

# THE APPLICATION OF PLACE-BASED EDUCATION IN SOCIAL STUDIES OF GRADE 5 BHUTANESE STUDENTS

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#### Thesis entitled

# THE APPLICATION OF PLACE-BASED EDUCATION IN SOCIAL STUDIES OF GRADE 5 BHUTANESE STUDENTS

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was submitted in partial fulfillment of the requirements for the degree of Master of Education in Curriculum and Instruction

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#### **Abstract**

This quasi-experimental study investigated the effectiveness of the Place-Based Education approach on students' learning achievement and learning satisfaction of grade 5 Bhutanese students in Social Studies. A mixed method was used to investigate learning achievement using Place-Based Education and to examine their learning satisfaction in Social Studies. The target group consisting of 31 grade 5 students was selected as research participants in this study as the research school had only one section of grade 5. The quantitative data collected through pretest and posttest were analyzed and interpreted using an inferential statistics t-test with p≤.05 level of significance, mean, and standard deviation. Similarly, qualitative data collected through a semistructured interview was analyzed employing a thematic analysis. The result of the pretest and the posttest score analysis showed a significant difference between the posttest mean ( $\bar{x} = 14.45$ ) and the pretest mean ( $\bar{x} = 8.37$ ) with a mean difference of 6.08. The significant value for the group was .01, indicating a significant increase in the posttest scores as compared to the pretest. Similarly, the data analyzed from the semistructured interview confirmed that students derived positive learning satisfaction. Hence, the Place-Based Education approach enhances the learning of Social Studies.

(Total 116 pages)

Keywords: Social Studies, Place-Based Education, Learning Achievement, Learning Satisfaction, Grade 5

Student's Signature......Thesis Advisor's Signature.....

# **TABLE OF CONTENTS**

		Page
ACKNOWLEDG	GEMENTS	i
ABSTRACTS		ii
TABLE OF CON	NTENTS	iii
LIST OF TABLE	ES	vi
LIST OF FIGUR	ES	vii
ABBREVIATIO	NS	viii
CHAPTER 1	INTRODUCTION	1
	1.1 Background and Rationale of the Study	1
	1.2 Research Objectives	7
	1.3 Research Questions	7
	1.4 Research Hypothesis	8
	1.5 Scope of Study	8
	1.6 Conceptual Framework of the Study	11
0	1.7 Limitations of Study	11
2	1.8 Operational Definitions	12
	1.9 Significance of the Study	13
CHAPTER 2	LITERATURE REVIEW	14
	2.1 Historical Overview of the Bhutanese Education S	System. 14
	2.2 Social Studies Curriculum in Bhutan	15
	2.3 Teaching of Social Studies	17
	2.4 Placed-Based Education	20
	2.5 Principles of Placed-Based Education	22
	2.6 Benefit of Place-Based Education	25
	2.7 Related Learning Theories	28
	2.8 Related Research and Studies	31

# **TABLE OF CONTENTS (CONT.)**

		Page
CHAPTER 3	RESEARCH METHODOLOGY	35
	3.1 Research Design	35
	3.2 Location of the Study	37
	3.3 Target Group	37
	3.4 Research Instruments	37
	3.5 Validity and Reliability of the Research Instrument	41
	3.6 Data Collection Steps	43
	3.7 Data Analysis	45
CHAPTER 4	RESULTS AND DATA ANALYSIS	47
	4.1 Result of Quantitative Data	47
	4.2 Qualitative Data Analysis	52
CHAPTER 5	CONCLUSION, DISCUSSION AND	58
	RECOMMENDATION	
200	5.1 Conclusion	58
77	5.2 Discussion	61
,	<ul><li>5.1 Conclusion</li><li>5.2 Discussion</li><li>5.3 Recommendations</li></ul>	64
REFERENCES		67

# **TABLE OF CONTENTS (CONT.)**

		Page
APPENDICES		73
Appendix A	Letter of Approval	74
Appendix B	Learning Achievement Test Questions	78
Appendix C	IOC of Learning Achievement Test	82
Appendix D	Sample Lesson Plan	85
Appendix E	IOC for Lesson Plan	98
Appendix F	100	
Appendix G	IOC for Semi-Structured Interview Question	102
Appendix H	Paired Sample T-Test	104
Appendix I	Instrument Validators	106
Appendix J	Reliability Test -KR-2.	108
Appendix K	Consent Letter Form	110
Appendix L	Content of Study	113
BIOGRAPHY	ก็ค <sub>ยาลัยจังสิต Rangsit University</sub>	116
	'गधरंशति Rany'	

# LIST OF TABLES

		Page
Tables		
1.1	Lesson outline with topics and activities	9
1.2	Timeline of the study	10
3.1	Demographic profile of the research participant	37
3.2	Table showing lesson topics and activities of place-based	39
	education	
4.1	Result analysis of pretest and posttest within the target	48
	group	
4.2	Score difference between pretest and posttest	49



# LIST OF FIGURES

		Page
Figures		
1.1	Independent and dependent variable	11
2.1	5Es learning model	25
3.1	Illustration of research design	36
4.1	Graphical representation of pretest and posttest mean	49
4.2	The Pie chart illustrates the percentage and number of students	51
	who improved their scores after treatment	



### **ABBREVIATIONS**

Abbreviations	Meaning		
BCSEA	Bhutan Council for Examination and Assessment		
CAPSD	Curriculum and Professional Support Division		
CDEO	Chief District Education Officer		
DCRD	Department of Curriculum and Research Division		
EMSSD	Education Monitoring Support Services Division		
HSS	Higher Secondary School		
HSS	Higher Secondary Schools		
IOC	Index of Item Objective Congruence		
KR	Kuder-Richardson		
LSS	Lower Secondary School		
LSS	Lower Secondary Schools		
MKO	More Knowledgeable Others		
МоЕ	Ministry of Education		
MSS	Middle Secondary Schools		
MSS	Middles Secondary School		
PBE 🐾	Place-Based Education		
PEEC	Place-Based Education Evaluation Collaborative		
RCSC	Royal Civil Service Commission		
REC	Royal Education Council		
RUB	Royal University of Bhutan		
TPS	Trongsa Penlop Scholarship		
TSS	Teton Science School		

#### CHAPTER 1

#### INTRODUCTION

This chapter discusses the background and rationale, objectives, questions, and hypothesis, along with its scope, conceptual framework, operational definitions, significance, and limitations of the study.

#### 1.1 BACKGROUND AND RATIONALE OF THE STUDY

With the rapid pace of modernization, education has become a challenging pursuit across the globe. Curriculum orientation, teaching pedagogy, and school facility are prerequisites for good school education. The necessary prerequisites aforementioned should not only be of high efficacy but also holistic across interdisciplinary, changing time, and student backgrounds. Students are exposed to different disciplines of learning in school.

Social Studies is a subject that builds curiosity in many primary students. Students learn about their country and the rest of the world in Social Studies, but to comprehend the value of human life, students make comparisons between the natural and cultural contexts (Dhandania, 2016). Teaching and learning Social Studies would significantly contribute to changing future generations' mindsets to appreciate and value one's unique and diverse traditional and cultural values. Similarly, Dhandhania (2016) supports incorporating Social Studies into the curriculum at all grade levels in order to emphasize the relevance of the subject and the crucial role it plays in students' life. Further, Misco (2014) asserts that through the teaching of Social Studies, learners could be made into productive citizens.

Agung (2018), the purpose of teaching Social Studies is not only to excel in academics but also to improve personal, social, and intellectual competencies. Similarly,

it aims to improve student's abilities to be more perceptive to social issues in the environments they live in, to have a positive attitude on any unbalanced event, and to be able to deal with common issues that have an impact on people or society (Summaatmadja, 1984, as cited in Agung 2018). In other words, the goal of Social Studies is to support students in becoming competent decision-makers who can be a productive citizens in the global community.

Owing to the fast and rapid globalization and advancement in technology, the value of one's own profound tradition and culture is on the verge of despair. In order to inculcate a sense of love and respect appreciating one's own unique culture and tradition in the younger generation is crucial, particularly in a tiny nation like Bhutan. Bhutan's education system not only aspires to provide its youth with the required knowledge, skills, and competencies, but also inculcates in them the country's unique cultural and ethical values, and universal ideologies (BCSEA, 2021). Royal Education Council [REC] (2020) stated that knowledge and values provided by Social Studies will not only enable the learners to understand how ideas, events, and people interact within their own country but develop the required abilities to become independent lifelong learners. Eventually, they will be able to succeed as contributing citizens of the country.

As per the REC (2021), Social Studies would help learners to gain skills through hands-on activities such as experimentation, discovery, observation, investigation, survey, measurement, and field trips, which help them comprehend and live harmoniously in a technologically changing world. They are expected to advance twenty-first-century skills such as the ability to think critically, resolve issues, and make the right decision required to be successful citizens. Therefore, "It is intended to provide civic competence through scientific and historical knowledge, skills and attitudes required of learners to be able to assume roles of good citizens in a fast-changing society" (REC, 2020, p.8).

Despite a series of educational reforms in policies and updates to the curriculum in the last couple of years, the traditional teaching methodologies still predominate in Bhutan's educational system which is "too text-book-based" (Rinzin, 2021). Similarly,

the research findings from Sherab and Dorji (2013) also suggested that there is a need for a shift in Bhutanese teachers' pedagogical practices in classroom teaching and learning. Furthermore, the study revealed that many teachers need to adjust their mindsets and methods of instruction. Therefore, to enhance the learning outcome of the learners, Bhutanese teachers must embrace the latest teaching approaches to enhance students' achievement and effective engagement. In other words, teachers of Bhutan need to upscale and rescale their teaching strategies and approaches in order to tailor the needs of 21st-century learners. Cultural, historical, social, and political aspects today must be acknowledged and incorporated into education (Giffin, 2017). Thus, the Place-Based Education (PBE) approach would be the best method to make connections between class learning and students' life experiences.

PBE is a strategy that links learning and communities to improve academic results, learner engagement, and community impact. (REC, 2022). Furthermore, REC (2022) highlights that PBE emphasizes pragmatic, real-world learning activities that enable students to relate to their immediate community, environment, and economic system.

Place-Based Education is a way of learning and teaching that makes use of the neighborhood and surroundings as a frame of reference. It is one of the emerging teaching approaches that possess a lot of scopes not only for the teachers but also for students to be resilient, adaptable, and adjustable to the immediate environment. By incorporating the approach, teachers can engage learners actively in the lesson. Most learning activities would be learner-centered since the approach focuses on learning by doing. Giffin (2019) supports that PBE aspires to link text to real-life situations where students get to explore their own areas and get well-equipped with values, lifestyles, and resources, all inside the teaching and learning process. PBE strives to ignore the complexity of place by embracing a diversity of place-based environments for community learning (Griffin, 2017). Additionally, she highlights that PBE focuses learners on the local and reintroduces the concept of "self" to the center of education while also enhancing test performance. Students gain insight into issues pertaining to the school environment, the student's perceptions of the school laboratory, the local

community, and the environment in the classroom through experiences from real-world situations. Thus, PBE is highly significant in a country like Bhutan, both geographically and with an ideology of Gross National Happiness (Griffin, 2019).

The Promise of Place (2010) defines PBE as a teaching method that makes use of the neighborhood and immediate surroundings as a point of reference when imparting knowledge in subjects such as Science, Mathematics, Social Studies, and other subjects. Similarly, the goal of PBE is to foster a sense of place and enhance subject knowledge by embedding the neighborhood and community into learning (Griffin, 2017). She also underlines how PBE's instructional approach strives to establish a bridge between place, community, and education. With rapid economic growth and the advancement of technology, there is a paradigm shift in education beyond hands-on learning that is in place, eradicating the setting in which true learning occurs (Griffin, 2017).

Due to the overwhelming information available online, one of the biggest challenges for teachers is to engage their learners meaningfully and effectively. There are numerous types of research that have proven that the PBE teaching approaches can engage learners meaningfully. According to the research done by Dorji, Kinley, and Sivitskis (2021), the PBE teaching methodology not only involves students in their education but also gives them the opportunity to obtain practical experience. The study also found similarities between PBE and GNH (the guiding philosophy of Gross National Happiness), particularly in terms of the intellectual and academic aspects of the Green School concept. Thus, the effective implementation of PBE would not only improve teaching and learning, but it would also promote achieving Bhutan's national education vision of generating graduates who are connected to their communities and are capable of participating in the global community.

The purpose of incorporating various disciplines into the Social Studies curriculum is to cultivate capabilities and transversal skills. Through the integration of various disciplines into the Social Studies curriculum, it seeks to enhance cross-disciplinary skills and capabilities. It also fosters civic values, skills, and attitudes they need to be effective citizens in a fast-changing society. In the study, the researcher

focused on PBE as an independent variable to ascertain learning achievement and learners' satisfaction. A key learning goal of PBE is to ensure each student with these competencies is PBE, by moving from one's self to one's community to the world, Teton Science Schools connects classrooms and communities (TSS, 2017).

Through the teaching of Social Studies, learners can be aware of national and global concerns. The twenty-first-century learners must be aware of the surrounding environment on which they are dependent. However, students' overall performance in Social Studies continues to be weak and falls short of national standards. Moreover, students are found to lose interest in learning Social Studies since it is perceived as a minor subject in Bhutan. The number of teaching periods allocated for Social Studies in classes four to six is comparatively less than that of other subjects such as English, Dzongkha, Mathematics, and Science. Due to the reduced teaching period, teaching and learning of Social Studies lessons are mostly confined to the classroom. Teachers could not come up with innovative and creative approaches to take learners out of the four walls due to the time frame.

The study on the quality of education in Bhutan found that both teaching and learning curricula were teacher-centered (Utha et al., 2016). Similarly, in Bhutanese schools, Rabgay (2014) discovered that lecturing took up 75.71% of class time, with the teacher speaking contributing 85.23% of the time and student discussion only contributing 11.38%. The results of both types of research clearly demonstrate that teacher-driven education is more common in classrooms in Bhutan, which could be one of the main factors contributing to the subject's poor performance. Hackathorn et al. (2011) also support this statement, claiming that the lecture method was inefficient and resulted in students obtaining low grades. Consequently, to increase the effectiveness of teaching and learning, teachers must embrace and accept the change.

