Adoption of Place-based Learning in a Rural Primary Government School in India

Deepti R Bhat

Supervisor: Åsa Nilsson Dahlström
Examiner: Johanna Dahlin
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Abstract

There is a growing body of research internationally on place-based learning (PBL) and its contribution to the development of connectedness to the local place, enhancement of ecological awareness and its overall impact on learning. This research conducted in two government primary schools in two different villages situated in the state of Karnataka and Tamil Nadu provides insights into the possibilities for the adoption of PBL in rural schools in India. It investigates the current practices and teaching methodologies adopted in these schools, and also the status of PBL. Though the study has found out that PBL is not been implemented currently in both the schools, it demonstrates the possibilities within the existing education system in these schools that utilize Activity-Based Learning (ABL) as the teaching methodology, to make the transition to PBL. It identifies the key stakeholders- 1. Teachers, 2. Headmaster, 3. Parents and 4. Children, who influence the implementation of PBL in the village, and also provides significant insights on how they influence. It contributes to a body of research that demonstrates how the teacher training forums influence the adoption of innovative teaching practices like ABL, and PBL, and the support provided by the administration for the ‘local’ teachers. This study shows how the current trend of private English medium schools in the faraway towns negatively affect PBL and the transfer of local knowledge. Finally, considering the huge rural population in India, this research conducted at the local village schools is of vital importance that sheds light on the possibilities and the barriers for the adoption of PBL at the ground level, and also provides short-term and long-term solutions for its implementation. This study thereby contributes to the international research on place-based learning.

Keywords

Place-Based Learning, Place-Based Pedagogy, Activity-Based Learning, Child-Centered, Village Schools, English Medium Schools, Connectedness, Outdoor Learning, Ecological Awareness, Teachers’ Localness, Teacher Training, Parent-Teacher Partnership, Local Knowledge, Headmaster Leadership, Teacher Attitudes
Acknowledgements

I would like to thank God for providing me this wonderful opportunity to pursue the Masters course in Outdoor Environmental Education and Outdoor Life in Sweden. It has been a wonderful experience with nature and people here. I thank my friends and teachers from the course who have inspired me with their experiences and all my other friends at Linköping who became my family. I thank my ‘Swedish grandparents’ who pampered me with their love.

I thank Mother Nature with all her beauty for the wonderful experiences I have had till now. I thank my parents, Jayashri and Ravi, who have nurtured me, and made sure I ‘Skype’ them everyday morning and evening. Your love keeps me grounded and humble. I thank my brother Sudhi, who pesters me and showers sibling love in his unique way. I thank my fiancé Nikhilesh for being my strength all throughout this journey. You listened to my stories from the field with great interest, always gave me the best possible suggestions, positive energy, and made me believe in my abilities.

I am grateful to all the teachers, parents and children at the school who gave me their precious time selflessly and shared their opinions and knowledge patiently. I thank each of you with all my heart. I thank all my friends from India in Linköping who helped me translate some data in the written form collected from the field. I extend my gratitude to my dad’s colleague, my uncle Satish and his family, and my loving relatives who took care of me during the field visits.

I would like to thank my supervisor ‘Awesome Åsa’ for her time, and inputs throughout this journey of producing the master thesis. You always filled me with inspiration, energy and enthusiasm, and challenged me to expand my thought process. Your guidance has been vital in producing this body of research and it has given me life-long learning.

I thank my previous mentor Anand, for believing in me and supporting my initiatives in the field of education. Finally, I thank each and everyone who has contributed to my journey of fulfilling the dream of studying Masters in Outdoor Environmental Education, thereby helping me acquire greater knowledge, experience and skills.
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Introduction

Villages in rural India are usually small settlements with agriculture as the major occupation. Families depend on the firewood for various household activities and often interact closely with the elements of nature around them. Children in villages grow up in a landscape that is rich in nature and culture. All the livelihood activities that the families are involved in, for example, picking firewood, making pickles and papad1, broomsticks from local plants, growing various crops, using local plants for medicinal purposes, building houses with local materials, etc. involve rich knowledge which is a result of the continuous interaction and the deep understanding of the local environment. Most of the villagers who are involved in these traditional livelihood activities and agriculture spend a lot of time outdoors, working in the fields, in the woods, in their backyards, rearing and taking care of animals, and around the common utilities like village wells, and threshing grounds, etc. Doing their day-to-day activities in the nature and interacting with the local ecology on an everyday basis is a part of their life. Hence outdoor activities are a tradition and integral part of them.

Families in rural India send their children to schools that are run by the government or to a private school that may be aided or non-aided by the government. In either case, the school is a place that plays a vital role in a child’s life, making a huge influence on his/her entire being. It affects the way they think, make sense of the things around them and their holistic development socially, culturally, morally, intellectually, and physically. Most of the children in the villages attend schools because of support from parents, and also significant impetus provided by the Right to Education Act, introduction of mid-day meals and combined efforts of the government and non-governmental organizations (NGO) (Elementary Education Government of India, Ministry of Human Resource Development, 2016).

The government has also introduced various developmental schemes like ‘Activity Based Learning (ABL)’, the UNICEF2 assisted project implemented in primary government schools in seven states including Rajasthan, Madhya Pradesh, Jharkhand, Gujarat, Andhra Pradesh, Karnataka and Tamil Nadu (Evaluation of Activity-Based Learning as a means of Child-

1 Papad is a thin, crisp, round-shaped Indian food made from peeled black gram flour (urad flour).

2 UNICEF is United Nations Children's Emergency Fund that provides developmental assistance to children in developing countries.
Friendly Education – Final Report, 2015). ABL, a child-centric teaching pedagogy, is introduced with the aim of increasing student-teacher interaction and in this method children learn in groups using ABL cards\(^3\) to make learning joyful. The programme fosters creativity and experimentation in the classrooms (Raj, Sen, Annigeri, Kulkarni, & Revankar, 2015).

When it comes to the education in India, it has evolved through the years. During the 1990s and early 2000, the school books were literary based and no emphasis was given to connect the knowledge to our daily life. Being a hyperactive child and kinesthetic learner, I myself had issues coping with the school. Education was perceived to be happening when we read the textbooks and schools never promoted group-work. Hence as a student, education for me was through textbooks that only catered learning for students who could read and comprehend, ignoring the kinesthetic and visual leaners, and teachers were mere conveyers of information in the textbooks.

However in 2005, the National Curriculum Framework (NCF) proposed some major changes to the schools all over India (National Curriculum Framework, 2005). NCF 2005 states that teaching methodology is as important as the textbooks for the education to be effective. The present NCF proposes four guiding principles for curriculum development: “(i) connecting knowledge to life outside the school; (ii) ensuring that learning shifts away from rote methods; (iii) enriching the curriculum so that it goes beyond textbooks; (iv) making examinations more flexible and integrating them with classroom life; [...]” (National Curriculum Framework, 2005: ix). Hence the curriculum, the teaching methodology and the textbooks became student-centered, and it addressed the ‘what’ of learning, and ‘how’ of learning. However the ‘where’ of education, that is, the place of learning still remained unaddressed.

Especially when it comes to education in government primary schools in villages in India, it becomes important to identify how schools nurture the local knowledge in the village among the children, that is, how they succeed in integrating the knowledge of the local ecology, local techniques and proficiency that is endemic to the village landscape, and the local

\(^3\) ABL cards describe various activities and use combination of texts, images, games and hands-on experiments. These cards are developed for each lesson in the textbook. Schools that have adopted ABL methodology are provided with ABL cards by the government and all the classroom sessions are taught using the ABL cards and hence textbooks are merely used as reference. More insights on ABL cards and methodology are provided in the findings chapter.
culture, at the school. Are the schools considering the ‘where’ of education? Are the rich natural and cultural landscapes and spaces in a village well utilized by the schools for learning their lessons in the curriculum? Is the education preparing the children for useful work in their home villages, or is it preparing them to leave their home environment in search for jobs that suit their education?

This brings us to the question of how the introduction of place-based learning in government primary schools in villages accomplishes the above challenges. Also how does it aid in every child’s overall development and in providing inclusive education where children with different types of learning styles (auditory, visual, kinesthetic, reading, writing) get equal opportunities for a joyful learning experience? Also, can place-based learning be a means to sustainable rural development by increasing the interconnectedness between children and their environment?

This research tries to seek answers to these questions and thereby find out the status of outdoor learning; especially place-based learning, that is, how the teacher utilizes the places around the children in the village (like schoolyards, nearby rivers, lakes, agricultural fields, livelihood, nature reserves, etc.) for teaching the lessons. The study will only focus on the places that are available to the teacher at her disposal in the village, that is, within 2 to 5 kilometers from the school where logistics is not a problem for the teacher.

**Aim of the study**

The aim is to study the possibilities for adopting place-based learning in the rural government primary schools in India.

**Research Questions**

1. What is the current situation for place-based learning in the government primary school in a village?
2. How can place-based learning be implemented in a village school?
3. Who are the stakeholders and how do they influence the implementation of place-based learning in a village?
4. What are the factors that affect the possible implementation of place-based learning in a village?
Rationale

Learning is a continuous life-long process that begins from birth. While the nature and the people around always aid in the learning process of a child, primary schools serve as an introductory phase to his/her formal schooling. As they are often restricting the children to the indoors and continuously performing all the learning activities inside the classrooms, and also tested for their knowledge in their classrooms, children begin to have a notion that ‘learning only happens indoors’. Furthermore, since children spend a lot of their time in the classroom, the interaction with nature and the places around them is reduced. This continuing trend throughout their schooling eventually leads to a disconnection from their place, and may lead to lack of care, emotional connection and empathetic appreciation, towards the environment around them. Considering the plentiful opportunities for place-based learning in a village and its overall impact on learning and sustainable rural development it becomes important to introduce place-based learning when the children are young in primary schools.

Additionally, villages provide abundant natural and cultural landscapes that remain largely unexplored by the education system. Also, these landscapes are within the reach of the teacher. The teacher can take advantage of the topography provided by the village for implementing place-based learning where transportation of the students does not become a problem. Hence this research presents a strong case for further investigation into its applicability by also unraveling the possibilities and barriers that need to be addressed.

Theoretical framework for Place-Based Learning

Place-based learning (PBL) or place-based education is a pedagogy that makes the ‘place’ an educational resource. The place can be anything: a playground, forest, kitchen garden, museum, arboretum, science center, parks, etc. It not only involves being in the place physically, but also using the place effectively, and all its elements in the learning process. Place-based learning, in a school context, is utilizing the outdoors or places in the vicinity of the school for example, a garden, a forest, a lake, etc. or out-of the school places (extended classrooms) like museums, National Parks, or science centers for accomplishing the curriculum goals. It involves being in the place and conducting activities that are experiential, and sensory based, for example, if the teacher has to teach about ‘the sense of smell’ to grade two students, the teacher takes the class to a forest nearby. She divides them into groups and
asks the group to collectively pick three items in nature that smell different. Such an activity performed by the teacher falls under the category of PBL. Through this example, we can understand that PBL provides opportunity to perform activities in a group. It also provides possibility to gain knowledge through inquiry-based learning. For example, the teacher can have discussions and ask them questions like why do you think the objects differ in smell, how did they recognize that they smell different, etc. In this study, the activities grounded on place-based learning, incorporate the following key concepts. It is important to note that other studies on place-based learning may involve other concepts that are not addressed in this research.

**Place-based pedagogy**

PBL adopts place-based pedagogy that takes into consideration the ‘where’ of teaching and learning. It provides opportunity to utilize the different elements of nature and culture around the children, and help them develop connectedness to a place. PBL shifts focus away from the abstraction of nature to the particulars of a place and understand why a particular place matters to them (Wattchow & Brown, 2011: 86), and provides educators with an opportunity to utilize the places around the school for teaching different concepts in the curriculum. Moreover, places are sources of identity (Wattchow & Brown, 2011: 54). There is a creation of feeling for the place with time and this creates oneness, i.e. to be in and one with the place. PBL, when practiced by a school in places that are in its vicinity, creates possibilities for dwelling and oneness with the place. It leads to ecological awareness of the place (Prokop, Tuncer, & Kvasnicak, 2007), facilitates attitudinal and behavioral changes towards their immediate environment (Ballantyne & Packer, 2009), provides different possibilities for action – *affordance* (Gibson, 1986), and brings familiarity (Szczepanski & Andersson, 2015). If educators teach the lessons using the places that the children are familiar with, it creates relevance to them, which is a strong motivator for learning (Driscoll, 1994). For example, a near-by stream where children often go to play or catch fish can be utilized to teach about aquatic ecosystems, and it creates relevance to the learners, thereby providing a strong motivation and interest to learn more about the place that is familiar to them. John Dewey, one of the prominent educationalists, also brings across the importance of studying subjects, not as isolated things by themselves, but in their reference to student’s social environment (Dewey, 1990: 77). Since elements in the society bring relevance to the children, it is important for educators to integrate it to the learning process. Therefore, PBL employs a
place-based pedagogy that enables an educator to utilize the places in nature, culture and society to teach lessons in the school curriculum.

Cross – curricular learning

PBL is inherently multidisciplinary (Woodhouse & Knapp, 2000). Since nature is vast and diverse, the interaction in nature is also diverse and it never provides classified or subject-wise information as compared to indoor classes. Place-based pedagogy will break the walls between various subjects and help children learn, and inter-connect concepts from various cross-sections of the school curriculum. Research conducted with pupils studying in 8 primary schools in the North East of England has shown that studying outdoors has benefits beyond the core-subject at hand (Scott & Boyd, 2014). It has demonstrated cognitive gains in Literacy (one area of the curriculum) through fieldwork in Ecology (another area of the curriculum). The literacy levels achieved by pupils who had taken part in the Ecological fieldwork was higher than those of their peers who did not, and this indicates the benefits of cross curricular learning furnished by outdoor activities. Moreover, “experience [outside the school] has its geographical aspect, its artistic and its literary, its scientific and its historical sides” (Dewey, 1990: 91). Hence place-based learning will lead to cross-curricular learning at every point.

