



Place-Based Education: Community as a Multidisciplinary Learning Environment

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Abstract:

Those moments when the learner is deeply immersed in the experience of the world and what is happening in it; learning is made natural and profound. There is a lot to learn about the places where he lives and from traveling around the world getting out into the community. However, the experience of education that depends on the study of the place remains the exception. The transition from the restricted education approach inside the school to the real education approach is a goal agreed upon by many educators. Place-based education (PBE) is a form of realistic education that extends outside the classroom. This education represents a link between learners and society, as it depends on solving real-world problems, with this method; education becomes interdisciplinary, combining history, geography, science, environment, media, and languages which increases the pleasure of learning across different disciplines. This paper aims to provide a thorough view of the concept of PBE, its objectives, benefits, and foundation. The paper proposes ways to apply it in multidisciplinary classrooms and provides examples of topics that can be discussed throughout.

Keywords: Place-Based Education (PBE), Multidisciplinary Learning, Education 2.0.

Introduction

A brand-new type of education has emerged, namely place-based education (PBE), which is increasingly present in village schools. The PBE approach is to introduce educational material outside the classroom. It can also be extended outside of school. This method represents a link between learners and the local community, by integrating learners with the problems facing the local community and taking the initiative to solve these problems, either individually or in the form of learner groups (Mahasna, 2014).

Some educators believe PBE is not a new educational approach, and its beginning can be traced back to ancient times. PBE was widely practiced during the nineteenth century. Where some childhood educators, such as Pestalozzi (1746-1827) and Froebel (1782-1852) incorporated PBE activities and models into kindergarten education, and they have incorporated the study of nature, horticulture, and similar types of content in their curriculum (Buxton & Provenzo Jr, 2012).

At the end of the nineteenth century in the United States, John Dewey gradually included knowledge of the place as a basic part of his curriculum, as he sought to overcome the separation between the school and the children's world in a school. He sees that school wastage comes from the inability to benefit from the experiences that learners get outside the school in a full and meaningful way, as the learners are not able to apply what they have learned in school in their life (Buxton & Provenzo Jr, 2012).

Accordingly, place-based education is a modern educational approach that has not been used in Arab countries. Therefore, this paper calls for increased awareness of the concept of place-based education and the importance of its use in teaching multidisciplinary materials adopted by the education system 2.0 in Egypt. This paper explores a main question: How could place-based education be used to teach interdisciplinary materials? Underlying such a question are the more basic ones that inform the paper:

1. What is place-based education (PBE)?
2. What is the difference between place-based education and environmental education?
3. What are the objectives, foundations, and benefits of place-based education?
4. Where Can Place-Based Education Occur?
5. What forms of learning are included in place-based education?
6. What are the Pedagogical Implementations of Place-based Education across disciplines?

Following is a discussion of place-based learning, its conceptual frameworks, and practical examples of how it can be used in interdisciplinary materials.

Definition of Place-Based Education (PBE)

The concept of place-based education was first issued in the 1990s by Laurie Lane-Zucke. In 2002, Gregory Alan. Smith defined Place-based education (PBE) as an approach for developing education and curriculum that directs learners' attention to issues; local, phenomena, and culture, as a basis for learning they encounter at school. PBE can be called place-aware education, society-based education, learning for sustainability, and environmental learning, but is rarely service-based education. PBE can be described as the education of the community, the re-engagement of the person into his town, and the restoration of the essential links between the person and his, and it seemingly asks some questions: Where are we? What is the history of this place and its nature? This type of education is based on solving problems in the real world, where learners participate in solving these problems that are identified through the school curricula, and so the curriculum is linked to the real world. In doing so, they become producers of knowledge rather than consumers of it, and they become a part of society, not passive observers.

As defined by Elfer (2011), PBE is an educational approach that uses places and resources as a basis for cross-disciplinary learning. Place-based resources may be cultural, historical, geophysical, environmental, and others. Ark (2016) points out that it is an approach to learning that takes advantage of the nature of the place to create personalized learning that is meaningful, authentic, and engaging for learners through a realistic experience that places learners in the local environment, and uses them as a basis for study in history, geography, arts, literature, mathematics, science and other subjects that can be studied across the space. It connects communities and learning with the essential aims of increasing and enhancing academic outcomes, learner engagement, and enhancing understanding of the communities and world.