The quality of education has been the national concern and top priority for the Ministry of Education of Bhutan in the last few years (BCSEA, 2021). To enhance the quality of education in the country, the Ministry of Education [MoE] has taken a series of reforms aimed at improving access, equity, and system efficiencies (Dorji et al.,

2021). However, the country's educational standards could not be substantially increased by the implementation of new teaching methods. Furthermore, the Ministry of Education's attempt to reform teaching methods to enhance students' performance had almost no impact on the general academic front, particularly in Social Studies.

As per the findings of BCSEA (2017), the overall mean score was 59.12 in Dzongkha, 54.01 in Science, and 51.19 in Social Studies. Similarly, BCSEA, (2018) reported an overall average score of 57.96 in Dzongkha, 53.46 in Science, and 55.83 in Social Studies. The report of BCSEA (2019) highlighted that Science had the best overall student performance with a mean score of 61.35, followed by Dzongkha with 55.48 and Social Studies with 54.47 respectively. From the above reports, the average mean score for Social Studies for three consecutive years (2016-2018) was the lowest at 53.8 compared to the other two subjects Dzongkha with 57.5, and Science with 57.5 respectively. Thus, the overall performance of the student in Social Studies has been declining in the following years.

Additionally, the researcher observed that the overall performance of grade 5 Social Studies was deteriorating each year even in the current school where the researcher conducted the study. The results were obtained with the consent of the school administration from the researcher's current school (names are withheld for ethical reasons).

The annual result report of the research school indicates that there is a decline in the overall performance of grade 5 Social Studies. There was a drastic fall in mean marks from 70 in 2017 to 66 in 2019. There would be a further fall in the overall performance of Social Studies in the following years but the researcher could not obtain the data on Social Studies from the year 2020 since Bhutan has implemented a prioritized curriculum after the covid pandemic. In the prioritized curriculum, Social Studies is excluded in order to reduce the overload for the students. However, from the result analysis from 2017 to 2019, it is clear that the grade 5 Social Studies proficiency of the current school has declined drastically since 2017.

The primary purpose of the study was to fill the literature gaps regarding Bhutan's use of Place-Based Education. The study's findings would enable educators in implementing strategies to enhance student learning outcomes and learner satisfaction in the teaching and learning of social studies in Bhutan. It would stimulate classroom learning, resulting in learners' motivation and satisfaction in achieving higher learning outcomes in Social Studies. As a result, teachers in Bhutan would be able to use PBE as an alternative teaching strategy to teach Social Studies.

Therefore, in the context of Bhutan's current post-pandemic educational reforms to incorporate a learner-centered teaching strategy, the researcher investigated the effectiveness of PBE with Bhutanese grade 5 students learning achievement. Numerous studies on the effectiveness of the PBE on students' academic success and learning satisfaction have been conducted in other nations. However, there hasn't been any research done on the teaching of Social Studies in Bhutan incorporating PBE approach. Therefore, the purpose of the research was to bridge the literature gap and investigate the application of Place-Based Education to enhance grade 5 students' learning achievement and satisfaction in the teaching of Social Studies.

#### 1.2 RESEARCH OBJECTIVES

- 1.2.1 To investigate the effectiveness of Place-Based Education in Social Studies of grade 5 Bhutanese students.
- 1.2.2 To examine learning satisfaction in Social Studies of grade 5 Bhutanese students after using Place-Based Education.

#### 1.3 RESEARCH QUESTION

1.3.1 Would there be any improvement in grade 5 Bhutanese students' learning achievement in Social Studies after using Place-Based Education?

1.3.2 Would the grade 5 Bhutanese students exhibit learning satisfaction in Social Studies after using Place-Based Education?

#### 1.4 RESEARCH HYPOTHESIS

- 1.4.1 There would be an improvement in grade 5 Bhutanese students' learning achievement in Social Studies after using Place-Based Education.
- 1.4.2 The grade 5 Bhutanese students would exhibit positive learning satisfaction in Social Studies after using Place-Based Education.

#### 1.5 SCOPE OF THE STUDY

Firstly, the research was carried out in one of the primary schools in Bhutan, and data were gathered from one section of grade 5 which included 31 students. Secondly, in Bhutan, teachers are provided with a teachers' manual to teach any subject and the manual which outlines different suggestive learning activities. Thus, teachers have the liberty to choose interesting learning activities as per the content and the needs of the learners. Therefore, through this study, the researcher proposed the application of PBE as one of the teaching approaches by designing and executing learning activities to help improve student's learning achievement and satisfaction in learning Social Studies.

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#### 1.5.1 Participants

The research participants were grade 5 students in one of the primary schools in western Bhutan. Since there was only one section of grade 5 in the research school, the researcher included all of them as research participants. A total of 31 students were chosen as research participants with mixed abilities in Social Studies. The age of the students was from 12-14 years consisting of 19 girls and 12 boys.

#### 1.5.2 Content of the study

The study was carried out in grade 5 Social Studies with four 90-minute lessons using a Place-Based Education (PBE) strategy. The chapter has four topics, as shown in Table 1.2, and the researcher taught each of them to the target group using PBE. (Content of the study is attached in Appendix D). The content of the study was on 'People and the Environment and the sub-topics; 1) Human Activity, Livestock & Industry, 2) Impacts of Pollution, 3) Waste Management and 4) Conservation of the Environment. The content (chapter and sub-topics) of the study was selected as per the yearly plan prepared by the concerned subject teacher of the school. Therefore, this particular topic was chosen for the study based on the convenience of the concerned teacher and the researcher.

Table 1.1 Lesson outline with topics and activities

Week	Topics	Activities of PBE	
I	People and the Environment	Field visit to the	
	Session 1: Introduction on the people and	community to explore	
1	the environment and human activity.	human activities in the	
	Session 2: Livestock and industry.	locality.	
	Impact of pollution	Field visit to the dumping	
II	Session 1: Type of pollution.	yard to investigate the	
11	Session 2: Impact caused by the various types	types of waste in their	
	of pollution.	community.	
	Waste Management	Investigate degradable	
III	Session 1: Different types of waste and	and non-degradable waste	
111	effects on environment/humans.	by service learning in the	
	Session 2: Measures to reduce the waste	school.	
	Conservation of the environment	Creating awareness of	
IV	Session 1: Afforestation and reforestation.	waste management in the	
	Session 2: Ways to conserve the	school and community by	
	environment.	displaying posters.	

#### 1.5.3 Location of the study

The study was conducted in one of the primary schools in Haa district. It is a boarding school located in the western part of Bhutan. It is located in a semi-urban setting. The distance from the closest district town is about 10 kilometers. The school has grades ranging from pre-primary to grade 6. As of April 2022, the school has 211 students enrolled in total and 13 teachers.

#### 1.5.4 Time Frame

The study took place over a month. The researcher conducted a lesson of 90 minutes over two sessions every week. The researcher used a Place-Based Education approach while teaching eight sessions of Social Studies over the course of four weeks. The data was collected during the summer semester of the academic year 2022.

Table 1.2 Timeline of the study

	Research Time Frame			
Activities	From		To	
	Month	Year	Month	Year
Literature Review	January 470	2021 RC	May	2022
Research Proposal	June	2022	July	2022
Data Collection	July	2022	August	2022
Data Analysis	September	2022	September	2022

#### 1.6 CONCEPTUAL FRAMEWORK OF THE STUDY

#### 1.6.1 Variables of the study

There are two variables in this research: an independent variable and a dependent variable. Learning achievement and learning satisfaction were the dependent variables, and the use of the place-based education approach was the independent variable. Below is an illustration of the study's conceptual framework.

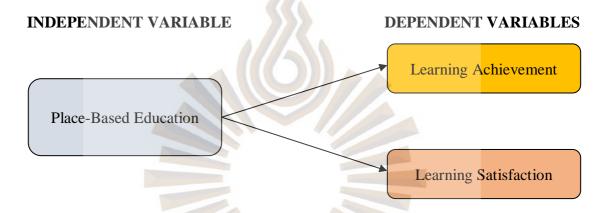


Figure 1.1 Independent and dependent variable

#### 1.7 LIMITATIONS OF THE STUDY

- 1.7.1 There were only 31 students who participated in the study. Therefore, the result of the study cannot be generalized to the overall learning achievement of grade 5 Bhutanese students.
- 1.7.2 The study covered only a chapter from a Social Studies textbook for grade 5. Therefore, the findings of this study cannot be generalized to any chapters in teaching Social Studies. taught in grade 5 in Bhutan.

#### 1.8 OPERATIONAL DEFINITIONS

**Place-Based Education** refers to the teaching approach in which the researcher used the place and immediate environment as teaching and learning resources that serve as a foundation for learning. The students were taken outside to learn in the community and around the school. Place-Based Education resources may be cultural, historic, and geophysical. However, in this study, the researcher let students explore nearby community settlements, human activities, types of pollution in the locality, issues with waste management, and some of the ways forward to conserve the environment within a month. The concept of "Community as Classroom" promotes extending the notion of the classroom to three different learning environments: bringing the community into the classroom through guest speakers and lesson content; taking students on learning trips into the community, and simply leaving the classroom to gain first-hand experience.. To identify human activities and their impact on the environment, the students in this study adopted the Place-Based Education approach, which includes the principle of using the community as a classroom. The students were taken outside to learn in the community and around the school. The students gained knowledge through investigation and exploration based on their observations for better comprehension from hands-on experiences.

Social Studies refers to blended subjects such as History, Geography, and Economics. The researcher gave lessons on these integrated subjects through the teaching of Social Studies to grade 5 Bhutanese students. It also included intrapersonal and interpersonal skills including reflective thinking, valuing, communicating, participating, making decisions, appreciating, interpreting, analysing, and problem-solving. "People and the Environment, Impacts of Pollution, Waste Management and Conservation of the Environment" are some of the topics that the research used in a PBE approach.

Learning Achievement refers to the success of research participants in Social Studies grade 5, exhibiting collaboration, social, and communication skills after studying the topics "People and the Environment, Impacts of Pollution, Waste

Management and Conservation of the Environment". This was assessed by achievement tests including pretest and posttest. In order to assess the short answer question items of the learning achievement. The researcher developed a marking scheme to be fair and transparent.

**Learning Satisfaction** refers to students' positive responses to using a PBE approach to teaching and learning Social Studies. The result of the students' interview measured the students' satisfaction with the use of PBE approach in learning Social Studies. The data were obtained from a semi-structured interview with the participants after the intervention.

Grade 5 Students refer to research participants who made up the majority of the researcher's study population. The students' age ranged from 12 to 14 years old. The school is one of the primary schools located in the district of Haa in the western region of Bhutan.

#### 1.9 SIGNIFICANCE OF THE STUDY

- 1.9.1 Implementing Placed-Based Education would enhance students' learning achievement in Social Studies of grade 5 Bhutanese students.
- 1.9.2 The study would positively impact the learning satisfaction of grade 5 Bhutanese students by using Place-Based Education.
- 1.9.3 The findings of this study would empower teachers to use Place-Based Education as one of their effective teaching pedagogies particularly in teaching Social Studies in Bhutan.

#### **CHAPTER 2**

#### LITERATURE REVIEW

The chapter presents the historical overview of the Bhutanese education system, the Social Studies curriculum in Bhutan, and the aims and objectives of the grade 5 Social Studies curriculum. The chapter also discusses the definition, principles, and advantages of Place-Based Education. Further, it presents the learning theories and literature related to teaching and learning Social Studies in schools incorporating Place-Based Education.

# 2.1 HISTORICAL OVERVIEW OF THE BHUTANESE EDUCATION SYSTEM

The first educational system was founded in 1914, under the reign of the first king Sir Ugyen Wangchuk (Dorji, 2021). However, formal schooling was established only during the reign of Jigme Wangchuk the second king of Bhutan. The first school in the entire kingdom of Bhutan was founded in the western Bhutanese town of Haa. By the end of the decade, there were five schools across the nation.

In the words of Dorji (2005) the foundation of modern education took its proper shape only from the year 1960s onwards. Further, he asserted that subjects such as Dzongkha, English, Arithmetic, and Hindi were taught in the schools. However, English replaced Hindi as the language of education from the year 1960. Earlier to the inception of the contemporary educational system in Bhutan, monastic education was the only alternative, and it was taught in Dzongkha, the country's official and national language.

Initial efforts to modernize Bhutan's educational system depended extensively on resources and teaching staff from India in the 1960s due to the lack of national

expertise (Gyamtsho, Sherab, & Maxwell, 2017). Due to such a dependence on outside sources, teacher-centered methods resembling the school management system used in Anglo-Indians were dominating the classrooms of Bhutan (Gyamtsho & Maxwell, 2012). Thus, teaching and learning were less constructive rather it was more of rote learning. The learner's outcome was comprehensively assessed by using continuous assessment only.

The primary education SDG target urges all children and young people to demonstrate proficiency in reading and Mathematics by the year 2030. In Bhutan, this SGD target ensures that all young people have the knowledge, abilities, and skills needed to realize their full potential and contribute to a society that is becoming more interconnected and meaning live. Every student in Bhutan must be given the opportunity to achieve excellence in academic results without compromising the country's vibrant culture and also keeping in mind to compete with those students in a high-performing international education system.

Conclusively, the three main divisions of instruction in Bhutan's current educational system are general education, monastic education, and non-formal education. Bhutan has taken a major step in developing and reviewing its educational policies, programs, and standards. Subba et al. (2019) state that the use of more adaptable and modern academic curricula has transformed the education system to be more adaptive and contextualized.

#### 2.2 SOCIAL STUDIES CURRICULUM IN BHUTAN

The Bhutanese Social Studies curriculum for classes IV-VI in Bhutan was developed and then piloted in 28 selected primary and lower secondary schools in the year 1992. The second edition was carried out in 2002. In order to update and further revise the existing curriculum, the Royal Education Council [REC] has initiated a series of meetings and consultations with curriculum experts, teachers, and other stakeholders. Subsequently, in the year 2009, facts and figures, maps, pictures, diagrams, and language were updated and corrected (REC, 2020). Similarly, Dorji (2021) asserted that

with the update in the topographical area and development toward democracy, the system was reformed, and the Department of Curriculum and Research Development (DCRD) of the Ministry of Education, as well as schools, have both expressed the urgent need to modify this subject immediately. The curriculum should be dynamic and relevant to the time. Thus, REC initiated and coordinated a writer's workshop involving teachers, officials from Bhutan Council for School Examinations and Assessment (BCSEA), and Education Monitoring Support Services Division (EMSSD) carried out a review of the Social Studies curriculum as a part of the periodic review in 2010. Further, in 2012, textbooks for classes IV-VI were reviewed and updated (REC, 2020).

