

A Scoping Review of Place-based Education in A Context of Environmental Education, Outdoor Education, and History Education

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Abstract. *This scoping review aims to analyze Place-based Education (PBE) research in the context of Environmental Education (EE), Outdoor Education, and History Education which have been published in peer-reviewed journals in the last twenty years. Researchers map the themes included in this research corpus, highlight EE and other specific subjects such as Outdoor Education and History Education where PBE was analyzed, and categorize the themes that emerged from the research. The Model of PBE dimensions by Ardoin et al. (2012) has been referred to as the main model in this research. Recently, PBE took part as a pedagogical approach that emphasizes the connection between the teaching and learning process. The physical place and nature are the most important elements in PBE. Teachers, students, and the community also play their roles in PBE. It incorporates the meanings and experiences of place in teaching and learning, which can extend beyond the classroom. The purpose of this study is to explore the dimensions of place: A confirmatory factor analysis of data from three ecoregional sites. The implication of the study can be determining the policymakers, administrators, scholars, educators as well as teachers in many countries increasingly seek to integrate PBE as a pedagogical approach into curricula. The findings will help other researchers steer future research on PBE. This research will be a guide for new educational policy and can be the best school practice.*

Keywords: *scoping review, place-based education (PBE), environmental education (EE), pedagogical approach*

1. Introduction

Place-based Education (PBE) is defined as an educational approach centered on real-world learning experiences that allow students to build a sense of connection to their natural and cultural surroundings. According to Yemini, Engel, and Ben (2023), PBE is a pedagogical approach that emphasizes the connection between a learning process and the physical place in which teachers and students are located. The concept of PBE refers to a method of instructing and learning that centers on the utilization of a specific geographical location or community as an overarching organizing principle. Teachers can assist students in developing a more profound awareness of the place they call home as well as the natural and cultural elements that come together to form their community if they relate the curriculum to the local environment. This method of teaching emphasizes active participation and learning through direct experience. It frequently incorporates community service initiatives, educational field trips, and other types of activities. Additionally, it can assist students in the development of a sense of commitment to a certain location as well as environmental responsibility.

Furthermore, Yemini et al. (2023) characterized PBE as a pedagogical method that emphasizes the relationship between the learning process and the physical location of

teachers and students. The educational strategy known as PBE is characterized by an emphasis on hands-on, experiential learning that is firmly established in the context of the local environment and culture (Asal & Barak, 2022). Whereby, Tollison (2023) emphasized PBE as a style of teaching in which pupils are taken on field trips to interesting locations close to where they live. Bui et al. (2022) highlighted in their research that PBE incorporates local traditional values, materials, or practices also gets children more interested in learning.

The success of PBE has proven the efficacy of this teaching method in concretizing intangible dangers and inspiring pupils to act on a local, and eventually global, scale (Bertling & Rearden, 2018). PBE, which aids teachers and students in better comprehending the social and environmental systems essential to the survival of all forms of life, is centered on reconnecting with local communities (Hamilton & Marckini-Polk, 2023). PBE enhances learning by providing real-world experiences, meets the emotional needs of students to connect with nature, and better prepares students to preserve land and communities. Reid (2019) found that PBE has the potential to extend the learning community beyond the boundaries of the university. The interaction between the discourse on local curriculum and the socio-cultural, political, and historical contexts is altered by PBE. Autthawuttikul, Laisema, & Bangtamai (2022) found in their study that PBE uses local cultures, histories, traditions, and experiences to teach across the curriculum. Hence, PBE is so important as one of the alternative approaches that teachers can implement to let the students have a better understanding of their surroundings and learn by exploring and experiencing the natural environment.

Environmental Education (EE) is about the exploration of knowledge and awareness regarding the environment and environmental challenges. The United States Environmental Protection Agency (2022), highlighted that EE is a dynamic and interactive process that enables individuals to investigate and comprehend environmental issues, participate in critical thinking and problem solving, and undertake measures to enhance the environment. EE is the process of using an interdisciplinary approach to increase public awareness and appreciation of nature and the environment. However, Smolyaninova et al. (2021) defined EE as the interdisciplinary study of natural, physical, and human environments to promote public awareness and appreciation of nature and the environment. Sunassee et al., (2021) emphasized that EE is based on a wide range of academic disciplines and seeks to encourage ecologically responsible behavior and modify human attitudes toward the natural world.