Experiential learning

PBL is inherently experiential (Woodhouse & Knapp, 2000). Experiential learning goes beyond passive listening, reading or writing, and it is dependent on activities that are performed hands-on by the students. It leads to improved student performance (Ekwueme, Ekon, & Ezenwa-Nebife, 2015), and they will consider learning to be more enjoyable and meaningful (LeBlanc, Léger, Lang, & Lirette-Pitre, 2015). Moreover, experiential learning should create experiences that “arouse curiosity, strengthen initiative, and set up desires and purposes that are sufficiently intense to carry a person over in future. Every experience is a moving force” (Dewey, 1997: 38). Experiences should be progressive, connected and continued (Experiential Continuum) (Dewey, 1997: 33). This means learning from one activity should be connected to another. The quality of these experiences are important, and hence the teacher has to plan the lesson flexible enough to permit free play for individuality of experience and yet firm enough to give direction towards continuous development.
PBL should hence provide quality experiences to learners and educators through hands-on activities. It should furnish an environment that encourages freedom of movement and also room for personal thoughts, and imaginations, which is vital for learning. Therefore experience is central for place-based learning.

Multi-sensory experiences

“The natural environments offered by place-based learning supports sensory experiences of a wide range that include visual impressions, scents, movements, sounds and shapes, etc.” (Dahlgren & Szczepanski, 1998:24). Research conducted among 9th grade students in Romania, has demonstrated that students’ skill to design and analyze computer algorithms is highly increased with the involvement of multiple senses - eyesight, hearing and the kinesthesia (Katai, Juhasz, & Adorjani, 2008). Research by Hannaford on the role of senses in education has confirmed that when ever touch is combined with the other senses, much more of the brain is activated. This builds more complex nerve networks and increases the learning potential (Hannaford, 2005: 47). She also argues that richer sensory environment and greater freedom to explore it, leads to more intricate patterns for learning, thought and creativity (Hannaford, 2005: 36). Since the outdoors provide the freedom to indulge in all our senses, it supplies a richer sensory experience and hence greater possibility for better learning through PBL. Multi-sensory learning provides opportunities for gaining more information, better comprehension, more efficient memorizing and ensures the same chance for students with different dominant senses (Katai, Juhasz, & Adorjani, 2008). Thus PBL provides multi-sensory experiences that contribute to better learning.

Motor sensory experience

Students gain motor sensory experiences at school by combining physical movements in the form of games or actions during lessons or physical activities like aerobics, yoga, sports, etc. that aid in their overall development. These activities are likely to increase attachment to school and self-esteem that are important contributors to academic achievement (Trudeau & Shephard, 2008). A study conducted with pupils aged 7–13 years studying in 10 UK schools, has shown that introducing motor sensory activities (like visual attention and eye tracking skills; classroom mild aerobic exercise; concentrating attention on limb-movement patterns; cross-lateral body coordination; relaxation) can significantly improve academic performance (McClelland, Pitt, & Stein, 2015). Place-based learning furnishes possibilities for motor
sensory experiences when students perform activities with physical movements using their body and also utilize multiple senses in a unique environment that is determined by the place of interaction. For example, when students are taken out to the nearby open paddy fields, and asked to collect 5 different elements in nature that smell different, then students have to move and also use their sense of vision, touch and smell to identify objects. The place of interaction itself plays a vital role in providing motor sensory experience. The same activity when performed in a forest with varying terrain will trigger different motor sensory experiences that are unique from those provided by the open paddy fields. Hence PBL presents learners with opportunities for various motor sensory experiences that will support their overall development while also potentially increasing their academic performance.

**Inquiry-based learning**

Inquiry-based learning creates experiences that enable the learners to formulate their own questions, and to seek their own answers (Hammerman et al, 1994: 30). Inquiry triggers curiosity and enhances the motivation of the students to learn and to seek knowledge (Driscoll, 1994). It encourages investigation and discovery (Holmes, 2011). Appropriate teaching methods can stimulate interest, motivation, and involvement among students and also subsequently lead to increased student achievement in science (Foutsa & Myers, 1992). In this context, inquiry-based learning can be viewed as a teaching methodology in which there is a higher degree of involvement by the students to frame the problem, and work together to find a solution.

Though it mainly depends on the teacher, PBL when based on inquiry can stimulate the learner. For example, if the teacher utilizes a paddy field in the village for teaching, and asks the students to take a sample of soil and investigate what are the insects and worms that thrive in the soil, and frames questions like what do worms do to soil, what happens when fertilizers are applied, what happens to soil when paddy plants grow, etc. the students are stimulated to find answers and there is a healthy discussion within the group. The environment furnished by the place, like paddy field, in itself opens up whole new set of encounters with nature like insects, terrain, birds, inorganic elements in soil, smell of the soil, texture of the soil, etc. that supports the possibilities for inquiries, discussions and solutions that may not have been encountered inside the classroom. In this context, PBL can be considered to encourage various situational inquiries and investigations that arise by being in
the place. Hence benefits of inquiry-based learning in PBL can be profound and therefore a fundamental part of the theoretical framework for place-based learning in this study.

**Group work**

Human beings including children are naturally social. It is common to see human beings collaborate with each other to perform tasks. At school, students also co-operate naturally to learn their lessons in curriculum, play games, dance and perform various tasks. Cooperative learning when emphasized at schools can promote the social skills among students (Lavasani, Afzali, Borhanzadeh, Afzali, & Davoodi, 2011). “The principle that development of experience comes about through interaction means that education is essentially a social process” (Dewey, 1997: 58). Group work also increases critical thinking ability of the students (Fung, 2014). They will also learn to appreciate the diversity of perspectives that exists in their group. Facilitating group work among students by teachers at school, show increased student academic achievement, enthusiasm to work with others, and focus on the task (Kutnick, Ota, & Berdondini, 2008). PBL provides the scope to work in groups. For example, when students are working together to accomplish a certain task in a place, for example, collecting aquatic fauna samples beside a pond and studying their features will provide opportunities to collaborate and increase the social skills among the students to perform the task collectively. Activities under place-based learning can aid in the development of social and collaborative skills among students (Victor, 2013). Group work is an integral part of PBL.

**Restoration benefits**

At school, students have to always perform tasks like writing, reading etc. that demand directed attention and extended use of directed attention by the students, which may lead to exhaustion. The restoration benefits of nature are profound on the fatigue that arises due to prolonged use of directed attention (Kaplan, 1995). Furthermore, a study conducted on the effect of ‘greenness’ on children’s cognitive function showed that children who have greenness around them have higher attention capacities (Wells, 2000). Since place-based learning provides opportunity to be in the nature, it can provide restoration benefits to the students that will in turn help them to perform activities like reading, writing etc. much better.
Hence the theoretical framework for place-based learning in this study is built on place-based pedagogy that brings across ecological and cultural awareness of a place, connectedness to a place, sensitivity and will for action towards the place, and at the same time incorporates group work, and inquiry-based, multi-sensory, experiential, motor learning that leads to cross curricular knowledge and restoration benefits of the nature to the students.

Figure 1: The theoretical framework for place-based learning
Methodology

The methodology adopted for both data collection and data analysis is based on a qualitative approach. “Qualitative research places emphasis on understanding through looking closely at people’s words, actions, and records” (Maykut & Morehouse, 1994: 17). Therefore this research incorporates the fundamental approach of qualitative research that is based on careful documentation of discussion with teachers, students, and parents, and also observation of their actions in the context of outdoor learning and outdoor life in the villages. Observations are recorded through field notes while the interviews with teachers and parents were audiotaped that were later transcribed for data analysis. The interviews were recorded only after the informants gave their consent. Besides, all the participants had prior information about the research and were aware of their role as informants. This research also combines literature studies that are relevant to the findings from this study.

Research Procedure

The research was conducted by performing case studies in two schools located in different villages in the south of India. The timeline for the study was 2 weeks, conducted from January 4, 2016 to January 14, 2016; one week in a Government Primary School (GPS) situated in a village in Dindigul district in the state of Tamil Nadu and another week in a Government Higher Primary School (GHPS) situated in a village in Shimoga district in the state of Karnataka. Adhering to the ethics of a researcher, the name of the villages will not be revealed and hence will be called Padalur and Talukoppa, and the schools will be called GPS, Padalur and GHPS, Talukoppa respectively. The two villages in two different geographies of India were selected for comparative reasons. The villages differ in terms of topography, flora and fauna, climate, language, culture, etc. hence providing an insight into how these differences could play a role in the place-based learning in government primary schools in India. Moreover, the choice of the two schools located at a distance of nearly 700 KM from each other is based on the research strategy influenced by the available resources at hand, that is, amount of time, and money required to travel to these schools, and the set of schools that were accessible within the network of the researcher.
**Methodology Rationale**

Focusing on just two instances rather than many provided an opportunity to perform an in-depth and detailed study that uncovered significant insights, which would not have been discovered through superficial research with many instances (Denscombe, 2007: 36). According to Denscombe, another advantage of a case study is that it focuses on relationships and processes. “Relationships and processes within social settings tend to be interconnected and interrelated. To understand one thing it is necessary to understand many others and, crucially how the various parts are linked” (Denscombe, 2007: 36). The case study approach worked well here because it offered more chance than the survey approach, of going into sufficient detail to unravel the complexities of the given situation. This research required an in-depth understanding of the local environment, that is, the teachers, their background, and their choice of pedagogy to teach the lessons, the children, the community and their knowledge and skills; all of these are interconnected and contribute to place-based learning. Hence a case study approach provided the opportunity to comprehend the relationship between these entities, and also the process that control them.

Moreover, "the real value of a case study is that it offers the opportunity to explain why certain outcomes might happen – more than just find out what those outcomes are” (Denscombe, 2007: 36). Therefore, this case study not only investigated what happens at the school and the village with regard to place-based learning but also ‘why or why not’ it happens. Another major advantage of a case study is that it allows the use of combination of different methods of data collection and when this data is put together it gives a holistic idea and also has the probability to increase the validity of the data (Denscombe, 2007). This research uses an amalgamation of research methods like semi-structured interviews with teachers, Headmaster, and parents, rich written description of their daily experiences at the village and feedback on the sample outdoor activities from the students, group discussions and mobile interviews with children, observation of the village, and the people in the community.

Though every rural government school in India is a typical instance that shares similarities, a case study with two instances helped to compare the settings (topography, teachers and their background, children, and community and their knowledge) and learn from the similarities and differences between them and how it affects place-based learning (Denscombe, 2007:}
44). It is important to note that it is the uniqueness of the place, the school, the teachers and their distinct background, that is more significant than the concept of generalization.

Despite the fact that a case study has the above advantages, it can be influenced by ‘observer effect’, that is, a slight change from the ‘normal’ behavior of those being researched because of the presence of the researcher (Denscombe, 2007: 46).

**Impact of ‘self’ on the research**

Having my grandparents and parents from the rural parts of Karnataka, I have had the opportunity for extended stays in the village from childhood and this can be perceived as an experience that contributed to deeper understanding of life in a typical rural household and about the relationships and processes between different entities at the village level. Also I lived and worked with many Government Higher Primary Schools across Dhakshina Kannada and Yadgir districts of Karnataka on experiential science learning for 3 years through a Non Governmental Organization (NGO). During my work here, I took up various roles: as a teacher working closely with students on hands-on activities, as a teacher trainer guiding other teachers in the NGO, and as a Programme Lead planning, and implementing the project. Since I worked through the NGO I was never bound to all the terms and the norms at the school and I could always have close, informal discussions with the teachers, students, Headmasters and parents. Moreover I worked with children, who lived a life where nature played an important role, be it a source of livelihood for their families through agriculture, or other forms of work depended on nature like making areca plates, broomsticks, etc. or taking care of animals for food, or other animal products like milk, collecting firewood, etc. Though they were closely inter-twined with the nature, did children really ‘appreciate’ and develop a ‘deep sense of connection’ with the environment they live in everyday? Since children spend a lot of time in school, I was intrigued to find out more about the role of schools in building this connection. It is this background experience, and knowledge on processes and intricate relationships between the different stakeholders of education in rural government schools (the children, the teachers and the Headmasters, the community), that I as a researcher bring to this study. It is also important to note that my ethnicity and experience will affect the way I perceive the social setting in both the villages.
Furthermore, the sex, age and ethnic origins of the interviewer can influence the amount of information people are willing to share, and their honesty about what they reveal (Denscombe, 2007: 184). For example, the female teachers at GPS, Padalur revealed about the ‘practices’ followed in the village during menstruation, but not the male teachers. If I were a male researcher the chances of obtaining this information could be very low. Also, since I was a young female researcher, the teachers in the village considered ‘unsafe’ for me to go on my own that restricted the information about the village I obtained whereas, a male researcher could have entered the village by himself and obtained some information that a young female researcher could not have.

It is also important to note that questions based on place-based learning put forward to the teachers and parents, had triggered the development of new thoughts, perspectives, analysis of possibilities, and assessment of PBL within the respondents, which would not have occurred otherwise in their daily life. Hence I, as a researcher, have made an effect on their thought-process through this case study.

**Methodology for data collection**

High quality data from the field can be obtained only when the researcher immerses himself/herself with the place and people. Since qualitative data is often people’s words and actions, the methods adopted are those that allow researchers to capture language and behavior (Maykut & Morehouse, 1994). The data is gathered by using in-depth interviews, group interviews, natural conversation, rich written description from children of their daily experiences at the village and feedback on the sample outdoor activities from the students, and participant observation. This section provides detailed explanation on how the aforementioned methods are used in this research.

**A. Teachers as informants**

One-to-one and group interviews were conducted with the teachers to understand their background, training and teaching methodologies adopted in the primary school. One-to-one interviews allowed the researcher to develop a good rapport with the interviewee and have a discussion without the interference of thoughts, ideas or suggestions from other teachers.
Also, focusing on just one person gave the interviewee sufficient time to develop trust and hence share things that would not have been shared in a group discussion.