In 2015, REC initiated the drafting of the first Social Studies Curriculum Framework based on the curriculum development cycle. This was, therefore, reinforced by the recommendations from the National Education Conference (2016) and feedback from different stakeholders. Subsequently, in 2020, REC with support from the Ministry of Education initiated the drafting of Prioritised Curriculum Framework and Adapted Curriculum Framework in case schools reopen during the pandemic (COVID-19) and also to keep students engaged and continue learning at home. As a result, New Normal Curriculum Framework was drafted for implementation from 2021 onwards.

In Bhutan, Social Studies instruction begins in the fourth grade and completes by the sixth grade. The subject is separated into two; History and Geography in grade seven: History and Geography. Likewise, it is integrated into Economics in the ninth grade. The Social Studies curriculum underwent a considerable revision to make it relevant for the Bhutanese environment with the blending of History, Geography, and Economics. According to the New Normal Curriculum Guideline, REC (2020, pp. 8-9) states that "The main goals of learning Social Studies is to promote civic and social competencies in young minds, and foster the values of interconnectedness, interdependence, and coexistence, inspired by intricacies of human values of Tha dhamtsi ley judrey". Thus, the teaching of Social Studies is envisioned;

- 1) Develop an understanding of human-environment interaction and its impacts.
  - 2) Understand the system of government and its functions.

- 3) Inculcate moral, social, and cultural values.
- 4) Preserve and promote national identity.

#### 2.3 TEACHING OF SOCIAL STUDIES

According to the American History Association (n.d.). states that the term Social Studies refers primarily to subjects dealing with human relationships that are organized for educational purposes. Social Studies are an integrated study of human activities and their relationships (Peldon, 2018). Social Studies is a subject that provides learners with relevant competencies to enhance critical thinking collaboration and cooperation for the active engagement of learners in learning processes (REC, 2020).

In the Bhutanese context, Social Studies refers to teaching and learning subjects that are effective for preparing students for life. Moreover, it builds interdisciplinary and cross-curricular skills, concepts, knowledge, and values; facilitates the integration of knowledge, skills, and values within and across subject areas; and enhances creativity and critical thinking, collaboration, and cooperation for active engagement of learners in learning processes (REC, 2020).

According to REC (2020), Social Studies is the study of the connections, interactions, and interdependence between humans and nature. It is a program that combines Social Science and humanities education with the goal of enhancing civic competence. Similarly, "Social Studies is all about the relationship between people and the environment" (REC, 2009, p.1). History, Geography, and Economics are all integrated into the Social Studies curriculum in Bhutan. Thus, Social Studies acts as a solid foundation for the above-mentioned subjects which are integrated with lower primary classes from four to six (Dorji, 2021). It covers topics from the community, history, culture, and environmental science. Due to the importance of content coverage, it is one of the compulsory subjects in the primary curriculum in Bhutan.

One of the important components of our school's curriculum is Social Studies (REC, 2020). Furthermore, REC (2020) highlighted that Social Studies focuses on the

interactions, interdependence, and relationships that exist between nature and human beings. It is intended to provide civic competence through scientific and historical knowledge, skills, and attitudes required of learners to be able to assume the roles of good citizens in a fast-changing society.

The goal of Social Studies is to support student's development of the competence to make informed decisions as members of a democratic society that values the diversity of culture in an interdependent global community. Further, it is designed to promote transversal skills and competencies through the integration of different disciplines in the Social Studies curriculum (REC, 2020). The Social Studies teachers' guide developed by REC (2019) illustrates that there are two competencies that students must acquire during the teaching and learning process of Social Studies. Students should develop skills; 1) through learning activities and 2) social skills through group work.

#### 2.3.1 Development skills through learning activities:

REC (2019) stated that reading, producing, using graphs, diagrams, timelines, maps, and tables are just a few of the skills that students would continue to develop throughout the Social Sciences. Learners would be able to gather information through direct observation, interviews, and surveys. Furthermore, students would not only gain more hands-on experience in collecting and sorting data for investigative history, but they will also be able to work independently (REC, 2019).

#### 2.3.2 Developing social skills through group work:

Learning about oneself and how one interacts with society is the goal of Social Studies. The Social Studies teacher must educate the students to help them develop good social skills such as politeness and respect, which will enhance their potential to communicate with others effectively. The small group activities required by this syllabus allow students to learn to constructively interact with one another, discuss problems together, plan and make choices, and collaborate in conducting research or preparing project work. "Students who learn cooperation, fairness, honesty, tolerance,

and kindness in the classroom will be better able to function positively and successfully in adult society" (REC, 2019, p.1).

According to the assessment guideline for the teaching of Social Studies, the following evaluation techniques are used to evaluate students' performance and academic progress in Social Studies (REC, 2019).

#### 2.3.4 Continuous Formative Assessment (CFA)

Regular feedback to teachers and students is provided through formative assessment in order to improve teaching and learning through the provision of feedback and remedial learning chances for the needy learners who are identified through the assessment. Likewise, it gives teachers knowledge about the most effective instructional strategies and resources.

The CFA enables teachers to determine the unique learning preferences and academic expectations of each student. Students are better able to recognize their strengths and weaknesses when they take the time to think back on their performance and successes. This is a result of the assessment's reinforcement. Throughout the school year's teaching and learning processes, CFA should actually occur daily. It is not graded because its sole purpose is to provide learners with ongoing feedback. Checklists and anecdotal records are the instruments mentioned for CFA. The checklist must be kept up-to-date for each topic and recorded throughout the academic session for future reference. The Assessment Matrix displays the CFA tools and methods.

#### 2.3.5 Continuous Summative Assessment (CSA)

Teachers provide students with comments for growth based on their performance. Students' performances and accomplishments are graded on a continuous basis. Additionally, it helps teachers choose the most effective instructional strategies and materials. Mainly students' knowledge, skills, values, and attitudes are graded.

The New Normal Curriculum of Social Studies of Bhutan (2021) states that the higher grades, Social Studies serves as a foundation for learning Geography, History, Economics, Science, English, Mathematics, Commerce, Accountancy, and other subjects separately, and it encompasses a wide range of teaching-learning methodologies. Therefore, Social Studies education is a crucial component of the Bhutanese curriculum, especially in the primary grades.

#### 2.4 PLACE-BASED EDUCATION

Place-Based Education is emerging as a progressive alternative to our education system's standardized, decontextualized curricula, which have currently and historically characterized (Pasiechnyk, 2018). Similarly, Sobel (2004) asserts that PBE is a method that focuses conceptual learning and instruction across all disciplines on the immediate environment and community. It heavily emphasizes practical application and real-world learning, which ultimately enhances students' academic performance, fosters stronger links with their communities, and increases their understanding of nature. Furthermore, Lloyd (2018) supports that PBE is a pedagogy that links student learning to the local environment and their lives. In other words, PBE bases its education and instruction on the neighborhood and students' immediate surroundings in order to foster a sense of community, a deepening relationship with nature, and a commitment to active citizenship. This strategy can stimulate students' interest in their studies and improve their academic performance.

According to Akbas and Cakmak (2019), the Social Studies course is an interdisciplinary one whose major goal is to give students the fundamental knowledge, abilities, and moral principles they need to adjust to the immediate place and society in which they live. On the other hand, PBE acts as a solid foundation for exposing learners to the local culture and traditions by using them as a basis for learning the language and other subjects across the curriculum. It provides learners with the opportunity to explore the world beyond (Promise of Place, 2010). PBE places a strong emphasis on education through involvement in community and school service projects. Thus, there is a lot of synergy in regard to the goal and principle of PBE and Social Studies.

The findings of Yilmaz and Karakus (2018) reveal that "The experiment group students who were taught using a place-based method attained the learning goals much higher as compared to the control group students who were taught using conventional classroom methods." The study concludes that PBE strategies are effective in improving student achievement in Social Studies. The PBE method focuses on educational opportunities that allow students to do worthwhile tasks and incorporate local knowledge and issues into the curriculum (Smith & Sobel, 2011).

Moreover, Place-Based Education is a kind of education that makes use of the local setting as the backdrop for learning and education (Akkaya & Karakus, 2018). A similar line reads, "PBE inside global conversations about creative teaching techniques that promote student agency, enhance ample opportunities, encourage deeper learning and customize learning" (TSS, 2017). In other words, PBE is all to do with the teaching and learning of the places, people, and the immediate environment that they live in. It is to make text-to-life connections rather than just mere reading of abstract concepts and ideas. Further, the study revealed that teachers and communities are working in collaboration to provide students with place-based learning experiences in a range of environments (TSS, 2021). Regardless of where the institutions are physically located, learning can occur anywhere, from the most remote to the most metropolitan schools. The integration of PBE is another strategy that can support students in learning about their community's environment, society, culture, history, and economy so they can compare it to other countries around the world. (Wangchuk, 2019). Thus, the approach of Social Studies teaching not only engages students and develops citizenship, but also fits into a Social Studies curriculum with reference to citizenship and community (Evas & Kilinc, 2013).

Bhutan's participation in the program for International Student Assessment (PISA-D) is merely intended to assess how well-prepared children are for full participation in society after completing the appropriate educational requirements (BCSEA, 2019). Similarly, PBE emphasizes teaching and learning with local communities, learning by doing, learning in the real world, learning by engaging in the immediate environment, and making connections between the text and real life.

#### 2.5 PRINCIPLES OF PLACED BASED LEARNING

Place-Based Education can cater to students' needs, interests and abilities since it emphasizes integrated goals including student involvement, community social-economic life, and ecological integrity (Promise of Place, 2021).

#### 2.5.1 Student Engagement

PBE improves students' academic performance, sense of personal empowerment, and commitment as stewards of their neighborhood and community. It can also offer teachers a fresh start.

#### 2.5.2 Community Social and Economic Vitality

PBE builds solid connections between the community environment and social organization and their supporters in the school community, enhancing both the quality of life and the region's economic vitality.

#### 2.5.3 Ecological integrity

Students contribute significantly to resolving regional environmental issues and preserving regional environmental quality through project-based learning.

Place-Based Education is an experiential, interdisciplinary learning approach that uses the community, environment, and society as a platform for learning (Dorji et al., 2021). According to the TSS, there are six core principles of Place-Based Education as follows;

#### 1) Local to Global Context

The potential for local learning enables pupils to comprehend global issues and provides connections that ultimately support the formation of experiences that may be inferred from a global perspective (REC, 2018).

#### 2) Learners-centered approach

The teachers motivate the students in taking ownership of their own learning. Therefore, kids are self-motivated and interested in what they are learning (REC, 2018).

#### 3) Inquiry-Based

Learning is focused on observation, appropriate questioning, formulating predictions, and gathering information to comprehend the world's social, economic, and ecological components (REC, 2018).

#### 4) Design Thinking

Through the curriculum, learners will learn to serve in making a contribution to their communities, and the design thinking method systematically structures that approach. (REC, 2018).

#### 5) Community as Classroom

It is possible to expand the idea of a classroom to incorporate a "house of experiences," where people, contexts, and settings can all enrich learning opportunities. These community-building techniques encourage participation among local and regional specialists, creating learning ecosystems for schools (REC, 2018).

#### 6) Interdisciplinary

"The curriculum matches the real world where the traditional subject area content, skills, and dispositions are taught through an integrated, interdisciplinary, and frequently project-based approach where all learners are accountable and challenged." (REC, 2018)

Smith and Sobel (2010, p.22) highlight that there are various educational models used in the present day, and each model's concept of PBE is different. However, each PBE component focuses on the basic values of citizenship, students' meaningful engagement with their communities and environments, and its consequences for the

present. Thomsen (2016) makes reference to the following list of PBE principles from the TSS:

- 1) Immediate environments such as the backyard, playground, local community, and surroundings are platforms for learning
  - 2) Local themes, systems, and content are the main focus of learning.
- 3)Learning takes place individually where the substance is relevant to the learner.
- 4) Learning opportunities enhance the community's role in promoting environmental quality on a global scale while also enhancing the vitality and environmental quality of the community.
- 5) Learning is supported by robust and diverse alliances with neighborhood companies, agencies, and organizations.
  - 6) Learning is interdisciplinary in nature.
  - 7) Instruction is adapted to the audience in the region.
  - 8) Learning is rooted nationally and develops a sense of belongingness.
- 9) Local learning provides the framework for comprehending and responsibly engaging in regional and global challenges.
- 10) Place-based education initiatives play a crucial role in accomplishing other institutional objectives.

In order to incorporate the principles of Place-Based Education, the researcher prepared lesson plans following the 5Es model. The 5Es model was developed by Robert Bybee. The 5E stands for Engage, Explore, Explain, Extend and Evaluate. The 5E cycle has shown to be an extremely effective approach to learning. The study results supported the application of the 5E learning cycle model as an effective strategy for increasing learners' comprehension of the subject or concept (Ihejamaizu, Ukor, & Neji, 2018). The following figure illustrates the 5Es learning cycle;



Figure 2.1 5Es Learning Model Source NASA eClips, 2022

#### 2.6 BENEFITS OF PLACE-BASED EDUCATION

Promise of Place (2010) claims that PBE builds the bonds between schools and communities and improves students' sense of place. Also, "It improves student achievement and enhances social, economic, and environmental life" (Promise of Place, n.d.). PBE can encourage constructive connections among students, teachers, and the community while empowering educators and boosting students' enthusiasm for learning and comprehension.

According to Pasiechnyk (2018) study, Place-Based Education approaches can enhance student learning in the following categories: 1) performance according to curricular learning outcomes, 2) social-emotional well-being, 3) thinking and learning skills such as creativity and critical thinking 4) engagement of improved environmental attitudes or students with learning disabilities, 5) benefits for otherwise marginalized learners. Similarly, the Place-Based Education Evaluation Collaborative (PEEC, 2010) highlights the following advantages of PBE for students and teachers;

#### 2.6.1 PBE helps students to learn better

The studies have indicated that there are differences between the students who are taught lessons using the PBE approach and those who did not. PEEC has conducted a study to compare two groups of students using the PBE model. A study was conducted

with grade one learners whereby the teacher incorporated an intensive PBE approach for one-two years. First-graders taught with an intensive PBE approach performed better than other peers on all assessments. The teachers who used PBE methods claim that their learners seem to be more engaged and motivated about learning (PEEC, 2010, p.2).

Similarly, the Beebe School in Malden, Massachusetts, implemented the PBE approach in 1999. Between 2002 and 2006, the student's performance in Mathematics and Science revealed a significant correlation between PBE and academic achievement. As a result, PBE and academic success are positively correlated.