Place-based and EE research can make excellent use of learning environment approaches, demonstrating the value of keeping this approach in use. A recent study by Sturrock & Zandvliet (2023), concluded that place-based environmental education has the potential to change learners' cognitive structures, attitudes, and the learning environment that surrounds these programs, enriching and stimulating more learning. Hamilton & Marckini-Polk (2023), proved in their research that environmental place-based education is intended to promote environmental literacy, a multidimensional concept encompassing affective, skill, and knowledge domains. According to Ernst and Erickson (2018), instructors who participate in place-based environmental education could address and meet academic requirements by using content that is genuine and has a purpose within the context of the local environment.

The qualitative investigation by Herman et al. (2018) found that place-based environmental education has an impact on the real contexts of the environment and builds strong affective and cognitive links to people and nature. Place-based techniques can help

children learn about socio environmental concerns by interacting with their local environment (Hirishi & Chisato, 2020). This research also highlighted that the combination of PBE and EE has the potential to result in a substantial transformation of people's interactions with the environment, including alterations to local ecological and social communities. Galley et al. (2021) found that the implementation of place-based environmental education provides a solid basis for fostering their interest in STEM.

The other aspect of the curriculum, Outdoor Education (OE), seem like EE because both involved natural setting, out of the classroom but different in kind of activities. OE literature emphasizes personal and social consequences. Werler & Baraldsnes (2018) explained the definition of OE as cultural conceptions of the pedagogical value of outdoor experiences provide the conceptual framework for the several subfields that make up the study of OE. According to the findings of Lovell (2020), children's growth, motor skills, and ability to pay attention are all improved when they participate in outdoor educational activities that emphasize interaction with natural settings. According to Yang et al. (2023), OE can be defined as physical education that is carried out in an outdoor environment. Students are required to live in natural settings as part of the curriculum for outdoor learning.

Place-based outdoor education includes outdoor adventures to promote personal growth, outdoor sports instruction to learn specific skills, field studies on environmental issues, and school-based activities led by teachers directly connected to their curriculum (Deschamps et al., 2022). In other words, proponents of place-based outdoor education argued for using the immediate environment and its natural features as a teaching tool (Walshe et al., 2023). Place-based outdoor learning includes curricular educational activities in the natural environment on school premises or in the local region. This includes forest schools, residential trips, and outdoor adventure, as well as core curriculum-focused instruction (Marchant et al., 2019). Thomas (2018) has confirmed the significance of group work and community functioning and their contribution to future active participation in the program and active citizenship. From this research, we found that there is a connection between EE and OE in the sense of PBE. Both environmental and outdoor education curricula and activities seem very similar and integrated.

Recently, History Education (HE) has taken part and played an important role in education. In this modern era, HE seeks to provide a quality education, enabling students to master the "view of history" based on historical knowledge and to better comprehend nature and human society through the study of history. The current curriculum for history education must maximize the subjective initiative of instructors and guide students to actively engage in exploratory learning. Teachers should implement the systematic teaching of history teaching units in conjunction with the purpose of history education from the perspective of history textbook instruction (Li and Jing, 2023). Place-based instruction should emphasize the fluid nature of evidence and the importance of theoretical background in identifying and interpreting evidence with high critical thinking skills. Cernin (2023) also emphasized that using PBE, the realms of historical explanation provide students with exciting vistas that might encourage critical thinking as they are learning about history.

2. Method

A scoping review is a type of knowledge synthesis that uses a systematic and iterative approach to identify and synthesize an existing or emerging body of literature on a given topic. While there are several reasons for conducting a scoping review, the main

reasons are to map the extent, range, and nature of the literature, as well as to determine possible gaps in the literature. This scoping review aims to analyze Place-based Education (PBE) research in the context of Environmental Education (EE), Outdoor Education (OE), and History Education (HE) which have been published in peer-reviewed journals in the last twenty years. The purpose of this study is to explore the dimensions of place: A confirmatory factor analysis of data from three ecoregional sites (EE, OE, and HE). According to Munn et al. (2018), the purpose of conducting a scoping review is to identify the available evidence in each area, to identify and analyze knowledge gaps, and as a precursor to the systematic review.