GPS, Padalur has 6 teachers while GHPS, Talukoppa has 3 teachers. Since one of the teachers was on a holiday in GHPS, Talukoppa, and another could not be interviewed because of lack of time, 7 teachers were interviewed in total and each interview lasted for at least an hour and half. A group discussion was also conducted among the teachers at both the schools. Group interviews provided the opportunity to control the interview yet gain a greater variety of experiences and opinions from more than one participant. All the interviews were semi-structured, that is, the researcher had a clear idea of the points of discussion but was open to the interviewee elaborating their points of interest and was not very particular about the order of the questions (Denscombe, 2007). Please see Appendix to know more about the questions that were used as the basis of discussion for the semi-structured interviews (one-to-one and group) with teachers.

B. Participant observer in the class

Interviews could be a good method to understand the teacher’s values, knowledge and perceptions but to really know what they actually did in the class; there was no substitute to watching them teach. Therefore four participant observations with different teachers were conducted at the schools – 1st grade and 5th grade at GPS, Padalur, and 1st-3rd grade and 5th grade at GHPS, Talukoppa. Participant observation is a form of reactive observation where people know that you are observing them and hence will play to the observer (Bernard, 2011). Therefore, it also important to note that the teacher’s behavior in the class could have been modified to a certain extent because of the presence of the researcher in the class. For example, he/she could have either put in greater efforts into the teaching than a regular class or she would have got nervous and that could have affected the teaching quality to an extent.

C. Children as informants

Children in the village form an important group who interact with different places in the village on a daily basis through various activities like playing, working in the fields, eating fruits from the trees, rearing animals, etc. It is important to understand how children perceive their daily lessons at school, and its connection to their life. It is also vital to obtain their
account of how different places play a role in their life and whether the teachers at the school use these places to teach the lessons. In order to gain understanding on all these aspects multiple methods were used – written description of their experiences at the village, and feedback on the sample outdoor activity session, group discussion and mobile interviews with the children.

**Written description of experiences and feedback:** 5th grade students at GPS Padalur and 1st to 7th grade at GHPS, Talukoppa were asked to write about the activities they love to do in their daily life and what places they liked to go in their village. In addition, at GHPS, Talukoppa the children who could participate in the sample outdoor activity session conducted by the researcher were also asked to write about their experience of the outdoor activity. The advantage of using the open-ended questions was that it allowed the students to reflect the full richness of the views held by the them and they could express their views in their own words (Denscombe, 2007: 165). Though it demands more time from the respondent it provided rich data to the researcher.

**Group discussion with children:** They were conducted to understand how children spend time at school, after the school and during weekends. All the group discussions were conducted in the presence of the teacher and after seeking the approval. Each group consisted of 6 to 9 children and the discussion lasted for 15 minutes. Though in a group discussion there is a risk of a dominant view overshadowing the minority views (Morgan, 1997), the researcher was moderating the discussion and giving a chance for everyone to speak. Another disadvantage is that there is a tendency to miss certain topics of discussion because the informants can either consider it un-important or forget it (Morgan, 1997).

**Mobile interviews with children:** Walking with the children to their homes brought significant insight into how children interact with the nature along the way and how they perceived different places in the village. Here the researcher took on the ‘least adult role’ by minimizing the characteristics of an adult both physical, and social, and authority (Mandell, 1988), and at the same time being a participant observer among the children. Spending time along with children in different places in the village provided an understanding of their daily -lived experiences in the nature. Moreover it is important to consider the institutional context while interviewing children, that is, structured and highly controlled space of the school might encourage children to provide the ‘correct answer’ while the more child-controlled neighborhood like a playground might provide them with more freedom to give answers.
which in some cases might have been undermined at school (Spyrou, 2011: 155). Hence, mobile interviews, and natural conversation in different places in the village, for example, their ‘play’ areas in the village provided different insights from the group discussion at the school.

It is important to note that mobile interviews with children were conducted only after their parents and teachers gave their approval. Furthermore, when it comes to representing views of children, another important question to ask is whether the researcher imposes their own meanings of the data (Spyrou, 2011). Using combination of multiple approaches, that is, written experiences from children, group discussions at school, and performing the mobile interview with natural conversation, provided opportunity for the researcher to understand children’s perspective from multiple dimensions. Hence this may reduce the possibility of the researcher succumbing to the problem of imposing his/her meanings to the children’s voice.

D. Observation of the village

Observation of the village provided a broader social context and an idea about the topography of the village, the flora and fauna, occupation of the people in the village, and the way outdoor places are used in the village. The goal of the observation was to understand the natural setting in the village.

Methodology for data analysis

“The goal of the qualitative research is to discover patterns which emerge after close observation, careful documentation, and thoughtful analysis of the research topic” (Maykut & Morehouse, 1994: 21). Qualitative data analysis is a non-mathematical analytical procedure that involves examining the meaning of people’s words and actions (Maykut & Morehouse, 1994: 121). Therefore all the interviews with the teachers, children and parents were recorded and transcribed. Subsequently, the data from the interview was analyzed using data-driven thematic analysis, that is, identifying and analyzing patterns within the data (Braun & Clarke, 2006). Fields notes from the observation of the village, classroom, written description of the experiences in the village from the children, and transcriptions of the interviews with children, teacher and parents were carefully examined for emerging patterns and themes. Convergence of a major theme or pattern in the data from these multiple methods will lead to strong credibility of the findings (Maykut & Morehouse, 1994: 146).
Conclusion

This research utilizes the case study approach since it is considered as the most appropriate methodology to conduct the study. With the aim of increasing the data accuracy and validity, the research has adopted a combination of methods – semi structured interviews (one to one and group), written description of experiences in the village, natural conversations, and observation of classroom and the village; and also different sources – teachers, children and parents. The interest of the informants is kept in the forefront and hence strictly adhered to the ethics of the researcher by making sure consent was granted for conducting and recording the interview, and for the classroom observations. Furthermore, the identity of all the teachers, children and parents interviewed in this study are not revealed and hence they are given fictitious names. Finally, the data obtained from different methods was carefully put together to find patterns within them, which are discussed in detail in the following chapter along with the relevant literature studies.
Findings

All the findings from this study are classified into two major themes:

1. Current practices in the existing system
2. Possibilities and barriers for place-based learning in the existing setting

It is important to note that current practices in the existing system play a significant role in this case study. It will be the point of departure for the possibilities and barriers for implementing place-based learning in the prevailing scenario. Hence this case study demonstrates a detailed discussion about the present system in the below section.

Current practices in the existing system

Both the schools GHPS, Talukoppa and GPS, Padulur have adopted ‘Activity-Based Learning (ABL)’ as a primary methodology for teaching. While GPS, Padulur is implementing ABL from 1st to 4th grade, GHPS, Talukoppa has chosen to implement it from grade 1 to 3. The key features of the current practices observed through the case study are that the methodology of teaching adopted in ABL is child-centered and child-friendly. It uses group work as a prime mode of learning and it provides inclusive education since it uses multiple modes of learning like pictures, actions, songs, and games that cater to different students with different learning styles. But when it comes to place-based learning at both the schools, the teachers did not use the different places in the village as an educational resource. This section provides a detailed explanation of the key findings in the existing system.

I. Child-centered and child-friendly methodology of teaching

The ABL methodology is developed based on Child Friendly Learning Centered (CFLC) principles (Evaluation of Activity-Based Learning as a means of Child-Friendly Education – Final Report, 2015). Hence the whole model has evolved such that students get a comfortable and friendly environment to learn at school. In this case study teachers, parents and children have expressed that the current methodology is indeed child-centered and child-friendly. For instance, during one of the interviews with a parent, Lakshmi, who shifted her two children studying in the 4th and 6th grade, from a private matriculation to the government school in Padalur, makes a comparison on the method of teaching at both the schools. Based on her
experience of sending her children to the private matriculation school, she feels that the it is not child-friendly. She conveyed,

“There is a lot of pressure, too much work… They (private matriculation schools) push the children a lot.”

In Lakshmi’s opinion, the private school was pressurizing the children and giving them too much work. She further elaborates in the conversation below how she firmly believes that education is beyond reading the content, memorizing and writing, which the private school has been practicing. She also explains how there is too much emphasis on tests in private schools.

“In that school they keep weekly tests, but here (GPS, Padalar) they use the cards daily and teach the children what they like and want to learn. But it is not the same in that school, they ask the children to copy and write, and memorize all the content. Here it is much easier for the students… they do not emphasis too much on tests, and it is good.”

Lakshmi points out how the Government school in Padular uses the learning cards based on ABL to teach the children. She identifies the importance of teaching children what they are interested in learning and feels that teachers at the GPS, Padalar understand this. Lakshmi associates teaching method followed in GPS, Padalar to be child-friendly and child-centered based on the following factors:

1. Use of learning cards
2. Teaching what interests children, and
3. Right amount of emphasis on tests.

Hence, the ABL methodology adopted in the GPS, Padalar, is seen by Lakshmi as a method that puts child to the forefront during the teaching learning process. Moreover, the evaluation report of ABL conducted in 110 classrooms shows that 75% of the classrooms provide ‘fear-free’ and child-friendly learning atmosphere where children could physically move around the classroom, voluntary participate and assume responsibility for their learning (Evaluation of Activity-Based Learning as a means of Child-Friendly Education – Final Report, 2015).
In addition, the children through the written description of their daily experiences in the village have contributed to the understanding that the school is indeed child-friendly. On asking students in the fifth grade at GPS, Padalur, to write about what they like to do, four children, Rajan, Anju, Devi and Dharan wrote,

“I love to come to school.”

The children were asked to write anything they love to do in their daily life and along with many other things they liked to do for example helping mother, playing with friends, etc. they also mentioned that they love to go to school. This statement shows that these students are happy to be in the school and there is a child-friendly atmosphere for learning.

One of the teachers, Veerapandy, at GPS, Padalur, has an experience of working with children for the past 15 years and has had the opportunity to use both Activity-Based Learning methodologies and conventional methodology. During the conversation with Veerapandy, he emphasizes how these cards make learning easier for children and opens up possibilities for the child to decide the pace of learning. He said,

“When the students read these cards after we teach, it is easier for them to understand and learn. Also students can decide the pace, the students can keep moving to the next card after completing the activities in that particular card (the cards are sequential and numbered), if a particular student is slow, we sit beside them and help them complete the cards.”

Veerapandy believes that the cards used in the ABL method makes learning easier for students and also allows them to play a significant role in determining the pace. Moreover, being a participant observer in the classroom for the grades 1,2 and 3 at GHPS, Talukoppa, it was observed that students approached the teacher with the cards asking her whether they could work on the questions or activities mentioned in the cards. This observation reassures that students perform activities based on their intrinsic motivation and their own will, therefore making the learning process child-centered. Evidence from the research conducted among 507 students studying in seven Elementary Schools in Portland, USA confirms that higher intrinsic motivation is positively related to school achievement (Corpus & Wormington, 2014). Hence the child-centered and child-friendly approach of ABL that
utilize the intrinsic motivation of the students can contribute to higher academic achievement. Additionally, studies have confirmed significant improvement in student performance following the implementation of ABL in publicly funded schools in the state of Karnataka (Raj, Sen, Annigeri, Kulkarni, & Revankar, 2015).

II. Group work as an important mode of learning

ABL uses group work as a prime mode of learning (Evaluation of Activity-Based Learning as a means of Child-Friendly Education – Final Report, 2015). Teachers at both GHPS, Talukoppa and GPS, Padalur confirmed that all the classes start with a grouping card that is numbered from one to six and students always belong to one of these groups during their lessons. During the classroom observation of the grade two at GPS, Padalur, it was observed that students used the grouping cards and always belonged to a group from 1 to 6. They performed the activities corresponding to these cards. Below pictures highlight the use of grouping cards. While some of the students belonging to group one (picture 1) are working together on an activity, other students belonging to group two (picture 2) are working on another activity card.

![Picture 1: Students in group one working together](image)
One of the students, Manju, in his feedback about things he likes to do in his daily life wrote,

“I love to study in a group.”

Similarly, three other children, Narendran, Periyasami and Bhoomi wrote,

“I love to be with students in a group and study.”

It is interesting to notice that children have included studying in a group as something they love and look forward in their everyday school life. A few children also find groups as a motivation to write. Three of the children, Parijatha, Devi and Periyasami wrote,

“I love to write with other students in a group.”

Through these examples, the children display their pleasure to be in the group while they are learning their lessons at school. In the conversation below, Saraswathi, the Headmaster at GPS, Padalur explains how ABL provides children the opportunity to learn in groups.
“Through ABL activities children develop the ability to have group discussions. They sit in circles and discuss. The child has the opportunity to find what he knows but his friends don’t and what his friend’s know but he doesn’t. The children in the group also come and tell us that this particular child in the group does not understand the particular concept, and then it becomes easier for us to identify such children and teach them.”

This conversation sheds light on the potential of group discussion in learning. She highlights the possibility of children learning from each other through discussions. She also points out how it helps her as a teacher to identify students who do not understand a particular concept because his peers become aware of that beforehand and let her know about it. In other studies, group learning has shown to increase academic achievement, and focus on the task (Kutnick, Ota, & Berdondini, 2008), and also strengthen social skills among students (Lavasani, Afzali, Borhanzadeh, Afzali, & Davoodi, 2011).

ABL utilizes the social interactions among children and their fondness to be in groups for better learning. Hence GPS, Padalur and GHPS, Talukoppa use group work as a major tool for learning.

![Children at GPS, Padalur working in groups](image)

**Picture 3: Children at GPS, Padalur working in groups**
III. Inclusive learning

This case study has brought out the inclusive nature of Activity-Based Learning, that is, learning environments that support diversity - diversity based on different learning styles among the students. The different learning styles can be auditory, visual, reading, writing, and kinesthetic.

In the below discussion with the teacher Veerapandy, he elucidates the different methods that are used in the ABL.

“These cards utilizes pictures, play way methods, and discussion with the teachers (teacher’s cards) where the teacher has to explain the essence of lessons to the students… they also sit in groups and discuss (group discussion cards), and we also identify students who do not understand and ask his peers to help him.”