#### 2.6.2 PBE enables students to become active citizens

With the Place-based Education teaching approach, students are kept active and engaged by letting them initiate socially productive work for the community they live in. Teachers that take part in the program collaborate with their children on projects like keeping track of ecosystem health, eradicating invasive species, assessing the water quality in the area, mapping watersheds and designing and enhancing public paths (PEEC, 2010). The PBE model provides a good platform for the students to showcase their honesty and integrity as productive citizens. By engaging students with developmented initiatives, as a result, they empower and continue to make good contributions to their community.

According to one of the teachers, Mildred Avenue Public Middle School, Boston, Massachusetts writes, the trip to Thompson Island compels students to evaluate their assumptions of who they are and the world in which they live. The trip to Thompson Island compels students to evaluate their assumptions of who they are and the world in which they live. It is the start of a new journey for many, but it is also a moment that will remain in everyone's memories forever (PEEC, 2010). The Place-Based Education approach can not only invite students to become active citizens but also inculcates a sense of responsibility, belongingness, and interconnectedness with the environment in which they live.

# 2.6.3 PBE provides motivation to teachers to teach

One of the New Hampshire teachers started a project with the goal of incorporating the 32-acre forest outside her classroom into the curriculum after taking a one-year professional development course to learn how to incorporate place-based education. The project's results were motivating and inspiring for her, as well as for her students and colleagues. She claims that made it possible for her to remain updated on new material and issues while maintaining a professional connection with her peers outside of the classroom. It allowed her to convince the science committee to support the curriculum's emphasis on the outdoors because of that connection (PEEC, 2010).

# 2.6.4 PBE boosts school culture

Placed-Based Education approaches help students to change their way of doing things. They become more reflective, think critically, and apply life skills. There are drastic changes in the environment in one of the schools in Massachusetts after adopting the PBE program for three years.

The schoolyards and a local nature center have become an outdoor extension of Haley's classrooms. Children grow gardens, explore a mini-wetland, categorize and analyse insects, track weather stations and write detailed reports on their findings. Students notice that their teachers are more motivated, asking better and more critical questions and seeing themselves as scientists, and observers and they see that as an important thing. Parents' involvement at Haley has increased. Collaboration among teachers has increased (PEEC, 2010).

#### 2.6.5 PBE helps to connect schools and communities

Learners, educators, their families, and community partners are committed to shared learning in order to enhance everyone's quality of life in terms of the economy, social structure, and environment (PEEC, 2010). Using PBE, students can work closely with other stakeholders to establish a connection between human and environmental health and well-being (PEEC, 2010). Place-Based Education uses an integrated,

interdisciplinary, and frequently project-based approach where all students are held accountable and encouraged to connect what they learn in the classroom to real-world issues (EL Education, 2022).

# 2.6.6 PBE encourages students to become environmental stewards

Place-Based Education provides a good opportunity to trigger students' curiosity to love nature. Learning about their environment can be more authentic when they are engaged and involved in the program. They get inspired in the process of learning about their immediate environment. The observation was made by Greenville School with their students after a week-long program.

A group of special-education students has organised a field research team to study the 100-Mile Wilderness, a segment of the Appalachian Trail. These students produced signage and brochures for trail users, and they hiked the 100-Mile Wilderness in sections over the course of a year. They were inspired to become Appalachian Trail stewards after their teacher attended a Trail to Every Classroom Summer Institute, a week-long course intended to encourage teachers to use the trail as a resource both in and out of their classrooms (PEEC, 2010, p.8).

# 2.7 RELATED LEARNING THEORIES

Learning takes place at a different pace and time with different individuals. In light of these findings, psychologists and educators have developed a number of widely used theories of learning. This part discusses the importance of related learning theories that are related to the Place-Based Education teaching approach. There are several learning theories that sink so well with the PBE teaching strategy. However, theories such as socio-cultural and experiential learning theories are best suited to the PBE principles of teaching and learning. The following provides a summary of the related learning theories.

#### 2.7.1 SOCIOCULTURAL LEARNING THEORY

According to Vygotsky's sociocultural theory, children gain knowledge about cultural norms, attitudes, and problem-solving techniques through cooperative interactions with more experienced members of society. As a result, human growth is viewed as a process that is socially mediated (McLeod, 2020). Similarly, David (2014) states that in social learning theory, learning occurs with the support of a More Knowledge Other (MKO) who has a greater degree of knowledge or comprehension than the learner. PBE teaching approaches all have to do with learning by interacting with the people living around them. People and places are considered the most important resources in PBE teaching and learning.

Vygotsky strongly believed that community plays a crucial part in the process of producing meaning, hence his ideas place a great emphasis on the significance of social interactions in the formation of cognition. Community learning using the immediate place and people is one of the unique features of a PBE approach. Besides that Vygotsky (1978) argued that the process of developing culturally oriented, distinctly human psychological function which is a necessary and universal factor.

Similarly, scaffolding is associated with cooperative learning since the Place-Based Education approach can be effective with appropriate direction and support. The guidance refers to the support that a teacher provides to students when they engage in the activity. Teachers can make students perform tasks independently after they are acquainted with them. Therefore, the use of PBE promotes working collaboratively by helping each other and learning from one another. Thus, Vygotsky's social learning theory and the PBE approach complement each other.

#### 2.7.2 EXPERIENTIAL LEARNING THEORY

Dewey and Piaget were educationists and psychologists who proposed the experiential learning theory. In an experiential learning process, experience plays a vital role. Experiential learning immerses students in real-world circumstances, providing

them with meaningful lessons (Kolb,1984). As per the experiential theory, knowledge is obtained through these procedural experiences, learning is regarded as an ongoing process that evolves from experiences. Thus, learners are given the opportunity to explore objects and concepts, as well as to reflect on what they have learned.

A significant underlying theory for learning, growth, and change in all its dimensions is experiential learning. Experiential learning highlights the ultimate learning process, makes it possible to recognize oneself as a learner, and gives one the power to take responsibility for their own learning and growth. PBE is related to the first stage of Kolb's cycle, which is the stage of concrete experience. The learning cycle illustrates how students can examine and investigate new experiences for future learning by reflecting on their experiences and incorporating them into concepts (Young, 2017). Similarly, PBE is also conceived on the experiential learning theory, whereby the learner learns by practical applications, self-reflection on lessons learned, and innovative experimentation.

The key principle of the experiential learning theory is that when students learn something by doing, one's learning is enhanced. For children to learn new concepts like watersheds, hands-on experiences might be more successful. Therefore, using PBE in the classroom can be one of the solutions to provide more effective, active, and engaging lessons in the teaching of Social Studies. Students can understand abstract concepts more easily when they learn how to connect with the immediate environment.

The researcher felt that the application of the Place-Based Education strategy in teaching and learning Social Studies would be the appropriate intervention when students across the country perform below expectations in Social Studies. Therefore, PBE would be regarded as one of the alternatives that can enhance learning outcomes and inspire students to learn Social studies.

# 2.8 RELATED RESEARCH AND STUDIES

Numerous studies on the effectiveness of Place-Based Education in subjects such as Science, Engineering, Mathematics, and Social studies classes have been offered across the world. A number of studies found that the PBE methodology proved a successful instructional tool for the aforementioned subjects at all grade levels. A few research findings on PBE are reviewed as follows.

PEEC (2010) conducted research to examine the effectiveness of community vitality to enhance students' learning outcomes. The data was collected from ten PBE programs across100 schools including rural, suburban, and urban schools in twelve states. The study's data includes a substantial document from 1000 adults, around 250 students, and more than 900 educators' surveys, 2700 student surveys, and dozens of field observations. The results revealed that PBE enhances learners' sense of place and strengthens strong bonding between schools and communities. Furthermore, it boosts social, economic, and environmental vitality but also improves students' learning. Thus, PBE teaches children to care for the environment by helping them understand where they live and take action in their local neighborhoods and communities.

A mixed-method study on the effects of PBE on Bhutanese educators was done by Koinis (2016). The data gathered through surveys, interviews, observations, and pre-existing data were analyzed using qualitative and quantitative methods. The objective of the study was to determine whether the PBE workshop offered by the Teton Science School had any positive effects on the professional growth of Bhutanese teachers. Data were gathered and analyzed from 43 participants. The research study has shown that TSS has considerably benefited the participating teachers in a number of different ways. The classroom was made more interesting by using interesting educational concepts, philosophies, and frameworks.

In order to investigate the impact of Place-Based Education on teachers' professional growth, Linnemanstons and Jordan (2017) conducted the study. The researcher used multiple qualitative strategies, including written reflections and semi-

structured interviews. The purpose of the research was to ascertain how PBE affected both students and educators. Nine teachers who took part in the PBE professional development program were studied. The researcher utilized the QSR NVivo 10 program to analyze the transcriptions. The study was conducted over a seven-month period in the participants' preferred environment, usually their classrooms during working time or after school. According to the results of the analysis, teachers indicated that PBE had a substantial impact on their students' engagement, cooperation, and ease of learning. Apart from the benefits to students, the study also reported the changes in teachers as a result of the PBE program's professional development.

Yilmaz and Karakus (2018) conducted to examine the effectiveness of Place-Based teaching methods to ascertain the learner's achievement. The study was carried out with 6th-grade students in the teaching of Social Studies. The study was carried out over the course of six weeks in a public secondary school in Milas during the 2013-2014 academic year. An intervention and a control group were used in this study. The unit "Our Country" was taught to the control group as part of their regular classroom instruction. Student achievement in both the control and experimental groups was measured using pretests and posttests developed by the researcher in order to compare student achievement between the two groups. According to the findings of this study, students in the experiment group who were taught using a Place-Based method achieved significantly higher learning outcomes than students in the control group who received traditional classroom instruction. The study concluded that the Place-Based Education method is more effective for student achievement in Social Studies teaching.

Tinder (2018) conducted a study on "The impacts of PBE in a middle school science classroom" with 33 sixth graders at Sea Crest School. The PBE-focused curriculum was implemented in partnership with the National Park Service, measuring whether PBE had more of an impact on science comprehension, curiosity, connection to the local landscape, and interest in the subject matter. The quantitative study included a pre-and post-test and Likert survey, and weekly assessments during the six-week unit, which cycled equally between PBE and traditional inquiry. Qualitative measurements included student interviews, field investigation journals, and post-field trip reflections.

According to the findings, PBE had the greatest impact on science learning, with significantly positive gains in connection to the environment/sense of stewardship, as well as curiosity and interest in the subject matter.

Akbaş and Çakmak (2019) conducted research to examine the effect of Place-Based Education integrated project studies on students' problem-solving and social skills. A sample of 18 grade 7 students was used to conduct project studies about the local history, cultural, and socio-economic structure of their environments within the context of the place-based education approach. Wilcoxon signed test was used to analyse whether there was a significant difference in the mean scores of the students' problem-solving and social skills between pretest and posttest. As a result, the study indicates that project studies are to be included in the teaching of various skills, values, and knowledge within the teaching context of the PBE approach in Social Studies.

Kezang (2019) a mixed-method investigation to examine Place-Based Inquiry (PBI) in Environmental Science instruction in Bhutanese classrooms has enhanced students' learning achievement and attitude towards it. A total of 39 students in grade 6 were chosen using the purposive sample technique. The researcher used a single-group pretest-posttest research design. For four weeks, the group was instructed to follow the Place-Based Inquiry method. The pretest and posttest were each comprised of a 20-item achievement test. Student's reflective journals and presentations on their exhibitions were used as data collection tools to find out the perception of the participants on PBI. The result indicated that the Place-Based Inquiry strategy improved student learning outcomes. Additionally, the study of the qualitative data revealed positive opinions toward the application of the Place-Based Inquiry method.

Dorji et al. (2021) conducted a case study in one of Bhutan's primary schools to examine how PBE is being implemented. The purpose of the research was to explore how PBE was incorporated into an innovative Bhutanese PBE pilot school. The objectives of the study were to investigate the potential influence of PBE on students' engagement in learning and further describe the PBE assessment practices carried out in the school. This qualitative study, which included an exploratory case study, was

structured from a constructivist viewpoint. The researchers used purposive sampling to seek data from respondents who had witnessed the event under study. Semi-structured interviews, classroom observations, and document analyses were done with 6 teachers and 8 students. The finding of the study asserts that the local community was used as an extended part of the classroom which provides a platform for the students to engage in hands-on experience. Furthermore, data analysis reveals that the PBE School used a variety of authentic evaluation approaches to evaluate student growth. The study also found a substantial correlation between PBE and GNH, particularly in terms of the academic and intellectual aspects of the Green School idea. PBE would therefore be utilized to solve the issues with students' poor performance in the teaching and learning of Social Studies.

PBE is a significant teaching strategy that may be applied to all academic levels and subjects. Incorporating the PBE approach, particularly in the teaching of Social Studies, has many advantages as highlighted in the previous studies mentioned in the related research part. The PBE approach's application is relevant in the Bhutanese context since Bhutan is a country with rich cultural and abundant natural resources. Students have a lot of opportunities to learn from the environment that they live in.

The findings of Dorji et al. (2021) indicate that the local community was used as an extended part of the classroom which provides a platform for the students to engage in hands-on experience. Further, TSS (n.d.) supports that communities and educators are developing Place-Based learning opportunities for learners in a range of settings. Students come from diverse backgrounds and settings. Therefore, the PBE teaching approach will be suitable for teaching Social Studies in Bhutan.

Therefore, the outcomes of the experiments discussed above showed incredibly positive results. Numerous researchers in other countries have succeeded with their studies on using PBE to enhance academic achievement. However, a few studies highlight several shortcomings and make suggestions for future research to focus on specific areas that required improvement.

#### **CHAPTER 3**

# RESEARCH METHODOLOGY

This chapter covers the research design, research instruments, participants, validity and reliability of the research instruments, data collection procedure, and data analysis of the study.

# 3.1 RESEARCH DESIGN

The learning achievement and learner satisfaction of grade 5 Bhutanese students using PBE to teach the topic "People and the Environment, Impacts of Pollution, Waste Management, and Conservation of the Environment in the teaching of Social Studies" were examined by the researcher using a quasi-experimental design that combined both quantitative and qualitative components of an approach.

In the words of Halcomb and Hickman (2015), the mixed research method is a single research project which not only includes qualitative but also quantitative data. It covers the use of both in a single research project. In order to achieve a comprehensive understanding, a thorough understanding, and reinforcement, mixed methods research employs both qualitative and quantitative research approaches. (Johnson, Onwuegbuzie, & Turner, 2007).