Mahasna (2014) indicates that PBE is based on using the local environment and society as a starting point for learning the concepts of history, geography, arts, languages, literature, mathematics, science, and all subjects that are found in the teaching schedules. This approach focuses on the real world and its experiences, and its benefits include raising the general average of learners and helping learners develop their connection with their community, in addition to training learners and developing their abilities to become effective members of society.

Place-Based Education versus Environmental Education

The educational literature shows that PBE is used in many areas of education for different purposes, namely, community-focused education, environmental education, and bio-regional education .Although PBE is rooted in environmental education, this path can be differentiated from traditional environmental education, because the searchers of PBE focused on both social and natural environments (Smith, 2007).

There are five thematic models in PBE; these included: nature studies, cultural studies, induction into societal processes, real-world problem-solving, and training and entrepreneurial opportunities (Smith, 2002). Thus, PBE is an approach based on the social and natural environment; In other words, PBE can be defined as an educational method that uses the local environment in the context of teaching and learning. The primary aim of PBE is to encourage learners to take care of their local environment and allow them to carry out tasks that achieve a better future for their society (Kuwahara, 2010).

Objectives of Place-Based Education:

According to Sobel (2004) and Johnson, et al. (2012), the three primary objectives of PBE are:

- **Improving Learner Achievement:** PBE encourages learners' involvement within the community with the purpose to improve their feeling of liability to their local environment, which in turn contributes to stimulating academic excellence.
- **Collaboration between educational organizations and community:** The practice of PBE develops the relationship between several local institutions and schools, this, in turn, improves the role of each of these parties in order to achieve a quality of life for the community.
- **Conservation of the environment:** When learners learn from their environment, they are developed to take procedures to conserve it and solve real-world ecological problems

The Foundations of Place-Based Education

McClennen (2016) identified five foundations upon which PBE is based as follows:

1. **Communication:** Where education is rooted and linked to the local communities in the learners' environment.
2. **Partnerships:** PBE relies on strong partnerships between different educational institutions and society partners.
3. **Research, Inquiry, and Design:** All are essential components of a PBE that encourages learners to understand the real world by asking questions, defining problems, making hypotheses, collecting data, and creating solutions through skills of research, inquiry, and design.
4. **Centered around the learner:** PBE depends on the learner and his activity during the learning journey, so that the learner is active and effective and acquires knowledge on his own.
5. **Interdisciplinary:** PBE depends on multidisciplinary educational experiences and is not limited to a specific discipline, but includes all areas of study that can be learned about the place.

Benefits of Place-Based Education

In PBE, learning and teaching can take many patterns —from official to unofficial, from simple lessons to whole PBE courses, and from the out-school personal and family activities to classroom-based activities, the benefits of which, can affect positively learners, educators, and communities (Ark, 2016). It also encourages the production of knowledge rather than the consumption of knowledge: learners not only learn by "consuming" knowledge, they learn by designing things and proposing solutions and procedures to real-world ecological problems (Peter et al., 2011).

PBE looks utterly different from one school to another and one place to another. There's no one right method to do it and that is the essence of its strength and beauty. Beyond these benefits, other benefits are highlighted by PEEC (2010) and Getting Smart and Teton Science Schools (2016):

- Learning experiences are obtained from the learner's local communities.
- Multidisciplinary education connects more than one specialization as long as the space allows linking these different disciplines.
- It is closely related to the learner and focuses on sharing and transferring realistic learning experiences.
- The topics that are learned depend on scientific investigation and the use of different thinking skills.
- This approach makes learners see the world through different dimensions: environmental, economic, and social.
- Learners practice learning with greater independence - which enhances motivation.
- Learners gain a better appreciation and understanding of the world around them, and learners can achieve deeper learning outcomes.
- Offers wonderful opportunities for personalized learning by giving learners 'voice and choice' in determining what, when, and where to learn.
- Adapt learning to the needs and interests of each learner.