This conversation with Veerapandy has thrown light on the mixed methods that are used in ABL, that cater to learners with different styles – visual, auditory, kinesthetic, reading, and writing. Apart from reading and writing exercises, the cards also include pictures that cater to the visual learners, and also explanation by the teacher that caters to students who are auditory learners. ABL also include group discussions and peer supported learning that caters to students who learn better in a group.

The following picture shows the card number 40 used at GPS, Padalur that introduces the chapter on ‘Food’. One side of the card is text-based information while the other side of the card has pictorial representations for the corresponding text.
Hence, the interview with Veerapandy and the cards observed in the case study bring out the actuality that ABL is multi-sensory and caters to children with different learning styles. During the discussion, Veerapandy also pointed out the use of actions while teaching. He said,

“We teach new words in English, through actions or by doing, for example, learning words like stand, sit, etc. by doing the actions.”

Veerapandy’s example of using actions to learn new words in English, demonstrates how learning by doing will cater to the students who are kinesthetic learners. Another teacher Jayamala at GPS, Padalur, pointed out how the teaching methodology has gone beyond the teacher merely talking in the class to incorporate activities that requires children to ‘do’ it. She conveyed,

“No there is a fulfillment that students have understood what we have taught. We were using pictures and cards before, we were asking them to see it, but now we are also showing many activities and asking them to do on their own. So students understand better now and the teacher is better convinced and has a fulfillment that they have understood… Before when I used to learn, teachers used to say it orally in the school,
they used to say that you have to brush your teeth in this way, but now we are using the cards and show them how to do it and also ask them about it every day in the attendance order... So they learn about cleanliness by doing it, and they learn the essence of this lesson with good understanding... We not only use charts now but also learn through discussions and by doing it. There is a difference in the way we teach now and back then.”

Jayamala connects her own experience as a child at school who was taught through the conventional lecture method. But now she is happy with the ABL cards, and the teaching methodology that allow children to participate and ‘do’ the activity than just listen to a teacher talking about a subject. She also mentions that when children perform the activity themselves or watch the teacher do it, then she is more convinced that the student has understood and also that it creates a fulfillment within her. Jayamala also believes that using discussions in the classroom along with the charts promote learning. Through this conversation, Jayamala brings out the ‘inclusive’ nature of learning in the current system that allows children to learn through experiential activity and also have discussions, catering to children with different learning requirements.

Observation of the learning cards at GHPS, Talukoppa brought to the notice an activity card in Environmental Science that imbibes the concept of air-pressure to the children by performing a hands-on activity (See picture 5). It is a peer-supported activity in which children use an old tin and make a hole on the top and make many holes at the bottom of the can. The can has to be dipped into the water and then lifted up when it’s full. The children have to close the top of the tin using their index finger and hold the can such that the bottom of the can with many holes is facing the ground. When the children remove their finger from the hole on the top, then water starts to flow from the holes in the bottom. The ABL card below explains the procedure to do the activity and also describes that water flows out because of air pressure.
When it comes to inquiry-based learning, the teachers usually ask questions that help the students connect it to their daily life. In the below conversation, one of the teachers Raji, at GPS, Padulur mentions how she uses questions in the beginning of the lesson.

“I ask questions, children are motivated if we ask questions. For example, if I am taking a lesson on food, I can ask questions like what did you eat in the morning? What did you eat in the night? What fruits do you like? What vegetables do you like? Then they reply and it is easy for us to connect it to the lesson. So we can say that if you eat this vegetable, you get these nutrients. And, if some children say that they love fried food, then we can
tell the children that it is not good to eat too much fried food, it is unhealthy, we can talk about healthy and unhealthy food, and also talk about the nutrients and vitamins in the food. So asking question related to that in the beginning would help them understand that we are going to learn about this concept today.”

According to Raji, asking questions about the concept that are related to their life helps motivate the children, gets them interested in the lesson while also help the students get a feeling of what they are going to learn. Moreover according to Driscoll, bringing relevance and arousing curiosity through inquiry are considered strategies for stimulating motivation to learn (Driscoll, 1994).

Therefore, education at GHPS Talukoppa and GPS, Padalur involves experiential, and multi-sensory motor learning with inquiry-based approach that promotes inclusivity in terms of accommodating children with different learning styles.

IV. Teacher education, and training and support by the education department

The teacher education among the teachers interviewed in this case study show that most of them have a Diploma in Teacher Education (DTE), or Diploma in Education (D.Ed) and three teachers have continued their education and completed Bachelors in Education (B.Ed) also. The teachers in GPS, Padalur have studied DTE, while the teachers at GHPS, Talukoppa have studied D.Ed. Saraswathi, the Headmaster at GPS, Padalur, and another teacher Veerapandy had completed their DTE in 1991, while the other teachers completed later. Ishwari completed in 2000, Jayamala and Sunita completed in 2002, and Abdul completed in 2004, and at GHPS, Talukoppa, Sowmya completed her D.Ed in 2006. Sowmya who was the latest to join the government primary school had written the Common Entrance Test (CET) for teachers while other teachers at GPS, Padalur had joined the school by Employment Seniority, that is, when they complete their education, they apply for a job at the Employment Office, and are on the waiting list. They are appointed, if there is a vacancy. This study has found out that irrespective of the type of course they studied (D.Ed, DTE, or B.Ed), the time of completion of their teacher education, and the way they were recruited, all
the teachers have obtained training provided by Sarva Shiksha Abhiyan (SSA)\(^4\) for adopting Activity-Based Learning. Hence the training received by all the teachers in both the government primary schools through the educational department plays a vital role in the adoption of ABL.

The interviews revealed that all the teachers have had the experience of teaching in both ‘conventional’ lecture methodology and through cards provided in Activity-Based Learning. Sowmya, one of the teachers at GHPS, Talukoppa, explains how ABL did not exist when she was studying her course in Teacher Education. She said,

“‘When I was studying (D.Ed), ‘Nali Kali’\(^5\) did not exist…. It was implemented in Lower Primary Schools in 2008-2009, but to Higher Primary Schools it was introduced in 2009-2010. So, in 2008, when I started working in this school as a teacher, Nali Kali was not introduced yet. It was introduced in GHPS, Talukoppa in the academic year 2009-2010…. But first ABL was tried in Heggadadevanakote taluk in Mysore in 2003-2004. It was first tested in this taluk and then implemented in other schools all over the state. While I was training I learnt ‘Chaitanya’ method.’”

Here Sowmya, brings to the notice that during her Teacher Education she was not trained in ABL, and she had studied the ‘Chaitanya’ method instead. She further adds in the conversation how the Chaitanya method differs from Activity-Based Learning methodology in Nali-Kali, and hence teachers were given additional training through SSA.

“In the Chaitanya method we had 5 steps, which include pre-preparatory activity, preparatory activity, learning point, practice and application, and evaluation. One lesson should consist of these five steps… For example, when they have a lesson in Maths on money, they know to add, subtract, etc. since I had taught and made them practice a lot. But if I have to make it applied, I have to ask questions related to their life, say for example, you

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\(^4\) SSA is an Indian Government programme aimed at the universalization of elementary education

\(^5\) ABL is implemented in Karnataka under the programme called ‘Nali Kali’.
are going to town and how much money did you take, how much did you spend, what did you buy using the money, how much money is left with you now, and how much did you give back to your mother? So this is application. Then in evaluation we keep a test after every lesson, or combine two competences and give a test. I can ask questions orally or give a written test after the lesson – it is our choice…. In the Chaitanya method we had to explain, read the book and then students will read the same, understand and ask questions. But Nali Kali is more like ‘Self – learning’, ‘Joyful learning’, and ‘self-paced learning’, that is, the students learn at their own pace, and joyfully learn how much ever it is possible for him to learn…. When the Nali Kali system was introduced, there was training for us on the new methods, because that system was not there when we had our teacher education. So, it was a new system and even we had no idea about logos and what we have to do if we get this particular logo, how to use them, and how to form a group using the group cards. They made us act like students and they were teachers and they taught us how to use the cards. That was the method training.”

Sowmya highlights how ‘Nali-Kali’ differs from ‘Chaitanya’ methodology that she learnt during her teacher education. She brings focus on the training that was provided to the teachers to get them accustomed to the ABL methodology that uses cards, logos and group cards for learning, since this methodology was new to them.

Furthermore, Saraswathi, Head Teacher at GPS, Padalur who teaches the 5th grade, highlights the support provided by the education department through SSA in supplying teaching aids. She conveyed,

“When I came here in 1990 teaching was oral, similar to the lecture method in college, teaching using books, read what there are in the books and write. Then 10 years back, SSA (Sarva Shiksha Abhiyan) came and brought many changes, they introduced cards, for grades 1 to 4th grades…. Back then there were not many teaching aids, so the teacher had to make them and show it to the children. So some teachers will do it, some will not. Not all the teachers will take the efforts to make the
teaching aids; they might do it if the school is very strict. But now SSA is providing these teaching learning materials required for every child, they allot funds, we buy the things necessary for the lessons. Back then children had to learn the entire book forcefully; they get a feeling that they have to study a lot… Now they use the cards that provide concise information to the students. The book has a lot of information and the child will not study. If you give the entire book they will not read, give them a small piece of paper, they will read. Moreover, there are colorful pictures in the cards, which motivate students to take the card and read them with interest. Whereas in the books they have lots of texts with just have one or two pictures. Compared to back then, teaching and learning is easier and students understand easier. The play-way method also makes it easier. For example, Mathematics can be taught using a kit box 6. They learn Mathematics playfully. The activities in the cards provide the opportunity for the students to find the required items and make the things. So, they develop the ability to ‘search’ and find things and make something out of it (points at items displayed in the school).”

This discussion with Saraswathi sheds light on the role of the education department that not only includes providing training, but also furnishing teaching aids, ABL cards, and funds to buy materials. Saraswathi also thinks that the cards are motivating children to study and also using play-way methods, for example, the Mathematics kit-box, all provided through the education department, helps teachers.

Hence the discussions with the teachers at GPS, Padalur and GHPS, Talukoppa have shown how the education department in the existing system plays a major role in teacher training for the adoption of ABL, and supplying various teaching aids and ABL cards.

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6 Kit Box consists of items and materials to learn basic concepts in Mathematics like addition, subtraction, multiplication, division and to achieve Mathematic skills like measurement, pattern, handling data, fractions, area and perimeter
V. Status of place-based learning

Conversation with the teachers at Talukoppa and Padalur, shed light on current status of place-based learning at both the schools. The six teachers in GPS Padalur and the two teachers in GHPS, Talukoppa who participated in the interviews told that they are not from the village and reside in the nearby or faraway towns. They also conveyed that they go into the village not for teaching but usually for ‘census’ once a year. On enquiring the teacher Veerapandy at GPS, Padalur, about the details of village visits made by him, he said,

“We go (to the village) every year for census. We go to every household and meet the parents. We tell them that if they have a kid over 5 years, please send them to the school here.”

Here, Veerapandy brings to our attention the purpose of visits to the village is not for place-based learning but for census. Interviews with other five teachers at GPS, Padalur have confirmed that the purpose of visiting the village was mainly census. The group discussion with teachers Nagaraj and Sowmya at GHPS, Talukoppa, has also confirmed that they do not venture into the village to implement place-based learning at school. The teachers here also go into the village for census. Nagaraj and Sowmya conveyed,

“We go for census, and we also go to every house twice a year to collect money for organizing the annual school festival, I know the village, and have an idea of the surrounding areas and how people live here… We also did one activity called ‘hora sanchara’, two times. In this activity the students are supposed to go out and write down what they have seen, we took the students outside just nearby to the school and we walked with them for 10 minutes. They were supposed to write down what they observed immediately after returning to the classroom.”

According to Nagaraj and Sowmya, although they had conducted one outdoor activity ‘hora-sanchara’ and hence place-based learning is not adopted as the prime method of teaching. The teachers confirm that they had not utilized the places in the village as an educational

7 A tour outside (translated from Kannada)
resource for their daily lessons. During the conversation with one of the teachers, Jayamala, with an experience of teaching 11 years at GPS, Padalur, mentioned that she never used any place in the village for learning. She said,

“I have never taught outside. According to the norms, it is always inside the classroom. Only for the games card we have gone outside, and also for the educational tour (to the nearby Mango juice factory)... I have not taught any lessons from the curriculum outside in the village.”

According to Jayamala, she has not taken any outdoor class and she perceives that the norm in the school is to teach in the classroom. Hence the interviews with the teachers at both the schools has shown that teachers have never utilized a ‘place’ in the village, except for the ‘hora sanchara’ activity conducted at GHPS, Talukoppa, and the teachers in GPS Padalur, who visited the nearby Mango juice factory along with the students in the academic year 2013 as an ‘educational tour’.

When it comes to using nature for learning, teachers used local materials (like a lotus plants) etc. that is available and brought it to the classroom to show it to the children. On enquiring Jayamala, whether she used the nature in the village to conduct the classes, she mentioned that, during science lessons she asked children to bring a plant to the classroom. She said,

“In science, they had to learn about parts of a plant, that time I asked children to bring a plant to the class.”

Jayamala brings to the focus how teachers are accustomed to teach in the classroom though learning about plants gives the teacher an opportunity to implement an outdoor activity. Nagaraj, one of the teachers at GHPS, Talukoppa, also confirmed that they bring the plants into the classroom and teach. He conveyed,

“If we are talking about the roots, we pluck the entire plant along with its roots, and show it, we show the leaves and the roots of the plant and help them to differentiate the parts of the plant. It’s not necessary to go to the field or outside, and we can bring the plant into the classroom, we also ask children to bring the plants. We don’t take the children outside every
time, sometimes we bring the plant, sometimes we ask children to bring, for example if we are teaching about flowers, we ask students to bring different types of flowers to the class, and dissect the flower, say Hibiscus, and show the internal parts of the flower to the students.”

According to Nagaraj, in the current system they are habituated to teach in the classroom and bring the flower or the plants into the classroom. These instances exemplify that the current practice is to teach in the classroom and teachers have not utilized the places in the village for teaching the lessons in the curriculum nor considered it as an educational resource.