The mixed methodology is a style of research that merges parts of qualitative and quantitative research methodologies in order to collect comprehensive information from researchers (Almalki, 2016). Moreover, Shorten and Smith (2017) asserts that mixed methods research makes use of both the potential benefits of qualitative and quantitative techniques, enabling researchers to look at things from different perspectives and uncover connections between the various layers of our many research

questions. A further justification for using this approach is to obtain dependable and consistent data (Mckim, 2017).

The sample group's learning achievement tests for the use of PBE before and after were assessed using the pretest and posttest to gather quantitative data. To obtain comprehensive information for researchers, the aspects of both qualitative and quantitative research methodologies were blended. In order to determine the learners' involvement with the students in the following teaching using the PBE approach, semi-structured interviews were conducted in the research. The figure below shows the research design used for the study.

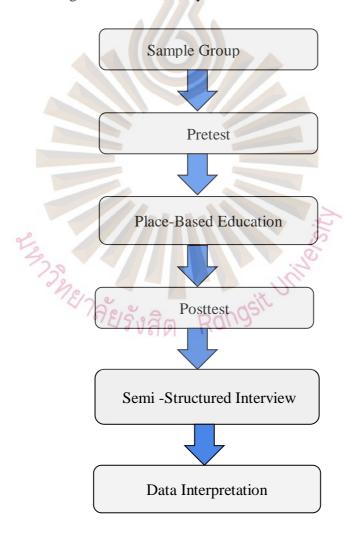


Figure 3.1 Illustration of Research Design

# 3.2 LOCATION OF THE STUDY

The research was carried out in one of the primary schools, in Haa district. It is a boarding school which is located in the western region of Bhutan. It is located in a semi-urban area approximately 10 kilometers away from the nearest district town. The school consists of grade levels starting from kindergarten to grade 6. The total enrolment of the school is 211 students with 13 teachers as of April 2022.

# 3.3 TARGET GROUP

The research involved grade 5 students from one of the primary schools in the Haa district, Bhutan. The researcher used all of them as research participants since there was only one section of grade 5 in the research school. Table 3.1 outlines the participants in the study's age and demographic data.

Table 3.1 Demographic profile of the research participants

Gender	Male	Female	Total
Percentage	38.7%	61.3%	100%
Age group (13-15)	912	19 pangsit	31
23/43 14013			

Table 3.1 details the participants in the study in terms of their age and gender. A total of 31 students between the ages of 13 and 15 were used as the sample group. The research participants consisted more of females with 19 (61.3%) than males 12 (38.7%).

# 3.4 RESEARCH INSTRUMENTS

Research Instruments are measurement equipment that was planned and prepared to collect specialised and relevant data on a certain research topic. The research instruments are data-gathering tools that allow the researcher to obtain relevant and

reliable information from the data collection process (Annum, 2018). The data were collected using three devices in this investigation. Lesson planning, learning achievement exams (pretest and posttests), and semi-structured interviews are among them.

The researcher used both quantitative and qualitative tools in this research to reduce the inadequacies and enhance the research outcome. The achievement tests were conducted with the target group before and after the intervention to gather information, and a semi-structured interview was conducted after the posttest to ascertain the qualitative data.

#### 3.4.1 Intervention Instrument

Bastos, Duquia, González-Chica, Martínez-Mesa, and Bonamigo (2014) highlight that the data collection instruments are an essential component of the research process. In this study, the researcher's lesson plans will be used as an intervention tool. It will be convenient for the researcher to educate the students about the application of the PBE teaching approach because the lesson plans incorporate all its aspects.

# 3.4.1.1 Lesson Plans

Jones (2018) asserts that lesson plans are essential tools because it helps teachers maintain a consistent teaching approach and prevent students deviating from the subject. In this study, the researcher prepared 90 minutes lessons each to be used in the study. A total of four lesson plans were prepared by incorporating the different principles of PBE teaching approaches with the 5Es model (see Appendix D). The researchers conducted two sessions each week for a total of four weeks. The researcher adopted the four stages of the community as a classroom principle, which is one of the principles of Place-Based Education. The four steps of a field visit are; plan with intent, frame the experiences, ensure experiential learning and connect and reflect (Schneider, 2016).

Table 3.2 Table showing lesson topics and activities of PBE

Week	Topics	Activities of PBE
I	People and the Environment Session 1: Introduction on the people and the environment and human activity. Session 2: Livestock and industry.	Field visits to the community to explore human activities in the locality.
II	Impact of pollution Session 1: Type of pollution. Session 2: Impact caused by the various types of pollution.	Field visit to the dumping yard to investigate the types of waste in their community.
III	Waste Management Session 1: Different types of waste and effects on environment/humans. Session 2: Measures to reduce the waste	Investigate degradable and non-degradable waste by service learning in the school.
IV	Conservation of the environment Session 1: Afforestation and reforestation. Session 2: Ways to conserve the environment.	Creating awareness of waste management in the school and community by displaying posters.

# 3.4.2 Quantitative Data Collection Instrument

# 3.4.2.1 Learning Achievement Tests

The learning achievement tests were developed as per the Royal Education Council's (REC) curriculum framework. The researcher followed the standard guidelines of the Bhutan Council for School Examination Assessment (BCSEA) while framing the test items.

The learning achievement test consisted of 10 marks for short answers, 5 marks for true or false, and 5 marks for multiple-choice questions. The learning

achievement test was out of 20. The topics covered "People and Environment, Impacts of pollution, Waste Management and Conservation of the Environment" from the grade 5 Social Studies textbook. The researcher conducted a learning achievement test before and after the intervention to analyse the learning achievement of the research participants. It consisted of a pretest and posttest. A pretest was administered prior to the intervention. The research used the same question but with different order of choices and was administered following the intervention to the same set of students. The researcher used the same test items for both pretest and posttest in order to ensure consistency with the evaluation (see Appendix B).

## **3.4.3** Qualitative Instrument

#### 3.4.3.1 Semi-Structured Interview

Lochmiller and Lester (2017) assert that Semi-Structured Interviews provide researchers the freedom to conduct interviews in a more casual conversation, allowing unanticipated information to emerge. Therefore, Semi-Structured Interviews are extremely effective for obtaining a solid understanding of a subject of interest. Hence, in order to find out the students' satisfaction with using PBE approach in the teaching of Social Studies, the researcher conducted a focus group after incorporating the intervention of the PBE approach.

The interview consisted of six questions that the researcher framed (see Appendix F for Semi-Structured Questions). Each group took approximately 7-10 minutes to respond and was given the freedom to speak in the language of their choice (English or in their mother tongue). The responses of each student were audio-recorded during the interview. Later the researcher translated and transcribed it into English. The data were analysed following a peer review process to avoid any bias in the data analysis.

# 3.5 VALIDITY AND RELIABILITY OF RESEARCH INSTRUMENTS

## 3.5.1 Content Validity

Zach (2021) defines validity as a survey or test that measures and constructs to set out the measure. For instance, if a professor wants to test the overall understanding of his or her students in the subject of elementary statistics. His or her test will have content validity. This test includes all of the topics in simple statistics that he or she covered in class and it does not include unrelated topics.

The validity of the research instruments, lesson plans, test items, and semi-structured interview questions was validated by 3 experts, a professor from Rangsit University, Thailand, and two experienced Social Studies teachers from Bhutan (see Appendix I for Expertise Details). The validity of the instruments was done using the Item Objective Congruence Index (IOC). The IOC of the instrument was calculated to see whether the items are aligned with the learning objectives. The result of the IOC index ranges from -1 to +1 as described below:

If the rating is 1, the item clearly matches the given objectives.

- 0, means the item is uncertain, not sure if it meets the objectives or not.
- -1, tell us that the item clearly does not match the objective.

IOC will be calculated by applying the formula: IOC  $\Sigma$ =, where 'r' is the score of individual experts' ratings and 'n' is the number of experts. The value of the test item between 0.67 and 1.00 will be considered accurate and acceptable whereas a value below 0.67 indicates that the item needs to be rephrased as per the expert's suggestions and feedback.

The experts used IOC to validate all the research instruments as discussed below:

- 1) All four lesson plans were rated as +1 by the experts which affirmed that the items were congruent with the research objectives. Thus, all the items were considered valid for the study (see Appendix E).
- 2) The IOC ratings for the test questions were rated +1 by all the experts which indicated that the test question items were congruent and valid for the pretest and posttest (see Appendix C)
- 3) The IOC for the semi-structured interview was above 0.67 which confirmed that the items were valid for the study (see Appendix F).

Therefore, all the instruments used for data collection were found valid and authentic in conducting the study as per the research objectives.

# 3.5.2 Reliability

In quantitative analysis, instrument reliability is the second determinant of consistency. In other words, there should be a negligible degree of outcome difference when the instruments were used in the same situation and context.

The researcher did an analysis to assess the validity of the achievement test items. a reliability test consisting of 20 marks questions with 31 students of grade 5 students. Kuder-Richardson equation (KR-20) was utilized to find out the learning achievement test's reliability coefficient. The KR-20 coefficient for the instruments has to be equal to or greater than 0.70 if the instruments are to be reliable. The KR-20 coefficient obtained was 0.713 (see Appendix J for the Reliability Test Report) which was greater than 0.70. Thus, the coefficient of 0.713 showed that the test items were reliable.

# 3.6 DATA COLLECTION STEPS

#### 3.6.1 Ethical Consideration

# 3.6.1.1 Approval

Ethics is considered one of the most important bases for conducting research. Negligence in ethical considerations may undermine persons, researchers, and the community as a whole (Essay in UK, 2013). The idea that individual rights, particularly those of the most vulnerable, should be protected has grown sensitive in society. Therefore, it is very important for researchers to get approval from concerned stakeholders prior to carrying out any kind of study.

Firstly, the researcher sought approval from the Research and Development Institute, Rangsit University. Secondly, the researcher also sought approval from the Ministry of Education in Bhutan (MoE), the Chief District Education Officer (CDEO), the school's Principal, the Head of the Department of Humanities, and the concerned subject teacher before the data collection. Thirdly, the researcher obtained a consent letter from the parents of every research participant since most of them were below the legal age of 18 years.

# 3.6.1.2 Anonymity of the Participants

When participants are anonymous, researchers are not aware of their specific identities. Since most human subject research requires formal authorization, subject anonymity is less common than it is in other fields (Evergreen Olympia Washington, 2016). Through a numbering system, the participants' comments and learning achievement records were kept anonymous and confidential. To maintain confidentiality, research participants were referred to as student 1(std 1), student 2 (std 2), and so on.

#### **3.6.2 Pretest**

In order to ascertain the current competency level of the research participants, the researcher conducted a pretest for the study participants which consisted of 31 students in grade 5 in one of the primary schools in Haa district. The researcher provided a week-long preparation time for the test so that the outcome would be reliable. The pretest question consisted of 5 marks multiple choice, 5 marks true or false, and 10 marks short answer questions. The time frame to complete the test for them was an hour.

#### 3.6.3 Intervention

The researcher created four lesson plans of 90 minutes (1 lesson plan = 2 sessions) each, to teach Social Studies to the research participants on the topics "People and the Environment, Impacts of Pollution, Waste Management, Conservation of the Environment" in Bhutan. PBE teaching approach was incorporated to teach the chosen content. Before conducting the PBE approach, the researcher briefed on the 5Es (Engage, Explore, Explain, Elaborate, and Evaluate) lesson model.

In all the sessions, participants got a chance to explore their immediate environment for learning. Students were engaged by visiting a nearby locality to explore human activities and identify preventive ways to reduce pollution, effective management of waste, and ways to conserve the environment. The sessions were spread over four weeks with two sessions per week. All the lessons were prepared to infuse PBE principles such as learning by doing, community as a classroom, outdoor education, and inquiry-based learning.

#### 3.6.4 Posttest

The researcher administered the posttest using the same set of questions used for the pretest after four weeks of teaching using the PBE approach. This was done in order to compare the pretest and posttest scores to ascertain and conclude the effectiveness of the intervention strategy used.

# **3.6.5 Focus Group Interview**

The researcher collected and analysed qualitative data by interpreting and categorizing themes. To get an in-depth understanding of the learning satisfaction of the respondents, the researcher conducted one-to-one semi-structured interviews after incorporating the PBE approach. The interviews consisted of six questions based on the PBE teaching approach. The research participants answered either in their mother tongue or English. The responses of each research participant were audio-recorded during the interview. The researcher included 31 research participants for the interview in groups. The researcher conducted focus group interviews to get in-depth quality opinions. After that, the researcher translated and transcribed the recorded audio after the interview.

# 3.7 DATA ANALYSIS

The data analysis can be classified into two categories:

- 1) Test score analysis to determine the Social Studies learning outcomes for students in grade 5.
- 2) Thematic analysis of the semi-structured interview questions through coding to find out how satisfied grade 5 students were with an application of the Place-Based Education teaching approach in teaching and learning Social Studies.

# 3.7.1 Analysis of learning achievement

The researcher conducted a pretest before the intervention and a posttest after the use of the PBE approach to determine the level of students' learning achievement in the teaching of Social Studies. After conducting the pretest and posttest, the researcher analysed the marks scored using paired samples T-Test with the help of a suitable software computer program. Based on the mean, standard deviation, and significant value, a comparison was made.

# 3.7.2 Analysis of learning satisfaction

In order to obtain qualitative data, the researcher carried out a semi-structured interview with the focus group. The main objective of the interview was to ascertain the level of learning satisfaction of the research participants in the teaching of Social Studies incorporating PBE approaches. The main purpose of qualitative data analysis was to organize and interpret the data collected. Lochmiller and Lester (2017) text data can be collected verbally, in print, or electronically using numerous methods for data collection. The data gathered after semi-structured interviews were analysed and later developed the themes through coding and pattern with thematic analysis technique.



# **CHAPTER 4**

# DATA ANALYSIS AND RESULTS

This quasi-experimental research design was used to study the topic, 'The Application of Place-Based Education [PBE] in Social Studies of Grade 5 Bhutanese students. The learning achievement tests were conducted on the target group before and after the treatment to investigate the learning achievement and learning satisfaction of the students. The data analysis was derived from the following research instruments: Pretest, Posttest, and Semi-Structured Interview. The quantitative data was gathered through a pretest and posttest which responded to Research Question One. To answer Research Question Two, the qualitative data was acquired through a Semi-Structured Interview and analyzed thematically. In this chapter, the findings from the data are discussed as follows:

- 4.1 Findings of Learning Achievement Test Scores
- 4.2 Findings of Semi-Structured Interview Scripts

# 4.1 RESULT OF QUANTITATIVE DATA

The results of the pretest and posttest were analyzed to determine whether the use of PBE in the teaching of Social Studies in a Bhutanese classroom improved students' learning achievement for grade 5 students. A total of 31 students conducted the pretest and posttest, which included five multiple-choice questions, five true-false questions, and ten short answer questions, before and after the intervention. To evaluate the efficacy of incorporating PBE, the research participants' pretest and posttest scores were compared using a paired sample t-test. Based on the mean, standard deviation, and significance level, comparisons were made (p-value).