Hence, in selecting articles to review, the systematic approach is adopted to ensure the article reviewed focuses on the research question and confirms the quality of the articles. This review focuses on PBE, EE, OE, and HE. Article journals were selected from the Elsevier-Scopus and ERIC (Educational Resources Information Center) databases. The Scopus and ERIC databases were chosen because both have the most extensive abstract and citation databases consisting of diverse subject areas and documents such as journals, books, and conference proceedings primarily published in educational disciplines. Most importantly, these two databases have been chosen because they provide quality articles to use in this research review. The review process was conducted as per below:

a. Identification

The first phase in the review process is identification. The process involved keyword identification for information-searching purposes. The keyword used in searching for the documents in databases also referred to the thesaurus to find the word with similar meaning to enrich its finding. The keywords used in advance searching for articles in the Scopus database are Article Title Abstract-Keyword ("Place-based Education "OR" Environmental Education "OR" Outdoor Education") AND ("History Education"). For the ERIC database, the criteria are limited to Collection; Peer reviewed, and Full text available on ERIC.

b. Screening

Screening is a process to include or exclude articles according to the selected criteria with the database's assistance. In the screening process, for Scopus database's criteria are limited to Document type: Article, Source Type, and publication year: 2004-2023 and the result shows 1,096 documents. After the keyword Place-based Education has been typed in, the researchers search for the number of collections in ERIC according to publication year: 2004-2023, and the result shows the total number of documents. The total number of documents from two databases after limiting the search criteria is n=5403. The process continues with merging the findings to exclude redundant articles from that two databases.

c. Eligibility

Eligibility is a process to exclude articles manually according to the specific criteria set by the author. The articles thoroughly reviewed from the abstract and those that do not meet the criteria are excluded. In this review, the selected article's criteria must be directly discussed. After reading the 25 articles' abstract and full text, we found out that ten number of the articles have fulfilled the criteria set according to EE, OE, and HE context.

Table 1 shows the list of articles selected after the eligibility process. Table 1 and Figure 1 show a significant increase in the number of documents in the form of articles published by researchers over 20 years. This is in line with the increasing public awareness of the need for teaching and learning activities to take place outside the classroom. The involvement of the community has also been focused on over the past 10 years with the potential of the environment being a priority.

Table 1. Number of documents by year from 2004 till 2023 in Scopus

Year	Number of Documents
2023	157
2022	134
2021	120
2020	97
2019	93
2018	80
2017	60
2016	47
2015	44
2014	61
2013	34
2012	45
2011	28
2010	29
2009	17
2008	17
2007	14
2006	14
2005	3
2004	2
Total	1096