Observation of the ABL cards for Environmental Studies (EVS) at GHPS, Talukoppa, brought to the notice a game card called ‘Lemon and spoon game’ that provided the opportunity for outdoor games to enhance focus, and motor skills. In this activity students are given a spoon and a lemon. They are supposed to place the lemon on the spoon and walk till the finish line without dropping the lemon. The below picture of the game card gives the description to the teacher to organize the activity.

![Game card with an outdoor activity, ‘Lemon and spoon game’](image)
Another activity card was also noticed that provided opportunities for close interaction with nature – ‘Creating forms and pictures using leaves’. The below picture of the activity card provides description about how to create the forms along with two examples pictures.

Picture 7: Activity card – Creating forms and pictures using leaves
The game card - ‘Lemon and spoon’ activity and the activity card – ‘Creating forms and pictures using leaves’ provide opportunities for outdoor activity. These cards open up the possibilities for the development of more ABL cards with activities that incorporate the theoretical framework for place-based learning and provide opportunities for the teachers to consider different places in the village as an educational resource. These instances lead us to the various possibilities for implementing place-based learning in a village and also the barriers associated that are discussed in the below section.

**Possibilities and barriers for place-based learning in the existing setting**

I. *School Headmaster – their understanding and willingness to adopt new pedagogies*

When it comes to implementing place-based learning in the school, the key person who influences is the Headmaster who also plays the role of a teacher in the school. It is their motivation, understanding and willingness to adopt new pedagogies, and rapport with the parents in the village that plays a role in its implementation. The following conversation between the researcher, a parent and the Headmaster, Saraswathi, of the primary school in Padalur, exemplifies how these factors are instrumental in conceptualizing place-based learning in a school.

Researcher: If I am teaching a lesson outside, what is your opinion on that? If I take a lesson in the nearby mango plantation and I take the students along with me, say 5th standard, what is your opinion on using such a style or method for teaching?

Parent: If it is done like that, ahh, then it is long, students will have difficulties, if it is in the school it is a bit easier, teachers will also have difficulties to take them too far and teach the lesson and come back. If they are in the school, children will study well, teacher will also find it easier. If you try to do such things (outdoor lessons) it will not turn out well.

Researcher: Say I do it in a place nearby the school?
Headmaster: -- (explains to the parent) Say if it is a pond, children will be taken to a pond, we will show them the pond and tell them about the details of the surroundings, and do the lesson by being in the place, children will understand better.

Parent: -- … children will understand, but how will they go if the place is too far, teacher?

Headmaster: -- not far, nearby places

Headmaster: […] say if it is within one kilometer, consider coconut trees, instead of just talking about the coconut tree, take them to a nearby coconut tree, and tell them that this is coconut tree, they will understand better.

Parent: -- How is that possible teacher, children will face difficulties? (laughs)

Headmaster: (smiles) It is not about difficulties, it will help the child understand better, to see and…

Parent: --I think if it is nearby then children can be taken outside.

Analyzing this entire conversation, we see how the Headmaster understands the importance of being in the place while learning a lesson, and makes an effort to help the parent understand by using examples of teaching about a pond and its surrounding (animals and plants that thrive in and around it) by taking the children to a nearby pond. She also provides another example of using coconut trees nearby the school to teach about the coconut trees. It is interesting to see how the Headmaster is trying to reason and explain to the parent on how this pedagogy aids in better learning among students. By the end of the conversation, the parent seems to understand the Headmaster’s point and forms an opinion that ‘if it is nearby children can be taken outside’.
Hence this basic understanding about the benefits of using the places in the village and her efforts in providing this insight to the parent, the Headmaster plays a key role in opening up the possibilities for place-based learning in rural primary schools in villages. Furthermore, the Headmaster Saraswathi expressed her opinion about implementing place-based learning at school being the Headmaster of GPS, Padalur. She conveyed that if she will be provided training on place-based learning she would welcome the new methodology and implement it in the school. She said,

“They (the education department) give us training on a particular subject because we are not experienced and or gained enough experience in it. What we learn in the training, we have to implement it in the school. So, if there is training on outdoor teaching, I will accept the new method and implement it.”

Saraswathi shows her acceptance for implementing place-based learning at GPS, Padalur, if she is given training by the education department, because in her opinion, what the Headmasters learn through the training has to be implemented at school. She also brings out the importance of the training provided by the education department that helps Headmasters gain experience on a particular subject, and ultimately help in the implementation at the school-level. Hence with a bit more training and support from the education department in terms of developing cards based on place-based learning will open up new opportunities for adopting authentic learning in villages.

Moreover, the Headmasters can have a huge influence on the other teachers at school. During the conversation with Saraswathi, she mentioned how she looked up to her former Headmaster and learnt many values from him/her. She articulates in the below discussion that the former Headmaster had inspired her to draw the values of punctuality, being friendly, and taking care of children.

“The former Headmaster was friendly to all colleagues and I am also following that. So, I am friendly to everyone. What he/she taught me, I am following that. I learnt to be punctual, to mingle and talk openly with colleagues, and to take care of the children from the former Headmaster.”
Saraswathi upholds the values and follows them, as she became the Headmaster. Here, Saraswathi brings out the influence of the Headmaster on the colleagues at GPS, Padalur in adopting values set by the leaders. Hence this conversation highlights how the Headmaster has an influence in the adoption of place-based learning at GPS, Padalur. The impact of Headmaster leadership has also been demonstrated in other studies. A research conducted at three secondary vocational schools in Greece, show that educational leaders like the Head Teachers or the Principals have a significant influence on the other teachers at the school and in the implementation of ‘Innovative Educational programmes’ that involve adoption of new teaching methods or means (Lourmpas & Dakopoulou, 2014).

II. Teachers - Their localness, and training and attitude towards place – based learning

Teachers are important contributors for education. Their training, attitude and background play a vital role in how they educate the future generation. This case study has thrown light on how the factors – a. Localness of the teacher, b. Attitude of the teacher towards place-based learning, and c. Teacher training in PBL affect the opportunities for place-based learning at school.

a. Localness of the teacher

The teacher’s ‘localness’ has an impact on their knowledge of places in the village and hence how they use the places for authentic learning at school. The six teachers in GPS, Padalur and the two teachers in GHPS, Talukoppa who participated in the interviews told that they are not from the village and reside in the nearby or faraway towns. They conveyed that they were inside the school everyday and went into the village usually for ‘census’ once a year. Since the teachers are not ‘local’ and also spend most of their time inside the school, this affects their familiarization and knowledge of the village and hence the implementation of PBL in the village school.

In addition, a conversation with a student Bharani, from the village, who was practicing to be a teacher at Government Middle School, Padalur, through her teacher education course, shed light on the support from the state education administration for the ‘local’ teachers. Probing whether she liked to join the government school at Padalur after completing her Teacher Education, she mentioned that she has to write a test (TET) and qualify, and then she will be
able to apply to be a teacher at this school through counseling only if there was a vacancy. Furthermore, during the travel to the school every day with another teacher, Sindhu, who was from the city, that took nearly one and half hour of travel, she expressed her discomfort in making this travel to reach the school. The conversation also shed light on how the ‘long’ travel affects the time the teacher spends at the school, development of relationship and knowledge about the village (ecological and cultural), and also the effect of the stress and tiredness (mental and physical) on the family of the teacher undertaking the long travel. Moreover, the teachers at GHPS, Talukoppa, Sowmya and Nagaraj, express their discomfort in making the travel. While Sowmya travels one and hour, Nagaraj spends an hour. Bharani’s situation in contrast to Sindhu, Sowmya and Nagaraj’s elucidates the need to facilitate a ‘local’ teacher by the administration. Hence the lack of support from the administration is seen by Bharani, Sindhu, Sowmya, and Nagaraj as a barrier to be a ‘local’ teacher at the government school.

Studies conducted with 18 teachers in lower, middle, upper primary years and secondary schools in UK, has shown that familiarization of the teachers to a place has a significant role in place-based pedagogy (Mannion, Fenwick, & Lynch, 2013). Wattchow and Brown, also indicate that the apprenticeship of educators to the ‘place’ is a necessity (Wattchow & Brown, 2011). This postulation is applicable to teachers at both the government primary schools. The schools need either a ‘local’ teacher or a teacher who familiarizes with the places in the village if they are not local. In both the case studies, since the teachers have stated that they are not ‘local’, this factor will affect the authentic learning in the village and hence familiarizing with the places in the village will be a good starting point for place-based learning at both the schools. Administrative support to be a ‘local’ teacher will also aid in place-based learning at GPS, Padular and GHPS, Talukoppa.

b. Attitude of the teacher towards place-based learning

The attitude of the teachers towards place-based learning is also a significant contributor in opening up the possibilities for place-based learning. On enquiring teachers at GHPS, Talukoppa, on introducing experiential activities like gardening or gaining traditional knowledge of making ropes, they expressed their receptiveness and pointed out how it creates an opportunity for children to spend time in nature. Nagaraj conveyed,
“I think it will be useful, since the parents in the village do not let the children do any activities related to agriculture or gardening, and ask them to study always, they do not get opportunity to spend time doing such activities. So at school if we ask the children to do gardening related activities, for example, cleaning the garden, plant new saplings, watering the plants, etc. children perform that with such a high level of interest, they are very happy, they never get tired of doing it, and they can do it from morning till evening without getting tired. We have asked the children right now to water the plants, if you go out and observe them, they do it with so much happiness, because parents do not allow the children to do them at home, because according to them, even if they are struggling, their children should not face troubles.”

Through this conversion it is evident that Nagaraj understands the importance of spending time performing activities related to gardening in the village while also recognizing the joy children derive out of such activities and how the school can contribute in providing opportunities for children to perform experiential activities in nature. While Nagaraj recognizes the importance of the school in contributing to the place-based learning, Veerapandy, teacher at GPS, Padulur has a different opinion. On enquiring if he had taken children outside during his daily lessons, he expresses that children in Padalur are already in the ‘nature’ and know about it. He said,

“Students in the village know about nature. Students see the nature in the village in their everyday life.”

Veerapandy slightly differs from Nagaraj on his viewpoint on doing outdoor activities at school. He believes that students already know about the nature and they see it in their daily life, so he doesn’t really see the purpose of taking the children outside. A conversation with another teacher, Jayamala at GHPS, Padalur revealed her unreceptiveness to the concept of teaching through outdoor activities in the village. In the following conversation it could be noticed that the researcher gives three different locations in the village, for which the teacher displays her reluctance to each of these locations.
Researcher: There is a tree next to the temple, with slabs to sit on. Do you think you can take a lesson by sitting under the tree?

Jayamala: We cannot sit there and take the lesson, and neither they (villagers) allow us to take the lesson there. We are ladies, and parents might think it may be inappropriate for us to be there because we might have our menstruation. They will not accept, we have never taken a lesson there nor we will take there. We go to the temple on Fridays and Thursdays and we pray there. If we have to tell about the temple then ‘sir’ (a male teacher) will come along with us and take the children there. We shouldn’t take lessons there…

Researcher: There is a pond close by to the school, what is your opinion on taking a lesson about the pond by going beside the pond and being in the place?

Jayamala: They are small kids, what if any child pushes the other child into the pond, we always advice the children not to go near the pond.

Researcher: What if you had to take a lesson in the coconut farm (see picture 8) behind the school to learn about coconut trees?

Jayamala: It will be good to take the lesson there. But I feel worried about children and their safety, what if a coconut tree falls down, I feel all these worries will obstruct the ability to take the class. I will not feel like taking the class. I will keep thinking about the children and their safety. I feel if we teach students inside the classroom it is safe for them… Whichever place we choose, we need to consider their safety… We can may be go outside with the children and show them the coconut tree for a bit, but we can’t sit there and take a lesson, it is not possible, we can do anything in the class, show them anything, we come to teaching field with this mindset.
Through this conversation, it is evident that Jayamala rejects the idea of taking the children outside by holding on to a reason for each given situation. She also identifies the root cause for her unreceptiveness, that is, teachers come into the teaching field with the mindset that lessons happen inside the classroom where children are considered safe. It is also important to keep in mind that Jayamala had lost her child in an accident, which could have had an impact on her notion about safety for children. Comparing her conversation with that of other teachers, Nagaraj and Veerapandy it could be noticed that the combination of a mindset that is nurtured to be in the classroom with years of experience and a personal incident has an impact on her reluctant attitude towards place-based learning.

![Picture 8: Coconut farm behind the school that was suggested to one of the teachers as a possible location for place-based learning](image)

When it comes to place-based pedagogy, it becomes important for the teachers to consider and value the local knowledge. The conversation with Jayamala shed light on the attitude about the parents in the village that persists in her. In her opinion, the parents of the children who come to GPS, Padalur are uneducated and hence they go to forests and do agriculture, and that if a child is unable to excel in studies then he/she will get involved in agriculture. This shows that the local knowledge is considered inferior and not as something that holds educational value. She said,
“Children should learn technical jobs, they should learn computers and whichever shop you go, whichever job you do, you need to learn a lot and educate yourself. Since their parents are not educated they roam in the forest and go here and there, children should learn and educate and only then they can go for jobs. Even if they work in a shop they will know to operate the computer… but they should not do what their parents are doing right now… But there are some children who are interested in agriculture, they say with excitement that they went in the forest, I went with the goats, and some of the kids will do that. How much ever efforts we put in, some children will not have their mind set to the studies, and if the child could not study, and have parents who are into farming and have a lot of land, then they go for agriculture…”

According to Jayamala, children who go into the forest with animals and who do agriculture are those who could not excel in studies. Also in her opinion, the locals who have the knowledge about flora and fauna in the village are ‘uneducated’. From this conversation it is important to understand that teacher’s attitude on the importance of local knowledge on flora and fauna make a huge difference in the actualization of place-based learning, because if this knowledge does not hold an educational value to the teacher, he/she will not see the purpose of adopting place-based pedagogy in the village.