# **4.1.1 Pretest and Posttest Comparison**

The students' achievement of grade 5 Bhutanese students before and after the intervention was compared using the data gathered from the pretest and posttest scores, as shown in Table 4.1. The table displays the findings of the descriptive statistical analysis for the achievement test results for the target group. The pretest and posttest were 8.37 and 14.45 respectively. The data shown in Table 4.1 clearly showed that there was a significant mean difference of 6.08 between the posttest mean scores. The posttest's considerable mean score indicated the efficiency of Place-Based Education. This clearly reveals that PBE is one of the most successful teaching methods for improving students' levels of academic success.

Table 4.1 Result analysis of pretest and posttest within the target group

Group	Pre	etest	Pos	ttest	Mean Difference	Т	P – value
Sample	$\overline{X}$	SD	$\overline{\mathbf{X}}$	SD	14.45-8.37=6.08	-7.333	.01
Group	8.37	4.189	14.45	5.421	10	120	

Figure 4.1 represents the mean scores for the pretest and posttest and they are 8.37 and 14.45, respectively. Since the posttest's mean scores were significantly higher than those of the pretest, it was evident that the intervention had improved the students' academic achievement, which was lower before the intervention. According to the Figure below, the mean of the posttest was greater than the mean of the pretest. The success of the students' grade 5 Bhutanese social studies placement-based education was supported by all of these scores in comparison. As a result, it provided a favorable response to the first research question and supported the response to the first research objective and hypothesis.

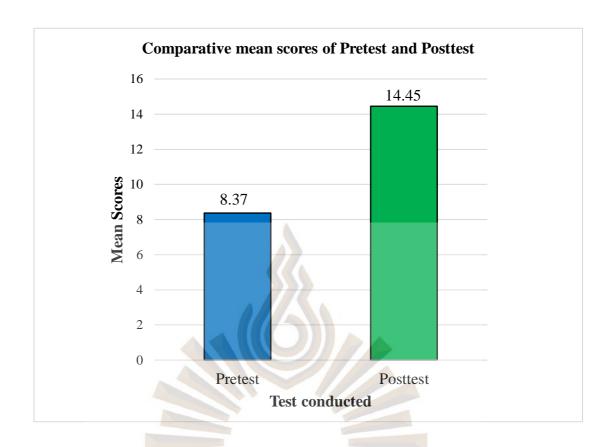


Figure 4.1 Graphical representation of pretest and posttest mean

Table 4.2 Score difference between pretest and posttest

Students code	Pretest Scores	Posttest Scores	Improvement of Scores
Std 1	9 % 8/20	12	3
Std 2	5 निधुन	van Rangs	4
Std 3	6	8	2
Std 4	17	20	3
Std 5	10	14	4
Std 6	6	6	0
Std 7	6	9	3
Std 8	11	19	8
Std 9	6	13	7

Table 4.2 Score difference between Pretest and Posttest (Cont.)

Students code	Pretest Scores	Posttest Scores	Improvement of Scores
Std 10	6	17	11
Std 11	5	6	1
Std 12	12	19	7
Std 13	8	8	0
Std 14	5	13	8
Std 15	11	16	5
Std 16	5	10	5
Std 17	10	18	8
Std 18	6	16	10
Std 19	7	10	3
Std 20	17	20	3
Std 21	14	19	5
Std 22	5	8	3
Std 23	9	17	8
Std 24	1	9	8
Std 25	16	20	41/5
Std 26	9	18	9
Std 27	1720	18	1
Std 28	8 479819	15 Rangsh	7
Std 29	3	71	8
Std 30	10	18	8
Std 31	5	13	8

Table 4.2 is presented to complement the findings of the descriptive statistical analysis and to present a comprehensive understanding of how each student's scores improved from the pretest to the posttest. The research participant with code number S10 made the highest improvement, scoring 11 marks higher in the posttest than in the pretest. Participants with the code numbers S11 and S27, on the other hand, showed the least improvement, scoring just 1 mark more in the posttest than in the pretest. It's

interesting to note that 2 participants had equivalent scores on the pretest and posttest. However, 93.5% of the participants managed to improve their posttest results. The remaining 6.5% of the students' scores were constant for both tests.

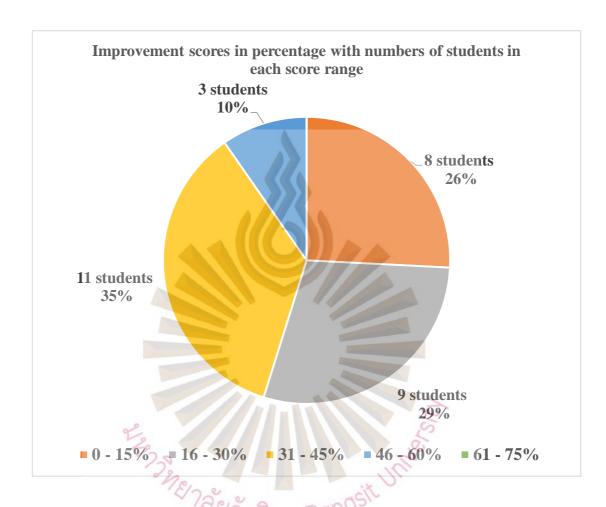


Figure 4.2 The pie chart illustrates the percentage and number of students who improved their scores after treatment.

The number of students in each score range difference between the pretest and the posttest is represented in the pie chart above. Out of the 31 students, 11 students, or 35% of them, managed to raise their posttest scores between 31 to 45%, which was the maximum improvement. 9 students equal to 29% secured within the range of 16-30% while 3 students equal to 10% managed to secure within the range of 46-60%. The rest of the 8 students equal to 26% managed to improve their scores within the range of 0-15%. Though there was a variation in the degree of improvement amongst the research participants, the intervention did impact everyone positively.

# 4.2 QUALITATIVE DATA ANALYSIS

Semi-Structured Interviews were conducted to obtain qualitative data in order to address the second research objective. The purpose of the study was to evaluate grade 5 Bhutanese students' learning satisfaction in Social Studies using Place-Based Education [PBE]. The researcher conducted interviews with the research participants at the end of the intervention with the students of the target group. Due to the time constraint and the convenience of the research participant, the researcher interview sessions were conducted in groups of 7 with 4 members and 1 group with 3 members respectively.

The researcher used the same student code utilized throughout the pretest and posttest to maintain the anonymity and privacy of the research participants. After being reviewed and validated by the three experts, a total of six questions were prepared for the interview (one expert from Thailand and two from Bhutan). In order to get the concert data from the research participants, they were given the freedom to speak in the language of their choice to express their answers in a language of their choice. Additionally, to obtain the data analysis interview sessions were audio recorded. And finally transcribed, identified themes, and evaluated accordingly.

Based on the study's objectives and questions, the data were analyzed and interpreted into themes. Six themes were used to analyze the information collected from the student interviews.: 1) Enjoyment in Learning, 2) Learning Satisfaction 3). Active Engagement, 4)Motivation for Learning 5) Effective communication, and 6) Revolution in Learning. The majority of the students responded positively to the use of Place-Based Education in Social Studies teaching.

# 4.2.1 Enjoyment in Learning

Maximum number of the research participants were excited to learn about Social Studies incorporating the PBE teaching approach. According to the data obtained from the student group interviews, PBE was an enjoyable and engaging approach to teaching and learning Social Studies. The comprehensive analysis of focus group interviews

revealed that participants expressed positive opinions with regard to incorporating PBE in the teaching of Social Studies. The lesson was fun and interesting since they got an opportunity to explore their immediate community to learn a new concept in collaboration with their group members.

The majority of the learners seemed to have enjoyed the PBE-infused lessons. They felt satisfied learning in groups with their friends. Student 3 from Group 1 stated that "Learning Social Studies using PBE has made the lesson interesting and fun. I got an opportunity to explore the real world around us." Furthermore, one of the participants from the Group 5 shared that "I enjoyed the lesson because it was interesting and fun learning. I understood the concept better and easily since my learning took place mostly outdoors." Similarly, a student from Group 2 stated that "I felt happy and excited to learn Social Studies because I got an opportunity to go out of the classroom. It was interesting and fun learning with friends. I feel and touch the real waste while learning about waste management."

# 4.2.2 Learning Satisfaction

Based on the opinions and learning experiences shared by the research participants in the interview, the session indicated that integrating Place-Based Education approach to learning Social Studies resulted in positive learning satisfaction. Most research participants agreed that learning Social Studies with the PBE approach improved their understanding of the subject, and they expressed an interest to use the Place-Based Education approach to learning other subjects as well. For example, one of the participants from group 3 said that "Learning Social Studies outside the classroom makes our learning better and practical. I could see and feel the real situation beyond the classroom setting but be creative and innovative with the ideas to solve day-to-day issues". One of the students from group 4 said that "Exploring our school campus was purposeful and engaging to me. I have involved myself in waste management and environmental protection in the process of completing our lesson activities". Also, some of the participants acknowledged that PBE activities were relevant and practical. One

student said that "I was asked to collect the waste from our school campus. After that, I segregated the waste into degradable and non-degradable waste".

According to the opinions expressed above, with the support of Place-Based Education, students were engaged and involved in learning activities. Moreover, they were able to actively take part in their own learning. It was also learned that almost every student was interested, excited, and enjoyed their learning through the use of the PBE teaching approach. Therefore, the application of the PBE approach motivated them to learn Social Studies.

# **4.2.3** Active Engagement

Most of the participants were active during the learning activities in the respective groups. Students found out that PBE stimulates their interest in learning since most of the learning activities were conducted outside the classroom. Furthermore, the learning activities kept them engaged since the learning activities were planned and designed to work collaboratively.

The research participants asserted that PBE improved their ability to learn social subjects. Student 1 from Group 8 stated that "I could learn many things from the learning activities. On the same note, one of the students said that "Learning the subject made it relevant and better when I got an opportunity to interact with my friends during the learning activities". Similarly, "PBE is all about learning by doing and it allowed us to involve in activities that help us to enhance our memory. I was able to learn better when I learn by interacting with my friends" shared student 3 from group 5. Furthermore, one of the students from group 6 said that "I liked the most when I got to interact with my classmate and work together. It provided a platform where we could engage and learn together."

Moreover, they were able to perform better in the posttest than in the pretest on through the application of the PBE teaching approach. Student 3 of Group 1 said that "PBE helps me to improve my test scores. It not only made me actively engaged and

learn from my peers but also from the immediate environment that we live in". Between the pretest and posttest, the majority of participants showed a significant improvement, which reflected their level of confidence in the subject.

# 4.2.4 Motivation for Learning

The majority of the research participants during the interview highlighted how motivated and excited they were to learn Social Studies when learning activities infused PBE approaches. They could learn and connect easily with the concept since most of the learning activities were designed to deal with the surrounding environment. Thus, it encouraged and inspired the participants to learn better. Student 4 of Group 7 stated that "I really enjoyed the Social Studies lesson since I could interact with the people and the environment around me. I enjoyed the Place-Based approach because it provides a good opportunity to contribute to my school and community".

# 4.2.5 Effective Communication

The Place-Based Education teaching style provided students with a greater opportunity to improve their communication abilities. Students interacted a lot during place-based learning activities, which enabled them to improve their spoken English by providing them with the opportunity to communicate with other group members.. Student 3 of group 3 stated that "I got lots of opportunities to share my views and opinions during the group activities. By doing so it improved my communication skills". After the activities, they presented their work to the whole class which enabled them to gain confidence. Thus, their communication skills were automictically enhanced by actively participating in the class

The participants considered learning Social Studies using the PBE approach fun, enjoyable, and exciting. Learning activities assigned in groups demanded them to collaborate, cooperate and communicate with each other. This in turn helped them in building team spirit. Student 4 of Group 4 said that "Throughout the session, my teammates taught me a lot. Group discussion was prolonged even during recess and

prepared for the group presentation. Such constructive discussion leads to better communication".

Additionally, group discussion exceeded individual acts as a means of generating original ideas. It enhanced their willingness to learn and assisted them in clarifying their doubts, which enhanced their level of comprehension. Everyone valued and respected others' views and suggestions during the group activities. One of the students from Group 8 stated "I felt that my voice is heard by my friends during the group discussion. It gave me positive energy to share my ideas without any hesitation in my group assignments. I enjoyed lessons incorporating a Place-Based approach". Thus, most of the participants were positive about incorporating the PBE approach in teaching and learning Social Studies to enhance their communication skills.

# 4.2.6 Revolution in Learning

More than 90% of the interviewees responded that using Place-Based teaching and learning was a new approach in Social Studies. They wished to learn subjects such as English, Mathematics, and others incorporating PBE since it made a positive impact on their learning. Student 3 from Group 3 said that "I prefer not only to learn Social Studies using the PBE approach but also other subject teachers to incorporate the approach to make our learning interesting and engaging."

Most of the respondents answered that they were usually taught Social Studies using chalk and chalkboard, text, and through lecture methods which didn't motivate them to learn and explore. However, the Place-Based Education approach kept them active and engaged. One of the members from Group 6 said that "In most of the classes, I used to feel restless and bored attending the class but place-based learning kept me active during the activity. It provided me more time to explore myself rather than the teacher explaining the content or text. The teaching and learning take a different way whereby I was mostly kept engaged by letting me explore and initiate myself".

The aforementioned response from research participants clearly showed that they valued the lessons and held positive opinions of implementing the Place-Based Education approach in Social Studies teaching and learning. Moreover, the examination of the qualitative data showed that the participants agreed with the use of the Place-Based Education strategy in Social Studies and that they enjoyed the session. The researcher was able to conclude that using Place-Based Education in Social Studies lessons not only drastically increased learning performance but also had a significant impact on students' learning satisfaction. Furthermore, there was a direct relationship between PBE and the improvement of children's overall academic performance.



