. Safrilianti, D. Erwinda, S. Apriliani, and A. Ahmadiyah, "the Local Wisdom of Kubu Raya Society and the Implementation in Science Learning," *J. Educ. Teach. Learn.*, vol. 4, no. 2, pp. 281–286, 2019.

Author Profile

Agung Hartoyo is a lecturer who teaches in the Master's Program for Primary School Teacher Education at FKIP UNTAN and has a research interest in character education.

Hairida is a lecturer who teaches in the Chemistry Education Study Program at FKIP UNTAN and has an interest in the field of educational evaluation and the exploration of local wisdom in West Borneo.