Though the teachers differ in their outlook on conducting outdoor activities at school, their attitude matters in its implementation. Pajares in his research argues that teacher beliefs affect the teaching methods they adopt (Pajares, 1992). Empirical evidence from a study that investigated the relationship between teachers’ educational beliefs and their computer use with 525 primary school teachers in Belgium showed that teachers’ beliefs significantly contributed to why teachers adopt computers in the classroom (Hermans, Tondeur, van Braak, & Valcke, 2008). The results from this study can be extended for the adoption of place-based pedagogy at school, that is, a teacher’s belief in place-based pedagogy affects its realization at school. Hence teacher’s attitude and also their understanding of place-based learning play a vital role in its actualization.
c. Teacher Training in PBL

Training provided to the teachers during their teacher education and also the training sessions organized by the education department influence how teachers educate their students. The conversations with the teachers at GPS, Padalur and GHPS, Talukoppa have confirmed that the training programmes by the education department do not emphasize on utilizing the different places in the village for education. Nagaraj, one of the teachers at GHPS, Talukoppa mentioned during the group discussion that training programmes do not give prominence for teaching outdoors. He said,

“The training programmes don’t emphasis on ‘outdoors’. Whatever we teach, it is based on the classroom. We use classroom, blackboard and practical experiments.”

Nagaraj points out how the current training programmes for teachers do not focus on outdoor activities. During the group discussion Nagaraj also demonstrated the importance of the education department in creating opportunities for place-based learning at school. He said,

“If place-based learning is introduced through the education department, we can do such activities. Right now it is hard for us to do it on our own. There is already a lot of work set by the department, and we can’t accommodate extra activities on PBL.”

In Nagaraj’s view, if place-based activities are a part of the ‘regular’ activities set by the education department, it creates possibilities to do such activities. Sowmya, his colleague also agreed with him and added,

“The department has set the curriculum and the syllabus, and we can’t do these (outdoor) activities diverging from the curriculum” 

Sowmya and Nagaraj consider PBL not a part of the current curriculum. In the conversation below Nagaraj also express the significance of incorporating the place-based activities into the existing syllabus. He further conveyed,
“We can do the outdoor activities if they are incorporated in the syllabus. Say for example, in the agriculture college students do the work practically, they have to sow the seeds, take care of the plants and harvest them and they are given marks for that, then students will develop competencies and learn the work practically and gain interest in developing technologies. Similarly, we can do these at school too.”

Nagaraj uses the example of the agriculture college to demonstrate how incorporating experiential outdoor activities in their syllabus create opportunities for such activities at the college. He feels that the syllabus framed by the education department, if includes place-based activities, then it is easier for teachers at GHPS, Talukoppa to actualize them at school.

The conversation with Raji, teacher at GPS, Padalur brings to the forefront how the training impacts teachers personally and the teaching methods they adopt in the classroom. She explains how the training session on conducting games to learn new words in English motivates them to organize it in the classroom. She said,

“There was training (from the education department) called ‘British English’… They taught us many new songs in English. They also told us that we could conduct a game for students with new words, or small sentences with 3 or 4 words in English. In this game, we write 10 words and stick them on the wall, and we divide the students into groups of 5. Then we can ask students in a group to go and see what words are there on the wall and then come back and write the words they remember. If there are 5 words, they will remember at least three words. They will do it actively and participate well since they want their group to win. This game will help them learn new words with correct spelling…. So, they conducted this game for us (teachers) during the training and it was very nice.”

This conversation with Raji brings out certain important aspects that play a vital role in the teacher’s adoption of new practices. She brings out the importance of training in opening up new ideas and perspectives. For example, Raji was motivated during the training to conduct games in the classroom to learn new words in English. She further adds in the below
conversation how the teachers were also encouraged during the training to use simple English sentences with the students in their everyday classroom interactions and mentions how it stimulates ‘shy’ students to talk. She also realizes the importance of practicing these simple sentences and appreciates this idea provided at the training by connecting it to her own experience of being a ‘shy’ person who did not talk to other teachers and how practicing helped her overcome the ‘fear’ of talking to others. She conveyed,

“They (the education department) also asked us to use small words and sentences during regular classroom interaction with the students. For example, we were told to encourage the students to use simple sentences like, ‘Please give me a pen?’; ‘May I come in?’; ‘May I go to the bathroom?’... Some of the students are so shy and they don’t talk. So encouraging them to use simple sentences will get them interested to talk. Even I was like that before, I was very shy. Even though I knew a lot of things, I wouldn’t talk to other teachers… I used to talk only when I taught the lesson and I was quite otherwise... I had a fear, a fear that what if somebody passes comments on what I talk. But now I socialized with everyone. Most of the teachers come in the bus daily, and we meet every day. We smile and talk. I started having more conversations with other teachers in the bus and now I talk without fear... Also, if there is anything new, we share and we try to learn from each other. For example, if a teacher has tried a new method, he/she shares about it in the bus, and I try to implement it in my class. We talk about all these in the bus – how students are learning, what methods are they using, how to implement it, etc. So we take what is good and try it ourselves...”

Here Raji mentions how she was motivated in the training to use simple sentences and words in English in the classroom with children. She also connects it to her own experiences, and mentions how she got rid of the ‘fear’ of talking to people by involving herself in the conversation with other teachers. She brings out the relevance of practice here. She also points out how teachers learn from each other through casual conversations. This discussion with Raji summarizes three major aspects: 1. The importance of training in equipping teachers with new practices, and the motivation provided during the training that prompts teachers to adopt them, 2. How teachers get rid of their ‘fears’ by involving themselves and actually
practicing it. 3. Sharing knowledge on new methodologies and experiences among them that builds and strengthens them as teachers. These aspects can be extended and applied for the adoption of place-based learning at schools. Hence training on place-based learning to the teachers becomes significant in opening up new ideas and perspectives among the teachers while the motivation provided during the training could also strengthen their beliefs in place-based learning. Furthermore, practicing place-based learning could help teachers overcome the ‘fears’ associated with outdoor learning, similar to how Raji got over her fear of talking by practicing. In addition, casual conversations among the teachers may help them share knowledge and experiences on place-based learning and hence learn from each other.

Other similar studies have also shown that teacher training influences the adoption of new practices. In another study, 20 schoolteachers in Kentucky, USA attended a place-based professional development program for 6 days. Results show that the training program had a “strong impact on teachers’ confidence to use community resources in teaching, conduct field investigations with students, and the ability to teach watershed topics and connect that teaching to society and real life” (Meichtry & Smith, 2007). Hence training teachers in PBL will positively impact their confidence levels and thereby influence its adoption at GPS, Padalur and GHPS, Talukoppa.

**III. Parents- their willingness to support as a key to place-based learning in a village**

The ability of the parents to influence the education at school in the village can be profound. Their opinion about place –based education plays a key role in its implementation. The discussion below with Lakshmi highlights how a parent reasons the advantages and disadvantages of conducting outdoor lessons. She said,

“The advantages are that if children are indoors then it feels like children are always inside the school, but if they are taken outside then children gain experience in the outdoors and get used to it. For the one hour they are outside, their mind becomes a bit relaxed than just staying inside all the time. The disadvantage is that it is a bit scary, if the children get excited and go to other places they see around them without the teacher’s notice.”
Here, we notice that Lakshmi sees the benefits of place-based learning. She sees it as an opportunity to gain experience outdoors and also feels it is relaxing for the students. But she also reflects on the point that she is worried children may go astray during the outdoor lessons.

The School Development and Management Committee (SDMC) and Parent Teacher meetings in the existing school setting can certainly serve as a very good platform for discussions about place-based learning in the village and to involve parents to address the barriers. If the parents recognize that advantages can outweigh the disadvantages and are ready to support authentic learning, then it is easier to foresee the barriers through discussions and solve them appropriately. Below is the suggestion provided by Yadav, a parent of four children studying at GHPS, Talukoppa, on using different places in the village for outdoor lessons.

“… You can use plantations and farms, you can use the open paddy farms during the evenings when the sun is not too strong, and go to the plantations during the afternoons where there is more shade and it may be bit cooler, or the forests like this (points out at the forest next to house that is similar to the one next to the school) which we clean up every summer [...] by removing all the small plants, and thorny plants and use it for manure.”

Yadav through his experience of living in the village understands what places are suitable for outdoor lessons and also provides insights into how you can decide upon the place based on the time of the day, to avoid excessive heat during afternoons. On enquiring further whether if the forest next to the school (see picture 9) can be cleaned to keep away the snakes, he says,

“If you clean the forest, they don’t come”

Yadav clearly has the experience of living in the village, working as a farmer in the fields, and working with nature for different purposes. This understanding of nature can clearly help teachers at school to implement outdoor lessons. Hence working in collaboration with
parents, and harnessing their experiences and knowledge on nature is the key to actualizing place-based learning in government primary schools.

While Lakshmi sees advantages of place–based learning and Yadav provides suggestions for using different places in the village, Satish, father of one of the students studying in the second grade at GHPS, Talukoppa shows barriers to place-based learning. The discussion with Satish highlighted the attitude of moving the children away from nature and village among the parents. Satish sheds light on how parents are now hesitant to send their children to collect firewood or explain about agriculture in detail to children because they want them to move to urban areas and do white-collar jobs. He said,

“We used to go to the forest to collect firewood, but now parents are reluctant to take children… neither do we explain to children about farming in detail… Parents think their children should settle in a town, they should be officers.“

Satish brings focus on the fact that parents want their children to be ‘officers’ and settle in the city. This is a barrier to place-based learning in the village since the parents are reluctant to
share their knowledge with children that they gained by continuous interaction with the local nature and from the previous generations. They do not recognize the need to talk about local knowledge on the flora and farming techniques since they eventually want them to settle in the city. Since parents also form a vital part of the village community and have a huge influence on the knowledge gained by the children, their attitude of moving children away from agriculture and village, affects place-based learning and becomes a hindrance in the transfer of local knowledge and development of connectedness to the place among the children.

Furthermore, the interview with Satish shed light on the decreasing number of students at GHPS, Talukoppa. The conversation has also revealed the reasons behind the decreasing strength at the school. He points out that private English medium schools are one of the reasons. Parents in the village are admitting their children to a private English medium school since they want them to talk in English. He further explains that it was not the same situation at GHPS, Talukoppa, when he was a student. There were more than 100 students compared to 19 students at present. He conveyed,

“Recently private schools have increased in number. Parents think that since everybody is sending their children to private schools, I should also send my child to the private, my child should talk English, etc. This belief is creeping into the mind of many parents… It is a recent trend in the last 20 years to send children to private schools… when I was studying in 7th standard in 1982-1983, there were 117 students, when I was studying in 1st standard and 2nd standard there were 130 students. Now it has come down to 19 students. In the past 30 years we have come to this situation.”

According to Satish, when he was in 1st grade there were 130 students in the school, and it decreased to 117 when he moved to 7th grade and finally this academic year (2015-2016) they have 19 students. He demonstrates the peer pressure that operates within the community in the village to send their children to a private English medium school. The nearest English medium school is approximately 15KM away in the town Thirthahalli. If the students from the village are attending a private English medium school in the town, then they would not be able to experience place-based learning within their village, and hence opportunities for the
development of local knowledge and connectedness to the village shall decrease among this section of the children in the village. This situation also in turn builds more pressure among other parents within the village to send their children to private English Medium schools. Satish further added one more reason for the reduced number of students. According to him people who are a bit younger than him have shifted to urban areas. He conveyed,

“The reason for the decrease in the number of students is that all the youth have settled in the city… Many people who are a bit less than my age, have settled in cities like Bangalore, the population has decreased in the village, and the rest who are left in the village, among them a few send their children to private schools.”

Sathish demonstrates through this conversation the shifting population from the village to cities at Talukoppa. This affects the transfer of local knowledge and ultimately place-based learning within the village. Hence the total effect of place-based learning in the village is reduced to a huge extent because of the shifting population to cities, and the peer pressure to admit students to a far off private English medium school.

While these factors are barriers to place-based learning at GHPS Talukoppa, Satish also demonstrates the measures taken by the community to counter these problems. The conversion with Satish shed light on the care and concern that parents have towards the school and solutions implemented by the community to protect their school from the decreasing student strength. In order to conserve the school and promote student strength, the community deposits 2000 Rupees for every child who gets an admission at the school as an incentive. They receive the amount when they leave the school or finish their higher primary education at the school. Satish said,

“To promote education in this school and to conserve the school we give an incentive to every child who gets admitted to this school, we deposit 2000 Rupees to their account in the bank, and we give the amount to them when they complete 7th standard or when they leave… We have been doing it for the past three years… Anyone who comes and joins this school from anywhere will get the incentive. We do this so that it improves the strength in the school, but still as you see, it is very low.”
Satish brings out the fact that the community in the village does recognize the importance of conserving the school and hence their efforts to increase the strength. Since the school is also a vital part of the village landscape, it becomes crucial to maintain the strength and subsequently increase the total effect of PBL at school.

Hence through the parent interviews with Lakshmi, Yadav and Satish it is evident that the parents’ attitude, and their support, influence place-based learning at both the government primary schools. In another study conducted in several schools in a rural district of Malawi, Africa show that active community and parent involvement improves quality of education at the school (Taniguchi & Hirakawa, 2015). Results show that schools with strong parent involvement provided higher quality education compared to those with low parent involvement. Hence parent involvement at GPS, Padalur and GHPS, Talukoppa, will play a vital role for an effective implementation of PBL.

IV. *Children: Their curiosity, and connectedness towards the place, and attitude towards outdoor activities*

Children are curious intrinsically and different elements in nature always harness this curiosity to attract the children for exploration and discovery. This study has brought to the forefront children’s affinity, and connectedness to their place in terms of interaction with flora and fauna in the village during play or on the way back to their home from school, and also while accompanying or helping their mother or father during work. 5th grade students at GPS, Padalur, in the written feedback about the activities they love to do in their daily life, have mentioned that their visits to farms and forest are one of those activities they love to do. Bhoomi, Parijatha, Devi, Pramod, Periyasami, Narendran and Gayathri wrote,

“I like to go to my farm.”

At Padular, the parents of most of the children work in mango, tamarind or coconut farms. Through this statement it is quite evident that they like to go to the farm. Esai, another student elaborated,

“I love my farm and there are a lot of monkeys there.”
Esai points out the interaction with the animals in the nature at Padalur.