# **CHAPTER 5**

# CONCLUSION, DISCUSSION, AND RECOMMENDATION

This chapter presents the achievement test and semi-structured interview which were used to collect quantitative and qualitative data, and the results are discussed in detail. It also covers how effectively the research objectives and research questions were achieved. The relevant literature that was evaluated and covered in this chapter supports the research conclusions. Furthermore, it includes suggestions for further study and recommendations for practice. The three main sections of the chapter are as follows:

- 5.1 Conclusion
- 5.2 Discussion
- 5.3 Recommendations

# 5.1 CONCLUSION

This study aimed to determine the efficacy of Place-Based Education (PBE) in enabling grade 5 Bhutanese students to learn Social Studies and to examine the participants' level of learning satisfaction. In order to find out the effectiveness of the PBE strategy, the researcher, therefore, administered the pretest and posttest. Data was collected using a semi-structured interview to determine the satisfaction level with learning. The outcomes of the data analysis resulted in the following conclusion.

#### **5.1.1** Conclusion from the Test Score Analysis

The purpose of this study was to examine the level of Social Studies learning achievement for grade 5 students adopting the Place-Based Education method, as well as to look at how satisfied they were with their learning. In order to collect the data required to achieve the set objectives, the researcher used a mixed-method approach. The outcomes of the data analysis resulted in the following conclusion.

# 5.1.1.1 The Result of Test Score Analysis

This study's key objective was to determine whether using the Place-Based Education teaching approach would enhance students' learning achievement in grade 5 Bhutanese students. A learning achievement test was conducted with the target group in order to determine the learning achievements of the students before and after using the treatment in teaching the topic "THE PEOPLE AND THE ENVIRONMENT" in grade 5 Social Studies. This was done in order to achieve the first research objective.

A paired sample t-test was used in a comparative statistical study within the target group to determine the difference in achievement level between the pretest and posttest. The mean scores for the pretest and posttest were 8.37 and 14.45, respectively. Between the pretest and the posttest, there was an average difference of 6.08. As shown in Table 4.1 in Chapter 4, the data analysis results indicated that the posttest mean score was significantly higher than the pretest mean score.

According to the significance value (.01) indicates that the sample group's posttest scores were considerably higher than their pretest scores. All students, with the exception of two (Std. 06 and Std. 13) who had the same score on both the pretest and the posttest, saw increases in their scores. However, both of the students during the semi-structured interview said that they thoroughly enjoyed the lessons incorporating the Place-Based Education approach. For an instance, Student 6 shared during the interview that "I enjoyed the learning activities where I got an opportunity to explore my school campus with the purpose". Similarly, student 13 expressed that "I was so excited to explore the world around us. This supports the first research hypothesis, which stated that the use of Place-Based Education would lead to an improvement in the learning achievement of grade 5 Bhutanese students in Social Studies.

Therefore, as per the findings, the participants were able to perform better and achieve higher scores on the posttest than on the pretest. The data analysis revealed that the incorporation of the Place-Based Education teaching strategy resulted

in a substantial improvement in the posttest scores as evidenced by the statistics of the mean, standard deviation, and significance value computed using paired sample t-test. As a result, the Place-Based Education strategy was found to be an effective method for teaching Social Studies and significantly improved the learning outcomes of Bhutanese students in grade 5.

#### 5.1.1.2 The Result of the Focus Group Interview

The second research objective examined at how effectively grade 5 Bhutanese children learned Social Studies after applying the Place-Based Education method to teach and learn the subject. To gather the required qualitative data from a target group, the interview was conducted with the research participants. Due to the time constraint and the research participant's convenience, the researcher carried out the interview in groups of four members in 7 groups and three members in a group. They were given the freedom to form their own group before conducting the interview.

The content of the participant's responses was evaluated by transcribing, interpreting, and thematically analyzing the focus group interview data. The researcher used six themes to categorize in order to evaluate their interview responses. The six themes were Enjoyment in Learning, Learning Satisfaction, Active Engagement, Motivation for Learning, Effective Communication, and Revolution in Learning.

The results of the interview revealed that the students were enthusiastic and motivated to learn Social Studies using the Place-Based Education instructional approach. The researcher subsequently concluded that participants exhibited tremendous learning satisfaction when the Place-Based Education approach was implemented. The majority of the participants appreciated the educational activities that gave them a chance to explore their immediate surroundings and gain valuable knowledge. They were inspired and encouraged to learn and participate actively in outdoor learning activities since the PBE model made learning fun and effective.

The overall findings indicated that the application of PBE for teaching and learning Social Studies was a new thing for them. It also has a positive impact on their learning as the use of Place-Based Education enhanced students' learning in Social Studies. Most of them shared that learning Social Studies with the use of PBE helped them to learn the subject better and they preferred to learn other topics with the use of Place-Based Education. Furthermore, it made it easier for students to recall and retain the lesson rapidly. They excelled in the subject because they had a thorough comprehension of the material.

The second research question, which examined the students' learning satisfaction with the use of PBE in their learning, was successfully addressed by these qualitative instruments. It was therefore proven that the application of PBE enhanced the learning satisfaction of Bhutanese students in grade 5 in learning Social Studies.

# 5.2 DISCUSSION

The study's conclusion indicates that teaching grade 5 Bhutanese students Social Studies using a Place-Based Education approach was not only successful but also had a positive effect on their attitude toward learning. Further indication that integrating Place-Based Education to teach Social Studies had a significantly favorable impact on students' learning achievement was revealed from the mean score difference between the pretest and posttest. This study proved that the PBE strategy has positive effects on students' learning satisfaction in addition to improving the academic achievement of Bhutanese students in grade 5 in Social Studies.

# 5.2.1 Learning Achievement Test

The study's result indicated that teaching and learning Social Studies was effective when using Place-Based Education approaches. The results showed that there was a mean difference of 6.08 between the pretest(8.37)and posttest(14.45) mean scores where the posttest mean scores were considerably higher. The learners performed

better on the posttest than on the pretest using PBE, with a significant value of .01. These indicated that the application of PBE significantly improved the learning outcomes of the students in Social Studies. As a result, it demonstrated how significantly the PBE approach enhanced students' learning achievement in Social Studies.

Similarly, Kezang (2019) conducted a study to investigate the learning achievement of grade 6 children, supporting the aforementioned conclusion. According to the study's findings, there was a significant mean difference between the pretest and posttest of 5.42. Additionally, the study's findings revealed a significant value of p (0.01), indicating that the Place-Based Inquiry technique is beneficial in enhancing student learning achievement. The study's findings confirmed that the PBE teaching method enhanced students' learning achievement in other disciplines including Science as well as Social Studies.

Except for two research participants who obtained the same scores on both tests, the majority of study participants improved their scores from the pretest to the posttest. However, they admitted that the class was engaging and that the learning activities were relevant. They stated during the interview that using the Place-Based Education approach in Social Studies had strengthened their social skills. This was also aligned with the research done by Akbas and Cakamak (2019) to look at how integrated project studies in Place-Based Education affected students' social and problem-solving abilities. According to their study's findings, there was a substantial difference between the pretest and posttest in terms of the students' mean scores for problem-solving and social skills. Moreover, the study's findings are also consistent with Kolb's (1984) experiential learning theory, which focused an emphasis on learning by doing in which students actively participated in the learning process and learned through experience in practical, abstract, reflective, and active methods.

Similarly, the results were also in line with a study by Yilmaz and Karakus (2018), whose results showed that using a Place-Based Education method in the classroom had a positive impact on student's academic achievement. Their study findings concluded that many of the students preferred to learn using the PBE approach.

In addition, students' responses also indicated that they did not have a negative perception of the use of the PBE learning approach. Overall, the study indicated that the use of PBE has positively affected students' learning achievement and learning satisfaction.

#### 5.2.2 Students' Learning Satisfaction

The students' positive learning satisfaction with the application of Place-Based Education in Social Studies was the study's second major finding. PBE was regarded as a fun, active learning, and adventurous method of teaching and learning social studies. It was discovered that it inspired the participants and increased their identity in Social Studies. They had the ability to better grasp and remember the lesson due to the learning activities.

According to the interview findings, every participant found the lessons to be engaging, interactive, and interesting. It was paralleled with the study done by Tinder (2018) where the findings of the study showed that PBE improved academic results, had an effect on students' sense of place and stewardship, and raised student engagement in active learning. Learning was also said to be considerably quicker and simpler. Furthermore, it exceeds conventional teaching approaches and has a positive impact on students' participation in outdoor learning activities. As a result, considering that they did better on PBE-related material, PBE has the capacity to leave a significant and long-lasting impression on students.

The results of the interviews revealed that the students were extremely motivated and showed positive learning satisfaction when Place-Based Education approaches were used to teach and learn Social Studies. This outcome was consistent with the PEEC (2010) study, which examined the individual and cross-program evaluation of ten PBE programs. The findings clearly indicated that PBE fosters students' sense of place and builds a strong connection between schools and communities. Along with raising student success, it also strengthens social, environmental, and economic vitality. The idea of Vygotsky's Social Culture Theory, which holds that human development is a

socially mediated process in which children acquire cultural values, attitudes, and problem-solving skills through cooperative interaction with more experienced members of society, is also supported by a study conducted by (McLeod, 2020).

Given the overwhelming majority of participants' positive feedback, the researcher came to the conclusion that Place-Based Education is one of the most effective methods for teaching Social Studies to Bhutanese students in grade 5. Therefore, with all the positive opinions expressed by almost all the participants, the researcher concluded that Place-Based Education is one of the effective approaches to teaching Social Studies to grade 5 Bhutanese Students.

#### 5.3 RECOMMENDATIONS

The study's overall results revealed that PBE is one of the effective strategies for enabling teachers to fulfill the requirements of 21st-century teaching. From this study, it was found that using Place-Based Education enabled Bhutanese students to learn more effectively and that it boosted their satisfaction with the challenging way they experienced learning social studies. Thus, the subsequent recommendations have been made by the researcher based on the findings of the study for the benefit of the teachers in Bhutan and other countries.

#### 5.3.1 Recommendation for Implementation

- 1) According to the study's findings, learning achievement scores were much higher in the posttest than pretest. Thus, it is highly recommended to incorporate the Place-Based Education approach into the teaching and learning of Social Studies and other subjects.
- 2) Place-Based Education learning activities may be applicable irrespective of subjects to enhance the student's learning achievements and learning satisfaction. It can also enhance effective communication and social skills besides learning the content.

- 3) Place-Based Education approach facilities active engagement, motivation, and effective communication with the participants. PBE can therefore be used to boost student interest and active participation in the classroom.
- 4) The study recommends that the application of Place-Based Education fosters learn-centric learning which makes the lessons engaging and motivating to enhance students' learning horizons. Thus, PBE can be used as an alternative method to the traditional teaching method.
- 5) Primary schools can employ the Place-Based Education approach to make learning enjoyable and connect students with their local community in subjects such as Science, Mathematics, English, and others.
- 6) Finally, this study also recommends the school administration support and encourage Social Studies teachers to integrate Place-Based Education teaching and learning strategies to engage the students in productive learning.

#### 5.3.2 Recommendation for Future Studies

Considering some of the drawbacks of the study researcher would like to suggest the following future recommendations:

- 1) The study included only 31 grade 5 students from one of the primary schools in Bhutan. Therefore, the researcher would like to suggest that future researchers do a comparative study using various grade levels, large sample sizes, and a long time period to ensure the reliability of the findings.
- 2) To provide a better situational analysis study, future researchers can conduct a survey on how teachers use the Place-Based Education strategy.

- 3) The study of subjects such as English, Mathematics, Science, and other instructional subjects could be also carried out by incorporating the Place-Based Education approach.
- 4) Further related studies could be conducted by integrating other grade levels in other schools located in different regions of the country.
- 5) The instruments used by the researcher in this study are limited to only a few. So, the future researcher could use numerous research tools for better investigation.
- 6) A similar study could be done to investigate the effectiveness of PBE other than primary schools such as LSS, MSS, HSS, and colleges.

Numerous studies on the Place-Based Education approach conducted by scholars all around the world results showed that this method of learning enables students to achieve higher test scores, develop stronger interpersonal relationships, and collaborate with their peers more successfully. To develop students and equip them for the kind of world they would be entering, educators should integrate the Place-Based Education approach in the classroom.

Finally, it was found that the Place-Based Education approach is a learner-centric method that helps students enhance their academic performance. It was also revealed that the integration of the Place-Based Education strategy allows learners to learn more effectively. As a result, the students demonstrate higher levels of satisfaction when learning Social Studies using the PBE method.

#### **REFERENCES**

- Agung, L. (2018). Character education integration in social studies learning. *Historia: Jurnal Pendidik dan Peneliti Sejara*, 12(2), 392-403.
- Annum, G. (2018). *Research instrument for data collection*. Retrieved from https://www.academia.edu/36865594/RESEARCH\_INSTRUMENTS\_FOR\_D ATA\_COLLECTION
- Akbaş, Y., & Çakmak, S. (2019). The effect of place-based education integrated project studies on students' problem-solving and social skills. *Asian Journal of Education and Training*, 5(1), 183-192. doi:10.20448/journal.522.2019.51.183.
- American History Association. (n.d.). *Chapter 5 history among the social studies: A meaning of the term "social studies"*. Retrieved from https://www.historians.org/about-aha-and-membership/aha-history-and-archives/historical-archives/american-history-in-schools-and-colleges-(1944)/chapter-5-history-among-the-social-studies
- Bastos, J. L., Duquia, R. P., & González-Chica, D. A., Martínez-Mesa, J, Bonamigo, R., R. (2014). Fieldwork I: Selecting the instrument for data collection. *Anais Brasileiros de Dermatologia*, 89(6), 918–923. doi:10.1590/abd18064841.2014 3884
- Bhutan Council for School Examinations and Assessment. (2017). *Competency-based assessment classes III and VI report 2017*. Retrieved from https://www.bcsea.bt
- Bhutan Council for School Examinations and Assessment. (2018). *Grades III and VI CBAT 2018*. Retrieved from http://www.bcsea.bt
- Bhutan Council for School Examinations and Assessment. (2019a). *Grade VI CBAT* 2018. Retrieved from http://www.bcsea.bt
- Bhutan Council for School Examinations and Assessment. (2019b). *Launch of Bhutan PISA-D national report*. Retrieved from http://www.bcsea.bt/index.php/bhutan-pisa-d-national-report/
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2<sup>nd</sup> ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.