Where Can Place-Based Education Occur?

The real world

PBE can happen anytime, anywhere: on beaches or rivers, in forests or gardens, in parks or streets; in museums or on farms; in the village, on a field trip, in school— wherever

the exploring takes learners. PBE can help to localize curriculum by urging learners to feel a sense of affiliation and responsibility for their surrounding environment, and community (Sobel, 2004).

Common places for PBE include campus locations such as school museums, green spaces, etc., and within the local community such as community gardens, local businesses, etc., or further afield such as specific cities, specific organizations, etc. In addition, education abroad programs provide learners with chances to experience many different sides of the environment and culture of other towns. (Knapp, 2005).

The virtual world

Place-based educational research is just beginning to understand the potential value of bringing the world into the classroom through place-based virtual learning experiences. With the limitations that teachers often feel when trying to organize traditional field trips—such as time, permission, budget, and transportation,—virtual field trips offer an opportunity to take learners outside the classroom and deliver content and media to mobile devices by providing location sensors through GPS, and WLAN (Zimmerman & Land, 2014).

One way that PBE can be supported and shared across the virtual world is by using location-based mapping tools, science content development apps and tools, and creating virtual tours where learners can use electronic technologies to research and study issues in their local area, conduct research on them, and draw attention to places of interest. (Te Kete Ipurangi "TKI", 2022).

Forms of learning included in place-based education

Many researchers have investigated knowledge gain and learning that occurred during place-based education by using several techniques and activities (e.g. Glasson, 2015; Anderson

& Sarah, 2017; Özkara! & Tas, 2018; Akbas, & akmak, 2019). Additionally, Knapp (2005) mentioned that depending on how the activities are carried out, PBE can contain aspects of problem-based learning, experiential learning, outdoor learning, and community-based education. According to that, some methods can be suggested through which PBE can be implemented, namely:

1. ***Field trips:*** They are a visit to a place far from the usual place of study. The purpose of this trip is to provide learners with an experience outside the classroom environment, school, or laboratories, and to identify the nature of the place in the form of its environmental, social, economic, and cultural dimensions.
2. ***Problem-based learning:*** In problem-based learning, the environment of the real place of the problem is used and through which learners are challenged to solve a problem from the real world and work is done in groups where learners use prior knowledge and inquiry to build their learning while trying to solve the problem presented to them.
3. ***Experiential learning:*** It is learning by action. This is done through the interaction and involvement of learners in practical experiences; learners become more able to relate their previous knowledge and their new knowledge in the school to real-world situations. Experiences exist in a variety of subjects and may include community service, scholarly research, and graduation projects.
4. ***Project-Based Learning (PBL):*** In PBL, learners learn by involvement in real-world and meaningful projects. Learners work on a project that engages them in answering a question or in solving real-world problems. They explain their information and exhibits skills by creating presentations or products for a real community. As a result, learners develop real and deep knowledge such as critical thinking, collaboration, and communication skills.

5. ***Action-based learning:*** There are many forms of action-based learning, such as training at the end of the learning stage, practical practice in the workplace, and apprenticeships that start from the vocational education and training institution, one of the forms that blend vocational education and training in the educational institution, with learning in the labor market under the supervision of an expert craftsman trainer and the follow-up of the vocational education institution's trainer, with the aim of providing learners with the knowledge, experience, and skills necessary to practice what they have learned in terms of professions and crafts within the walls of vocational schools, which is a form of PBE.
6. ***Professional learning or professional development:*** It includes activities and experiences in which the learner participates in order to improve his practices and skills to develop himself professionally. For example, the training that takes place in schools for student teachers before service is a place-based vocational training, through which students learn everything related to the school environment and develop themselves professionally, socially, and personally. Therefore, Place-based professional development can be a very effective method for all career learners
7. ***Informal learning:*** This is “anytime, anywhere” learning that takes place outside the formal requirements of school, classroom, certifications, etc. it is often driven by vested interests and takes place in the ordinary, everyday context which makes it a perfect match for PBE.
8. ***The STEM model:*** This is an interdisciplinary approach, in which scientific concepts are combined with natural phenomena, and enables learners to apply STEM in situations that make school-community communication effective

through PBE, enabling the acquisition of scientific knowledge and the ability to compete in the International Economy.