Another student Muthu Lakshmi explains her interaction with the flora while accompanying her grandmother to their farm. She wrote,

“Oh the way to my farm I see trees, plants, climbers, and mountains. I saw the monkeys on the tamarind tree. I asked my grandmother what were the names of the all trees that we saw on the way and she said it was Banyan tree, Peeple tree, Kalli Maram\(^8\), Tamarind tree, coconut tree, and mango tree. I saw all these trees in my farm.”

Muthu Lakshmi’s experience clearly shows her interaction at the farm includes the local flora and fauna, and she curiously questions her grandmother about the names of these plants while they are together at the farm. Muthu Lakshmi shows curiosity about the elements of nature in the farm and with the help of the local knowledge from her ‘grandmother’ she tries to understand the place, which contributes to the development of connectedness towards the place. Another student, Arjun, explains what he sees when he takes the goats for grazing. He wrote,

“When I go for grazing goats I see squirrel, myna, sparrow, bee hives, cows and cranes.”

Arjun’s purpose of taking the goats for grazing also leads to encounters with different animals and birds in Padalur. Parijatha, one more student at GPS, Padalur confirms the interaction with different aspects of nature at Padalur. She wrote,

“I love to grow tree, plants, and climbers (vegetables). I love to eat fruits. I love to take care of my kitten. I love to play in the rain. I love to go to the mountains (surrounding Serumalai Resered Forests).”

Parijatha’s experience shows her attachment to nature in terms of growing trees, and vegetables and also taking care of her kitten. She also expresses her love for playing in the

\(^8\) A variety of local flora found in Padalur
rain and also visiting the mountains that surround Padalur. Parijatha’s affirmations bring to the focus the encounters and attachment with local environment at different levels.
The children have also indicated their affinity towards the forest. Ambuja, Esai, Anju, Manju and Rajan wrote,

“I love to go to the forest.”

Padalur is surrounded by Sirumalai Reserved Forests and children go along with their parents to the forests for work. Their affirmation about their love for forests indicates their fondness towards nature. These casual interactions result in the creation of local knowledge in the child and also show how connectedness develops to the place.

At GHPS, Talukoppa, which had 19 students in total at the school, the students were introduced to a few sample outdoor activities in the school premises by the researcher. This activity was conducted before their lunchtime and in all the activities they were grouped with children from different age groups. The three activities conducted were as follows:

i. Smell the nature – Each group was supposed to collect five different leaves from the plants in the school grounds that had different smell.

ii. Shapes in nature – Each group was assigned a shape and they had to bring elements in nature of that shape.

iii. Picture creation - Each group had to collect different items from nature and make a picture of a living or non-living thing they see in the nature.

In the written feedback from the students, all the students unanimously stated that they loved the outdoor game and everyone was fond of running into the nature and bringing different objects for example leaves, stones, bricks, twigs, etc. They also expressed that they felt happy doing the activity. Their affinity towards the outdoor games was quite evident when they continued to play the game on their own after their lunch. They also requested whether they could do the outside activities during their post lunch school sessions that reflected their liking for being ‘outside’. Moreover the students of the age 10 -11 also expressed what knowledge they gained from the activities and why they like to have activities outside. Sandeep, one of the students at GHPS, Talukoppa wrote,
“Through the first activity, we learnt about the different types of plants and trees that exist in the nature and we came to know about the smell of the leaves associated with these plants. I liked the activity”

Sandeep comprehends the essence of the activity and states that he came to know about the smell of the leaves connected to each plant. Another student, Arun, wrote how his friends thought that they would never find leaves in a round shape but succeeded in finding it. He conveyed,

“My friends Sandeep and Gagan thought that they would never find a leaf in round shape but when we looked at the leaves near the well very closely, we noticed that they were round and brought it along with us.”

Arun’s statement bring across the fact that he is discovering the nature around the school along with his friends while also learning about the shapes. Feedback from Sandeep and Arun demonstrates how the outdoor activity contributed to the increase in their knowledge about the nature at their school. Some students have also explained why they like to have outdoor lessons. Hemanth wrote,

“I love to have outdoor lessons because if we have lessons in the forest then we can learn about nature and gain knowledge about it, and also get introduced to different types of trees and try to learn about them. Also we see a lot of wild animals and birds and learn more about them, get to know how they live in the forest.”

According to Hemanth, being in the forest will provide various opportunities to learn about different trees there and also about the wild animals and birds that inhabit the forest. Another student Saraswathi brings across other benefits of learning outside. She conveyed,

“If we have outdoor activities, we can benefit from the fresh air from the trees around us, we will have natural, bright and clear light, and we can learn more about nature.”
She puts across the point that outdoor environment provides fresh air and bright light to learn while also furnishing the chance to learn more about nature. One more student, Rachitha point out other perks of being outside. She said,

“I love to have outdoor classes because outside there are birds singing and also the breeze from the trees around us, which is nice.”

She thinks, being outside provides an environment that does not exists inside the classroom, for example, the breeze that she experiences outside.

According to the students they loved the outdoor lessons because they experienced lessons in a different way, for example finding leaves of a particular shape, finding the smell associated with the leaves of a plant, while also cherishing the additional benefits of being in the outdoor environment with bright light, fresh air, singing birds and the breeze. Most of the children at GHPS, Talukoppa, when asked about what they like to do in their daily life and what places they visit often in the village, answered that they love to visit the paddy fields and farms in the village. One of the students, Gangadhara wrote,

“On Saturdays and Sundays I play, write, spend time with my dogs and cats, go far from home and play, and also go to the paddy fields and plantations. I go to the forest with my grandmother and I also go with my father to chop and collect leaves. I also go to the forest to collect firewood. I also have a tree beside my home that I love.”

Gangadharan interacts with different places in the village, for example forests to collect firewood and leaves, and also faraway places (within the village) to play. He is gaining knowledge from his ‘father’ and grandmother in terms of accessing places for firewood and also likely through conversations with them during their visit to forest. One more student Vishwanath, mentions another place in the village that he loves to visit. He wrote,

“I love to go to the pond in the village because then I can watch the fishes and the tortoise. I love that place.”
According to Vishwanath he enjoys visiting the pond in Talukoppa and watch the fishes and tortoise. He has developed a sense of attachment to this particular place in the village and also gained knowledge about the local fauna in the pond. Another student, Rachitha, conveys her fondness to take care of the plants in the backyard of her home and also at the school and mentions different places in the village she likes. Rachitha wrote,

“I love the marigudi\(^9\) in our village, and also the pond, wells, streams and flowering plants in my village. I love the nature in my village. I love the trees beside my home and we play mara-kothi aata\(^{10}\) on them. There are different fruit trees near my home and we eat the fruits when they appear on the tree. I look after the nature in our school and at my home. I water the plants at school daily after our mid-day meal. I love to work in paddy fields and farms (areca farms).”

Rachitha mentions interaction with nature at different levels in the village Talukoppa. She describes her fondness towards the local temple at Talukoppa, which is an important part of the cultural landscape in the village, and also the local game ‘Mara kothi’ they play by climbing the trees. Here, Rachitha brings to the focus the development of motor sensory skills through local games. She also points out how she takes care of the plants and develops an attachment to them. Participant observation at school and also Nagaraj’s statement (refer to the section ‘Attitude of the teacher towards place-based learning’) who is one of the teachers at GHPS, Talukoppa confirms students’ affinity to take care of the nature at school. She also points out her liking for working at paddy fields and farms that leads to knowledge about local farming practices. Similarly another student, Dinesh, sheds light on the knowledge of the birds in Talukoppa. He wrote,

“The birds in my village are pigeon, parrot, hen, peacock, wood-pecker, stork, duck, sparrow, swan, owl, weaver bird, and crow. The fruit trees I like are Amla tree, Sweet lime tree, Mango tree and Jackfruit tree.”

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9 Temple dedicated to Goddess Mariyamma

10 A game which translates to Tree Monkey Game in which children climb trees and play
This statement by Dinesh shows his interaction with the fauna in Talukoppa and the development of his knowledge on the local birds. He also mentions the fruit trees he likes in the village. Talukoppa is located on the Western Ghats which is recognized as a World Heritage Site by UNESCO\(^\text{11}\), for its biodiversity and endemic species, and Dinesh’s experience brings across the rich interaction with the flora and fauna provided by the environment at Talukoppa. The mobile interviews with the five students of Talukoppa from school to home confirmed the diverse encounters provided to the children by the local environment. On the way, they passed through areca and banana plantations, and then through paddy fields, (see picture 10 and 11) and forest before reaching their home. They also passed a few houses where they socialized with the members of the house and also pet the dogs and puppies at their houses.

\[\text{Picture 10: Banana areca plantations} \quad \text{Picture 11: Open paddy fields}\]

Teachers and the parents had conveyed that it takes not more than half an hour for the walk but they take more than an hour to reach home because they played on the way. The mobile interviews with the children revealed the reasons were more than the play on the way. They pluck fruits from the trees, socialize with the local community members, and also stop at a house of the President of the SDMC (School Development and Management Committee) to give the keys of the school and talk to the grandmother at the house. They also stop by and pet the animals and play with them for a while. For example, while walking through a house,

\(^{11}\) UNESCO - The United Nations Educational, Scientific and Cultural Organization
they called out ‘Chinni’ and the dog came running, wagging its tail (See picture 12). They played with her for a while and then moved on.

![Picture 12: One of the students Rekha playing with ‘Chinni’, a puppy on the way back home]

On the way, they pointed out different varieties of flora that the local community used. For example, they pointed out to ‘Jirkana Hanu’, a sour fruit that the locals used instead of tamarind to make sambar\textsuperscript{12}. Furthermore, on enquiring whether they knew about the bird that made a unique call, one of the students Dinesh mentioned that it was called ‘Mangate Pakshi’\textsuperscript{13} (See picture 13).

\textsuperscript{12} A lentil based vegetable stew made with tamarind

\textsuperscript{13} Mangate Pakshi is Hornbill (translated from Kannada)
The conversation about birds opened up a discussion among them and they were discussing about a black bird and Vinay, one of the students, explained a bit more in detail and said that it has long tail and a small hangings attached at the end of the long tail. Then the students started discussing the name of the bird. They couldn’t agree on the right name for the bird.
On investigating whether they had learnt about these birds in their lessons, all the children mentioned it was not a part of their school lessons. This conversation shed light on the role of the school in enriching childrens’ knowledge about local fauna and hence the possibilities for place-based learning. They also showed the banana plant, wood apple tree, cashew tree, jackfruit tree, mango tree, orange tree and chiku tree, kavali hannu\textsuperscript{14}, hog plum tree, weaver ants and skin shed by a snake along the way. They also seemingly enjoyed this journey interacting with different places in the village because on enquiring whether they would like to go in a bus to their home or prefer to walk, they expressed unanimously that they love to walk because if they were on a bus they would not be able to watch the nature so closely, and hence it is boring to go in a bus. These instances experienced during the mobile interviews provided insight into the rich level of interaction children have with the local community, and the flora and fauna.

In this study, the children have contributed significantly in understanding the local village-local flora, fauna and community practices through their written feedback and mobile interviews. Therefore, this study has shed light on the fact that children play a vital role in the creation and transfer of local knowledge to others. Place-based learning contributes to increased ecological awareness (Prokop, Tuncer, & Kvasnicak, 2007) and effective transfer of local knowledge, and traditional practices (Woodhouse & Knapp, 2000). In a research that involved thirty middle school students studying in grade 6-8 in a public school in Oregon, USA showed that implementing place-based learning deepens their knowledge about the traditional practices and the changes in the context of globalization and recent transitions in the practices. When students worked with a watershed in the local area through local site visits, ariel photos, maps and interaction with the local farmers, their understanding of the social and cultural practices associated with agriculture, wetland management and their life expanded significantly (Santelmann, Gosnell, & Meyers, 2011).

Furthermore, the children in this study have also demonstrated their love for nature at both the schools. A research that investigated the relationship with the nature among 68 students who were 6-12 year olds showed that children’s love for nature comes from the many things that nature provides them for example trees, animals, fruits, etc. and also through their experience of nature through play, interaction with animals, visiting places, etc. (Kalvaitis &

\textsuperscript{14} Kavali hannu is Carissa carandas (translated from kannada) and it is berry-sized fruits
Monhardt, 2015). All the instances discussed this section are in agreement to the results established in this research. Hence place-based learning will provide various opportunities to both GHPS, Talukoppa and GPS, Padalur to harness the natural inquisitiveness and affinity towards nature among the children and strengthen the process of development of connectedness towards the places in the village.
Summary and Analysis

This case study in two government primary schools – GPS, Padalur and GHPS, Talukoppa, situated in two different villages, has shed light on the existing methodology of Activity-Based Learning that puts children to the forefront of teaching learning process, thereby providing a child-friendly and child-centered learning atmosphere. It has also demonstrated that the teachers are well trained in using the ABL cards that support multi-sensory motor learning, and understand the importance of using these child-friendly learning techniques that include inquiry-based and mixed approach of peer, individual and teacher facilitated learning.

The schools have not implemented place-based learning methodology in its entirety, that is, inclusive of all the fundamentals that form the theoretical framework for place-based learning considered in this research. Teachers at both the schools have neither contemplated nor used different places in the village as an educational resource till date. According to the theoretical framework of place-based learning, the ABL satisfies all the key fundamentals, except the place-based pedagogy that is vital and the restoration benefits of the nature that is an after effect of PBL. The following figure compares the ABL and the PBL methodology.

![Figure 2. Comparison of ABL and PBL](attachment:image.png)
It is evident that the missing central concept in ABL is place-based pedagogy and also restoration benefits of nature that is a consequence of PBL. Though the existing system does not implement place-based learning in its totality, I propose that it could be easily integrated into the current education environment by incorporating place-based pedagogy. I suggest the development of ABL cards for primary government village schools that are rooted on place-based pedagogy. These cards will utilize different places in the village as an educational resource and can help both the schools to actualize place-based learning. Some of the ABL cards that I have shown in this case study, for example, making pictures of animals and other living forms using different leaves, already incorporate PBL, but without the teachers’ awareness and recognition about this particular activity’s potential in promoting connectedness to the place, understanding of local ecology, etc. That is, the teachers are not aware of PBL as a teaching methodology, as much as they are aware about ABL and the teaching norms practiced till date is to perform all the activities inside the classroom, for example showing a hibiscus by being inside the classroom, and conducting games mentioned in the cards indoors.