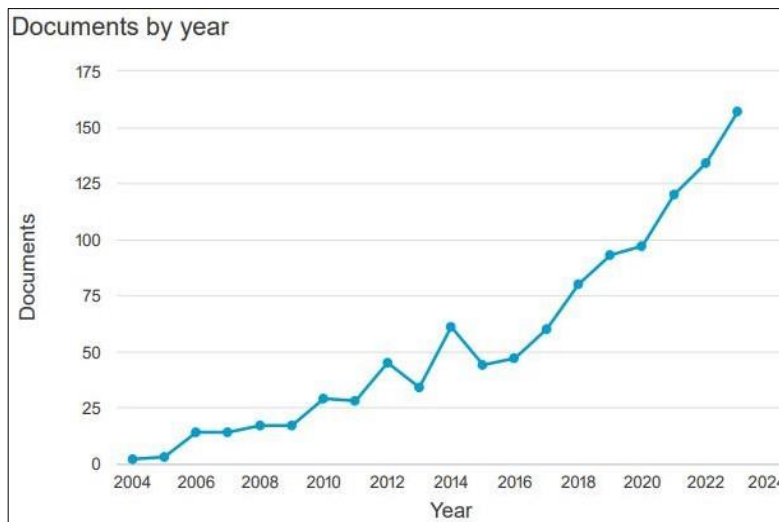
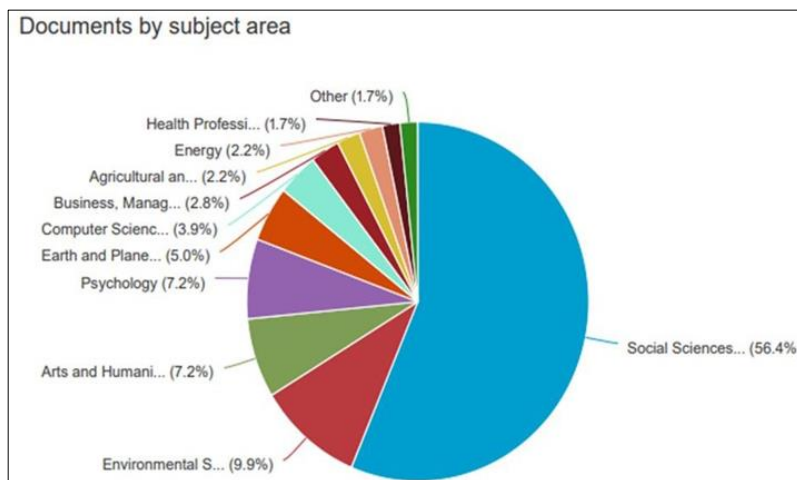


Figure 1. Increasing the number of documents by year from 2004 till 2023 in Scopus

Document search showed 11 subject areas are involved with PBE. The most important subject area related to PBE is Social Science which includes EE, OE, and HE. The following Table 2 shows the main subject area related to PBE from 2004 until 2023 while Figure 2 shows the document by subject area selected from the eligibility process.

Table 2. Documents by subject area involve with Place-based Education (PBE)

Subject Area in Scopus	Numbers	Percentage
Social Sciences	102	56.4
Environmental Science	8	9.9
Arts & Humanities	13	7.2
Psychology	13	7.2
Earth and Planetary Science	9	5
Computer Science	7	3.9
Business Management and Accounting	5	2.8
Agriculture and Biological Science	4	2.2
Energy	4	2.2
Health and Professionalisms	1	1.7
Others	1	1.7

**Figure 2.** Document by subject area selected from eligibility process

d. Data Abstraction and Analysis

The remaining articles were evaluated, reviewed, and analyzed after the eligibility process; the results are discussed in detail in this article. The scoping reviews were based on specific subjects that matched the research objective. This research aims to analyze Place-based Education (PBE) in the context of Environmental Education (EE), Outdoor Education (OE), and History Education (HE) which have been published in peer-reviewed journals in the last twenty years. The purpose of this study is to explore the dimensions of place as the confirmatory factor analysis of data from three ecoregional sites such as EE, OE, and HE. Table 3 shows the list of articles selected after eligibility.

Table 3. The list of articles selected after eligibility

Article Title	Author/s	Journal Name	Year
Non-Place and the Future of Place-Based Education	Bertling, Joy G.	Environmental Education Research	2018
Place-Based Education, Art, Art Education, Environmental Education Influence of the Natural Setting on Environmental Education Outcomes	Dale, Ryan G.; Powell, Robert B.; Stern, Marc J.; Garst, Barry A.	Environmental Education Research	2020
Environmental Education, Field Trips, Grade 5, Grade 6 Developing Youth Toward Pluralistic Environmental Citizenship: A Taiwanese Place-Based Curriculum Case Study	Chan, Yun-Wen	Environmental Education Research	2023