Among the previous studies that focused on place-based education was the study conducted by Özkara and Tas (2018), which aimed to assess teachers' attitudes related to place-based education in social studies lessons, where a scale was developed to assess teachers' attitudes about "place-based education" and the applied activities in social studies lessons. It was applied to (212) teachers, and the results showed positive attitudes toward this approach. There are no statistically significant differences between the attitudes of social science teachers towards the place-based education approach due to gender, specialization, educational background, and years of experience.

Furthermore, Akkaya and Karakuş (2018) conducted a study that examined the effectiveness of teaching the social studies unit for the sixth grade (12-13 years) "our country's resources" through the place-based teaching method on students' achievement. This research was conducted in the academic year 2013-2014 for six weeks in a public high school in Milas, Turkey. The experimental group was taught by the place-based teaching method. And introducing the control group to the unit through regular classroom instructions, according to the results of the analysis, the students of the experimental group achieved significantly higher educational goals compared to the students of the control group. Thus it becomes clear that the method of place-based education is more effective in achieving students teaching social studies.

Likely, Akbas and Çakmak (2019) conducted a study that demonstrated the effectiveness of the impact of place-based education on problem-solving and students' social skills, the participants were 18 seventh-grade students in Turkey, Students undertook project studies on the local history, cultural, and social, and economic structure of their environments in the context of a place-based education approach.

Pedagogical Implementations of Place-based Education across disciplines

The researcher offers some implications and recommendations as listed below:

- Designing a project on the global food crisis and how that crisis can be solved through the food bank and the distribution of resources to the poor. In this project, science and social studies are linked. An example can be taken of an area concerned with hunger and poverty, and the project worked around it, with the need to study the history of the place and the work of its inhabitants, in this case, is a multidisciplinary place study.
- Studying tourism, where learners search for tourist sites in the various fields of their society, whether medical, historical, sports, or cultural tourism. Learners can do a project to develop an advertisement for these tourist sites and how to publish them on social networking sites and take pictures of them while they are in the place. Learners can study the impact of tourism on society and the environment as well. In this way, learning becomes interdisciplinary, combining more than one discipline under the idea of a single project and more than one place.
- When teaching learners about wars through PBE, this can be done by interviewing veterans, collecting their stories, and making them into a newspaper article; this, in turn, will lead to their understanding not only of the meaning of war, but of the history of the place, the society, and the individuals in it.
- PBE can be used in vocational and professional education, where learners practice and train in the profession in its place of origin. Here, the focus is not only on professional skills, but also on social skills, how to communicate with colleagues and managers, the development of personal skills, and their acceptance of the place and its nature, which is the essence of PBE as it focuses on the social context of the place.

Recommendations

- 1- Conducting more experimental research in the field of PBE, to measure its effectiveness in improving the cognitive, psychomotor, and emotional domains of the learner's personality.
- 2- Reliance on PBE as one of the modern education strategies that can be applied in multidisciplinary education in kindergarten and the first three grades, especially with the Education 2.0 curricula developed in Egypt, which depends on solving problems and discovering the world around the learner.
- 3- The use of PBE in teaching learners with special needs of all their categories, as this type of education is expected to affect them positively because the learner with special needs always needs to go out for realistic education, and it is also not linked to specific content, but the content depends on the learner's need abilities and this is supported by PBE.
- 4- Conducting training programs for teachers in the different stages of education on how to apply PBE in their education and the procedures that can be followed to achieve it in the best way to benefit from it.

Suggested Research

For better understanding of Place-Based Education and how it could be effectively utilized in teaching a variety of school subjects, particularly science, the researcher offers some suggestions for further research as listed below:

- 1- The effectiveness of PBE in developing scientific concepts and the attitude towards the environment among kindergarten pupils.
- 2- The effectiveness of PBE in developing spatial concepts and sensory skills among students with special needs.

- 3- A proposed training program in PBE for multidisciplinary primary school teachers and, its impact on the development of teaching practices.

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