The analysis shows that, the teachers did not learn about Activity-Based methodology in their teacher education. They had received an extended, continuous and hands-on training by the education department in using the ABL cards. Subsequently it has helped the teachers develop an understanding about the importance of using this methodology. Furthermore, the department has set up 10 days of training every academic year that allows teachers to give feedback about the existing ABL methodology and also to additionally equip them with new ideas, perspectives, and methods. These training forums provide the necessary motivation, information, awareness and experience in adopting ABL methodologies and various improvements associated with it. I propose that, from a long-term perspective, this strong existing set up for teacher training be utilized for the implementation of place-based learning. Considering the role of the education department in actualizing ABL in these schools, this case study recommends using these training forums through the department as a platform for disseminating necessary knowledge, encouragement, and experience to the teachers for the adoption of PBL. It can also helping them discuss any issues that they face with PBL, similar to what is being currently done for ABL by the education department. This case study proposes that these training forums can help teachers develop a receptive attitude towards PBL by slowly changing the norm of teaching indoors and providing them an understanding of reasons that contribute to their adoption of PBL. The training programmes on PBL can
also prompt teachers to consider and value the local knowledge on the regional flora, fauna, and agriculture unlike the present situation that does not motivate the teacher to use different places in the village as an educational resource. Based on the analysis that attitude and understanding influence the adoption of new practices among the teachers, this case study asserts the value of these training programmes in keeping up the motivation while also bringing in an attitudinal change among the teachers which are necessary for the adoption of place-based pedagogy.

Additionally, this research has shown that localness of the teachers play a role in their understanding of the local knowledge and places in the village. It also brought out how the administration works against the concept of having ‘local’ teachers. The ‘local’ teacher from the village will be recruited in the village school only if there is a vacancy, and that means, even though there might be teachers working currently at the school who travel a long distance from an urban area which affects their apprenticeship with the village and hence the acquirement of local knowledge, the ‘local’ teacher is compelled to find a job in another school. This administrative set up works against the principals of place-based pedagogy and becomes a hindrance in having ‘local’ teachers at the school who might have familiarized themselves with the different places in the village. Hence this study presents arguments for an administrative system that supports and nurtures the ‘local’ teachers in village schools for an effective implementation of place-based learning. Therefore, administrative set up that promotes local teachers with proper training and the right attitude towards place-based learning would be ideal for its effectiveness.

Another major stakeholder who influences the implementation of PBL in a village school is the Headmaster. With their authority and leadership, also comes their willingness and acceptance to PBL and the inspiration, and motivation provided to other colleagues in the village school. The trickle down effect of the leadership of the Headmaster at the school impacts the adoption of PBL. For example, Jayamala who was unreceptive to the idea of PBL could be inspired and motivated by Saraswathi, the Headmaster who is open to the implementation of PBL. It has also been shown how the Headmaster influences parents’ opinion when it comes to the adoption of new practices and methods. I propose that the School Development and Management Committee (SDMC) in the existing system be utilized for the discussion between the parents, teachers and the Headmaster on place-based learning, and for sharing ideas and suggestions on using different places for different lessons in the
curriculum. Teachers can also seek help from the parents, for example, cleaning the near by forest for conducting outdoor lessons. It can also encourage discussions about any issues and concerns of parents and teachers on PBL. The analysis shows that the village school working in collaboration with parents, utilizing their experiences and knowledge on the local ecology, is the key to actualizing place-based learning. The sharing of local knowledge and parent participation will convey the ideology of PBL to parents. Place-based learning can counter the current trend of parents not actively participating in the dissemination of local knowledge and teachers not regarding them with educational value. Therefore this case study proposes that the parents-teachers partnership through the already existing set up of SDMC can counter the loss and disregard of local knowledge but instead aid the integration of the knowledge on the local ecology at both the schools.

This research has also shed light on the current trend of peer pressure that persists among parents to send their children to the private English medium schools in the faraway towns or urban areas where access to nature can be a major problem. Additionally developing connectedness to the ‘place’, inclusion of local knowledge and ecology is nearly impossible. Besides, there are local species that have names in the local language but may not be known in English. For example, ‘Jirkana Hanu’, a sour fruit that the locals used instead of tamarind to make sambar, is an example of such local species that are not known in English. Hence learning about local ecology in English medium schools can also lead to the loss of knowledge on the local species since they are not known in the English vocabulary. Moreover, since the private schools do not implement ABL currently, it requires more extensive changes to incorporate PBL. This present trend is against the whole philosophy of place-based learning. While there is an increasing body of evidence showing the benefits of PBL on learning, the current trend of private English medium schools and disregard for the local knowledge, works completely against its implementation.

Finally the whole discussion on education boils down to the ultimate beneficiary – the children, who in this case study have clearly indicated their fondness to the local flora, and fauna. This case study points out the need for further support from the school to enhance the quality of interaction with the nature in terms of developing knowledge on local ecology and also developing connectedness to the place. For example, during the sample outdoor activity, the children at GHPS, Talukoppa thought that they would never find leaves in round shape, but managed to spot it right next to the well at school. Hence this case study deduces the
development of new perspectives, and knowledge among children about local ecology through PBL, and their role in the effective transfer of the local knowledge. It infers that the place-based learning fits into the existing model of ABL based on Child Friendly Centered Learning (CFCL) principals. It is child-friendly since it provides them the opportunity to do what they like, that is, to be with the nature that constantly triggers their curiosity and the quest to learn more about it. PBL is child-centered since it uses the places in the village that children interact with on a daily basis and are familiar with, thereby increasing relevance to a great extent, which is one of the prime motivations for learning. Hence the short-term immediate solution will be to do the existing activities in the ABL cards through place-based pedagogy while the long-term solution will be the incorporation of PBL at the training level, similar to what was done during the implementation of ABL, and finally development of cards that are based on PBL. The following diagram summarizes the factors in the current system that could work for or against PBL.

![Diagram showing factors in the current system that could work for or against PBL]

- ABL methodology
- Strong training forum for teachers
- SDMC forum for parent-teacher partnership
- Children's fondness for nature
- Sending children to private English medium schools in faraway town
- Disregard for local knowledge on ecology
- Lack of support for 'local' teachers

Figure 3. Factors in the current system that could work for or against PBL
Conclusion

This study, undertaken to research the adoption of place-based learning in the rural government primary schools, has stimulated a body of research that has led to a deeper understanding on the current situation of PBL in the village schools. It has provided significant insight into the current practices and existing methodology of teaching Activity-Based Learning adopted in the rural government primary schools. Though this study has found out that PBL is currently not implemented in both the schools, it has demonstrated how the village schools can make the transition from ABL to PBL by integrating place-based pedagogy. It has provided an in-depth understanding on the factors and the stakeholders that affect the possible implementation of place-based learning in the village school. It has contributed to a body of research that provides deeper understanding on how the existing training forums by the education department, Headmaster, teachers, parents, the parent-teacher partnership at the village school and children influence the adoption of place-based learning in a government primary school in a village. It has also brought to the forefront the influence of English medium private schools in faraway towns and how it negatively affects PBL and the transfer of local knowledge.

Further research

This study could be extended to find out more about the depth of local knowledge and places among the teachers who are from the village and who are not from the village. It would be interesting to know the differences (if any) in the depth of their local knowledge and what are the factors that contribute to its acquirement and it’s transmission to the children at school. It will also be very useful to investigate the knowledge of local flora and fauna among the teachers. For example, ‘Mangate Pakshi’ or the ‘Hornbill’, which exists in Talukoppa, is the ‘Malabar Grey Hornbill’ that is endemic to the Western Ghats and not found in Padalur. A study can be initiated to find the impact of PBL on the children, the community in the village and its correlation to sustainable rural development. There can be an extensive investigation on the teacher training programmes, its curriculum and emphasis on the need for enhancement of the local knowledge. It will be also be interesting to research further on the tools and support provided to the teachers during their training with respect to place-based learning.
Bibliography


Spyrou, S. (2011). The limits of children’s voices: From authenticity to critical, reflexive
representation. *Childhood, 18*(2), 151–165.  
http://doi.org/10.1177/0907568210387834


http://doi.org/10.1080/03057925.2015.1038500

http://doi.org/10.1186/1479-5868-5-10


Appendix

Questionnaire for the teacher covers the following areas:

1. Background

   - Where are you from?
   - From the village
     - Yes
       - How long have you been staying here?
     - No
       - Where do you stay?
       - Where do you stay?
       - How do you travel to school?
       - How long are you there at school in a day?
       - Have you seen the village?
         - Yes
         - No
           - How often do you go into the village?
           - What do you do in the village?
Key questions:

a) Is the teacher a local in the village and does he/she go to the village often and if so, what do the teacher do in the village? → This helps us know how connected the teacher is to the village

2. Training

- Teacher training
  - When and where was it?
  - How long was the course?
  - What type of course
    - Distant education
    - Full time
    - Part-time
  - Are there training sessions by the education dept. for this academic year?
    - Yes
    - No
      - During the trainings, is there any mention about NCF?
        - Yes
        - No
          - Does the training provide knowledge about different methods of teaching?
            - Yes
            - No
              - If so, please provide the details.
Key Questions:

a) Does the teacher training equip her with different teaching methodologies?

b) Does it give her information on the current policies in education and especially National Curriculum Framework?

c) Does the training talk about children with different learning styles and if so, does it equip her to teach children with different learning styles?

d) Does the training bear any connection to the core concepts of place-based teaching like using outdoor games, outdoor environment, experiential learning, traditional & cultural knowledge, using senses.

e) Does the training give her information about relationship between physical movements and learning?
3. Knowledge

Key questions:

a) What is the teacher’s knowledge about NCF and how to use it?

b) Throughout the teacher’s carrier, what kind of knowledge has he/she gained about different teaching methodologies?

c) What is her knowledge about using outdoor environment, outdoor games, and experiential activities?

d) What is his/her knowledge about the impact of physical movements on learning?

e) What is the teacher’s knowledge about different places in the village?

f) What is the teacher’s knowledge about the community and traditional knowledge?

g) What is the teacher’s knowledge about the curriculum’s connection to the village?

4. Teaching learning experience and practice
Key questions:

a) How experienced is the teacher and experience particularly in this school?

b) What methods/ways of teaching the teacher uses during her teaching?

c) Whether the teacher has used any of the methods that are closely tied to the place-based teaching?

d) How well the teacher understands the learning styles of the different students in his/her class?
Questions based on observation of the class:

Feelings about teaching
- How do you feel about your teaching in class today?
- What were your goals and the lesson goals for the class today?
  - Do you think both the goals were achieved?
    - Yes
    - No
      - What goals were not achieved and why?

Improvement/variation from last year
- Have you taken the same lesson last year?
  - Yes
  - No
    - Could you elaborate on the connection
      - Why do you think so?

Daily life of children here & lesson taught today - You see any connections?
- Have you seen 'this particular place' in the village - Can you share your thoughts about teaching in this place?
- You think there is any difference if you teach this lesson in 'this place'?
  - Yes
  - No
    - What difference do you see?

Connections to my observation of the village
- Have you taught outdoors in this village or in school premises?
  - Yes
  - No
    - Please elaborate

Connections to place-based learning
- Have you thought about teaching outside the classroom?
  - Yes
  - No
    - Explain where you planned to teach and which lesson?

See any connection between place of teaching & learning outcomes?
- Tell me any lessons that you think could be done outside anywhere in the village?
  - Yes
  - No
    - Elaborate on the place, lesson and why you think it can be done there?

- Tell me what made you not think about that?
  - Yes
  - No

- Why do you think so?
Key questions based on observation of the class:

a) How she feels about the class she takes

b) How she sets the goals for herself in co-relation to the goals of the lesson? This will help us realize whether she considers connecting the local knowledge and local environment as a key to her teaching.

c) Whether she puts in efforts to improvise her teaching methodologies from the previous year. This will help us realize whether the teacher is aware that her teaching methodology is very important as the curriculum.

d) How the teacher connects the lesson he/she taught to the daily life of the children in the village.

e) How the teacher looks at my suggestion of using the ‘particular place’ and whether he/she thinks there is any difference in learning if the lesson is taught in this ‘particular place’ of the village rather than in the classroom. If so, what differences he/she sees.

f) How does the teacher look at learning outcomes using place-based teaching.

g) Has the teacher taught any lesson using place-based teaching? If so, what lesson and motivation behind doing it. If no, the barriers for not using place-based teaching.

5. Values

Why are you a teacher?

What is your purpose of teaching?

What is primary school education to you?

Do you think students in the village need education in this school?

Yes

No

Why do you think they need education?

Why do you think they don not need education?
Key questions

a) What is the teacher’s motivation to be a teacher? → *This is important to understand, because this factor will determine her actions, thoughts, willingness to teach better.*

b) What is primary school education to the teacher? → *This will help us analyse whether he/she thinks connecting the knowledge to local environment is important.*

c) The teacher’s thoughts on whether children in the village need education and if so, why the teacher thinks the children need education?

6. Perception
Key questions:

a) How the teacher perceives he/she contributes to the village? And also the barriers that don’t let him/her contribute.

b) How the teacher perceives the schools contribution to the village and the barriers that don’t let the school contribute?

c) How the teacher perceives the knowledge among the people in the village?

d) How teacher perceives about children gaining knowledge from the community and different places in the village?

e) Teacher’s perception about how children learn and their intentions to learn.

f) How teacher perceives about the knowledge that the children in the village need? And also his/her perception about how classroom environment contributes to the necessary knowledge and ideas to incorporate that knowledge.

g) Teacher’s interest/willingness in using different places in the village for teaching, and barriers for not using.

h) Teacher’s perception about key elements of the NCF and what elements they want to implement.