Article Title	Author/s	Journal Name	Year
Environmental Education, Citizenship, Civics, Foreign Countries Middle School Science Teachers' Agency to Implement Place-Based Education Curricula about Local Wildlife	Wright, Diane S.; Crooks, Kevin R.; Hunter, Don O.; Krumm, Caroline E.; Balgopal, Meena, M.	Environmental Education Research	2021
Middle School Teachers, Science Teachers, Professional Autonomy, Curriculum Implementation Student Emotional Response to the Lesser Kestrel Environmental and Sustainability Education Program	Gan, Dafna; Gal, Adiv –	Environmental Education Research	2023
Student Attitudes, Emotional Response, Environmental Education, Sustainability Place-Based Education from Three Perspectives	Cincera, Jan; Valesova, Barbora; Krepelkova, Sarka; Simonova, Petra; Kroufek, Roman	Environmental Education Research	2019
Place-Based Education, Sustainable Development, Municipalities, Decision-Making Environmental Education in Southern Africa: A Case Study of a Secondary School in the Okavango Delta of Botswana	Velamina, Kgosietsile; Martin, Bruce; Smucker, Thomas; Ward Randolph, Adah; Henning, John E	Environmental Education Research	2018
Environmental Education, Foreign Policy, Foreign Countries, Indigenous Knowledge Diminishing Footprints: Exploring the Local and Global Challenges to Place-Based Environmental Education	Chang, David	Environmental Education Research	2017
Facilitating Place-Based Environmental Education through Bird Studies: An Action Research Investigation	Can, Özge Kesaplı; Lane, Jennie F.; Ateskan, Armagan	Environmental Education Research	2017
Outdoor Education, Experiential Learning, Phenomenology, Place-Based Education Going Back and Beyond: Children's Learning through Places	Díaz-Díaz, Claudia	Environmental Education Research	2017

Note. The information on the journal quartile referred to Scopus Cited Core.

3. Results and Discussions

This section contains an objective description of the results of research with analysis and interpretation of the results. As the results of this scoping review are presented in the form of tables and figures above, we refer to each of the research objectives stated earlier. Most of the studies regarding PBE referred to Social Studies and Environmental Science. Besides that, there are also studies in other disciplines such as Psychology, Science, and Business Management. Herman et.al. (2018) and Deschamps et al. (2022) agreed that scoping review results show the same subject areas which are EE, OE and HE takes part. Demarest (2015) mentioned that although PBE research is often conceived as a science-based pedagogy, PBE can include multiple disciplines. As a kind of pedagogy approach, PBE emphasizes the real world, hands-on learning experiences directly connected to the environment or natural setting. In this scoping review, researchers analyzed and categorized PBE into three main ecoregional themes that are environmental, outdoor, and historical learning experiences which emerged from the research. These findings are in line with the four dimensions of the PBE Model by Ardoin et al. (2012). The four dimensions are biophysical, psychological, social-cultural, and political-economic. Recently, PBE took part as a pedagogical approach that

emphasizes the connection between the teaching and learning process. The physical place and nature are the most important elements in PBE. Moreover, as a form of experiential learning, PBE also provides teachers and students with opportunities to engage in local places and communities. Additionally, local places and environments also provide a foundation for the study of social sciences such as social studies including history and geography and other subjects across the curriculum. PBE is also intended to foster environmental literacy, a multidimensional construct, knowledge, skills, and affective domains.

4. Conclusions

In conclusion, PBE is an effective pedagogy approach and promises an interesting learning experience for students. Through PBE, environmental education, Outdoor Education, and History Education are connected to and integrated within the local context. This scoping review's findings align with the study done by Yemini et.al. Other scholars (Bertling & Rearden, 2018; Dale et al., 2020 & Chan, Yun-Wen, 2023) agreed that PBE needs the teachers' ability to implement this approach in the real setting. They may have difficulties without understanding its complexity. PBE will be more challenging if we integrate more than one subject area or across disciplines. Teachers and students will benefit in the teaching and learning process by exploring, engaging, and experiencing the natural environment, outside or beyond the classroom. Experiential learning, or learning by doing, will enhance the student's abilities and understanding of the real-world surroundings them. Teachers will also gain the opportunity to be more active and creative in planning their learning strategies and activities. We hope that this scoping review will help future researchers and policymakers in many countries increasingly seek to integrate PBE as a pedagogical approach into multidisciplinary curricula.

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