- Dhandania, T. (2016). *The importance of social studies in the school curriculum*. Retrieved from http://www.progressiveteacher.in/the-importance-of-social-studies-in-the-school-curriculum/
- Dorji, K., Kinley, & Sivitskis, A. (2021). Implementation of place-based education: A case study in a primary school at Talhogang, Bhutan. *Creative education*, *12*, 2390-2409. https://doi.org/10.4236/ce.2021.1210180
- Dorji, T. (2021). The application of think-pair-share for social studies of grade six Bhutanese students (Unpublished Master's thesis). Rangsit University, Thailand.
- EL Education. (2022). *Celebration of learning: Why this practice matters*. Retrieved from https://eleducation.org/resources/celebration s-of-learning-whythis-practice-matters
- Essays, UK. (2013). Why is ethical consideration important in social research?

  Retrieved from http://www.ukessays.com/essay/socail-policy/ethical-consideration.php?verf=1
- Evas, T. R., & Kilinc, E. (2013). History of placed-based education in Social Studies. *Journal of Social Sciences/Sosyal Bilimler Dergisi*, 6(14), 263-277.
- Evergreen Olympia Washington. (2016). *Understanding confidentiality and anonymity*Retrieved from https://www.evergreen.edu/humansubjectsreviw/confidentiality
- Gyamtso, D. C., & Maxwell, T. W. (2012). Present practices and background to teaching and learning at the Royal University of Bhutan (RUB): A pilot study. *International Journal of Teaching and Learning in Higher Education*, 24, 65-75.
- Gyamtso, D. C., Sherab, K., & Maxwell, T. W. (2017). Teacher learning in changing professional contexts: Bhutanese teacher educators and the educating for GNH initiative. *Cogent Education*, *4*(1), 1-19. http://doi.org/10.1080/2331186X.2017. 1384637
- Griffin, E. (2019). A small, Bhutanese village school leading the way in place-based education. Retrieved from https://www.tetonscience.org/a-small-Bhutanese-village-school-leading-the-way-in-place-based-education/

- Griffin, E. (2017). The role of critical pedagogy in place-based education: A literature review. *SCE Journal*, *1*, 21-35. Retrieved from https://www.sce.edu.bt/wp-content/uploads/2020/06/NIE-Journal-vol.1.pdf
- Idowu, O. I., & Adeyeye, B. A. (2021). Implementation of value education in social studies curriculum: The place of sustainable pedagogical learning environment. Nigerian Journal of Social Studies, 24(2), 1-11.
- Ihejiamaizu, C. C., Ukor, D. D., & Neji, H. A. (2018). Utilization of 5Es' constructivist approach for enhancing the teaching of difficult concepts in biology. *Global Journal of Educational Research*, 17(1), 55-60.
- Jones, S. (2018, March 23). 3 reasons why it is important to plan lessons [Web log message]. Retrieved from https://www.eln.co.uk/blog/3-reasons-why-it-is-important-to-plan-lessons
- Kezang, N. (2019). The application of place-based inquiry approach on grade 6 Bhutanese students in learning environmental science (Unpublished Master's thesis). Rangsit University, Thailand.
- Koinis, N. J. (2016). An evaluation of the impacts of the Teton Science Schools placebased education professional development workshops for teachers in Bhutan. Retrieved from https://repository.uwyo.edu/smtc\_plan\_b/49
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Retrieved from https://simplypsychology.org/learning-kolb.html
- Linnemanstons, K., & Jordan, C. (2017). Learning through place: Evaluation of a professional development program for understanding the impact of place-based education and teacher continuing education needs. Retrieved from http://www.susted.com/ wordpress/content/learning-through-place-evaluation-of-a-professional-development-program-for-understanding-the-impact-of-place-based-education-and-teacher-continuing-education-needs\_2017\_02/
- Lochmiller, C. R., & Lester, J. N. (2017). *An introduction to educational research:*Connecting methods to practice. USA: SAGE Publication, Inc.

- McLeod, S. (2020). *Vygotsky's sociocultural theory of cognitive development*. Retrieved from https://www.simplypsychology.org/vygotsky.html
- McKim, A. C. (2017). The value of mixed methods research: A mixed method study. Journal of Mixed methods Research, 11(2), 202-222.
- Misco, T. (2014). Controversial issue instruction in context: A social studies education response to the problem of the public. *Education and Culture*, *30*(2), 47-59.
- Mufalo, S., M., Muleya, G., & Simui, F. (2021). Exploring the global emergence of social studies at junior secondary school: A glance on literature. *International Journal of Research and Innovation in Social Science*, *5*(7), 694-703.
- Pasiechnyk, C. L. (2018). *Place-based education: Improving learning while connecting students to community and environment* (Unpublished Master's thesis). University of Victoria, Canada.
- Peldon, D. (2018). The effect of cooperative learning strategies on sixth-grade

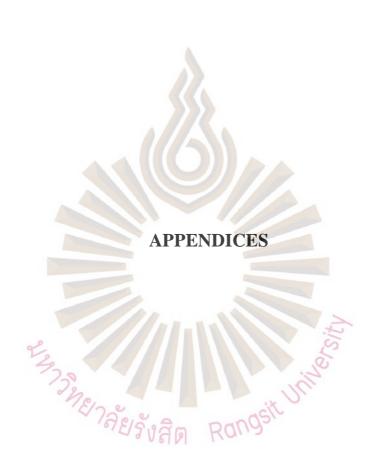
  Bhutanese students' learning satisfaction in social studies class (Unpublished Master's thesis). Rangsit University, Thailand.
- Place-based Education Evaluation Collaborative. (2010). *The benefits of place-based education:* A report from the place-based education evaluation collaborative (2<sup>nd</sup> ed.). Retrieved from https://promiseofplace.org/sites/default/files /2020-06/PEEC%2C%202010%20summary.pdf
- Promise of Place. (2021). What is place-based education? Retrieved from https://promiseofplace.org/what-is-pbe/what-is-place-based-education
- Sherab, K., & Dorji, P. (2013). Bhutanese teachers' pedagogical orientation in the primary classes: A factor on quality education. *JISTE*, *17*(1), 18–28. Retrieved from https://www.academia.edu
- Shorten, A., & Smith, J. (2017). Mixed methods research: Expanding the evidence base. *Evid Based Nurs*, 20(3), 74-75. Retrieved from https://ebn.bmj.com/content/ebn urs/20/3/74.full.pdf
- Smith, G. A., & Sobel, D. (2010). *Place-and community-based education in schools*. New York: Routledge.

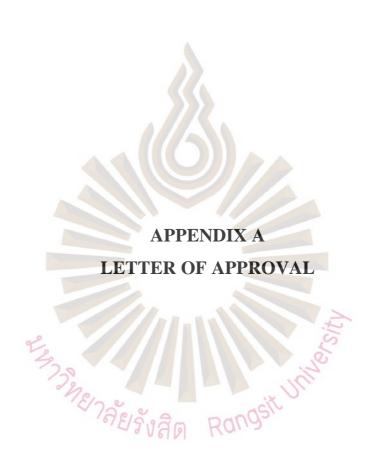
- Sobel, D. (2004). *Place-based education: connecting classrooms & communities*. GreatBarrington, MA: Orion Society.
- Subba, A. B., Yangzom, C., Dorji, K., Choden, S., Namgay, U., Carrigton, S., & Nickerson, J. (2019). Supporting students with disability in schools in Bhutan: perspectives from school principals. *International Journal of Inclusive Education*, 23(1), 42-64. doi:10.1080/13603116.2018.1514744
- Rashmi. (2020). *Aims and objectives of teaching social studies*. Retrieved from https://www.teachersadda.com/aims-and-objectives-of-teaching-social-studies
- Rinzin, C., Y. (2021, January 16). Reforming the education system. *Kuensel*. Retrieved from https://docs.google.com/document/d/1Mv-LVvsYlaCSMLHWMK2xwm ZxpYXmo/edit
- Royal Education Council. (2018). *Teacher learning center place-based education workshop guide*. Paro Bhutan: Author.
- Royal Education Council of Bhutan. (2019). *Social studies class V teachers' manual*. Paro: Author.
- Royal Education Council of Bhutan. (2020). New normal curriculum social studies curriculum framework class: IV-VI. Paro: Author.
- Royal Education Council of Bhutan. (2021). Social Studies class VI. Paro: Author.
- Tshewang, R., & Lhamo, J. (2020). Compassionate classroom teaching: Bhutanese teacher educators' perspectives and practice. *Rabsel-The CERD Educational Journal*, 21(11), 24-40.
- Teton Science School. (n.d.). What is place-based education and why does it matter?

  Retrieved from https://docs.google.com/document/d/1MvA7WhU3IAfhWu57

  LVvsYlaCSM LHWMK2xwmZxpYXmo/edit
- Teton Science Schools. (2017). TSS at 50 Years: Our "Why?". Retrieved from https://www.tentonscience.org/tss-at-50-years-our-why
- Thomsen, J. (2016). Exploring the impacts of Teton Science Schools' field education programs on visiting teachers' beliefs and practices about place-based education. Retrieved from http://files/4365/Exploring the Impacts of Teton Science Schools- Field Education P.pdf

- Tinder, C. (2018). *The impacts of place-based education in a middle school science classroom*. Retrieved from https://scholarworks.montana.edu/xmlui/handle /1/14811
- Tran, V. D. (2016). The effects of cooperative learning on academic achievement and knowledge retention. *International Journal of Higher Education*, *3*(2), 131.
- Wangchuk, J. (2019, April 24). School curriculum revised and rationalized. *Kuensel*. https://kuenselonline.com/school-curriculum-revised-and-rationalised
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Yilmaz, A., M., & Karakus, U. (2018). The impact of place based education approach on student achievement in social studies. *Review of International Geographical Education Online (RIGEO)*, 8(3), 500-526. Retrieved from http://www.rideo.org//vol8no3/Number3winter/RIGEO-V8-N3-5.pdf
- Young, C. (2017). Benefits of fun with camp on undergraduate nutrition students' education (Master's thesis). Retrieved from ProQuest Dissertations & Theses database. (ProQuest No. 1022302940)
- Zach. (2021). What is Content Validity? Statoloay. Retrieved from https://www.statology.org/content-validity/







Director General Department of School Education Ministry of Education Thimphu, Bhutan

Date: July 8, 2022

Subject: Request for Permission to Collect Data for Master of Education Theses

Master of Education Program in Curriculum and Instruction, Suryadhep Teachers College would like to request your permission for five Master of Education candidates to collect data for theses in Bhutan in the period of July 10, 2022 to August 20, 2022. The details of the candidates are shown as follows:

Sl. No	Name	Research Title	Research School
1	Tenzin Pema	The Application of Intensive Reading Approach with video for ELS Reading Comprehension Skill of Grade 6 Bhutanese Students.	Chumithang Middle Secondary School, Chhukha.
2	Leki Dorji D	The Application of Place-Based Education in Social Studies of Grade 5 Bhutanese Students.	Jyenkhana Primary School, Haa.
3	Pema Seldon	The Integration of Web Applications and Collaborative Learning in Mathematics for Grade 5 Bhutanese Students.	Phuentsholing Lower Secondary School, Phunentsholing Thromde.
4	Tshering Pem	The Application of Play-Based Learning for a Science Subject of Grade 5 Bhutanese Students.	Dechencholing Higher Secondary School, Thimphu Thromde.
5	Pema Dorji	The Study of Primary Bhutanese Teachers' Perceptions and Practices Towards the Use of Technology in Teaching.	13 Primary Schools, Tsirang.

Thank you for your kind consideration.

Truly yours,

NEPAPORNS'

Nipaporn Sakulwongs, Ed.D.

Director of Master of Education Program in Curriculum and Instruction Suryadhep Teachers College, Rangsit University

Muang-Ake, Paholyothin Road,

Lakhok, Pathum Thani 12000 Thailand

Mobile Number: +66-868846226 Telephone: +662997-2222 ext.1275 Chief, Longer, 58 CD & L. C.



# रतजार्मेषायवीयाः चिद्याः स्वेशार्म्याः सेषाया

Royal Government of Bhutan Ministry of Education Department of School Education



-Rethinking Education -

DSE/SPCD/SLCU(2.1)2022/1538

July 4, 2022

Chief Dzongkhag/Thromde Education Officers Chukha, Haa and Tsirang Dzongkhag Phuentsholing and Thimphu Thromde

Subject: Approval to collect data for Master of Education Thesis.

Dear Sirs/Madams,

The Director, Master of Education Program in Curriculum and Instruction at Suryadhep Teachers College, Rangsit University in Thailand has written to the Ministry seeking permission to conduct data collection from the attached list schools for thesis writing of our teachers who are undergoing their Masters Degree at Rangsit University.

To this effect, the Ministry of Education is pleased to accord approval for collection of data as per the list from the month of July to August, 2022. However, the researchers are requested to carry out the task without affecting the normal instructional hours.

Therefore, you are requested to kindly facilitate the researchers to collect data for their theses please.

Thanking you,

Sincerely yours,

(Karma Galay)

Officiating Secretary

Copy to:

1. Principals of the listed schools for kind information and support

- 2. Director, Master of Education Program in Curriculum and Instruction, Suryadhep Teachers College, Rangsit University for kind information
- 3. Chief Program Officer, SPCD, DSE for kind information



# Felor छन् तहावा बाबुङ । मेल दे वा अन् कावा Ministry of Education



Date: 21/08/2022

#### JYENKHANA PRIMARY SCHOOL, HAA

Office Telephone no: 08373102

Ref. No. JPS/65

To
Program Director
Faculty of Education
Suryadhep Teacher College
Rangsit University
Thailand

Subject: Completion of Data Collection

Dear Dr. Nipaporn Sakulwongs,

The undersigned is glad to inform your kind self that Mr. Leki Dorji D bearing student ID 6306120, who is currently pursuing a Master in Education Curriculum and Instruction at your university has been in this school w.e.f July 10, 2022 till August 20, 2022, for one month on Data Collection for his thesis.

The school has rendered the best possible means to help him carry out his research and he has successfully completed his data collection.

The school administration would like to wish him the best wishes for his future endeavors.

Thanking you

Yours sincerely

(Kuenzan Tenzin) Principal

হ। তথ্য প্ৰসূত্ৰ হা প্ৰত। প্ৰতিহ্ন

# APPENDIX B LEARNING ACHIEVEMENT TEST QUESTIONS



Appendix B Learning Achievement Test				
<b>Objective:</b> To evaluate the extent of learning achievement of grade 5 students in				
Social Studies using a Placed-Based Education approach.				
Class: V Total Marks: 20				
Subject: Social Studies Time: 1 hour				
Student's no:				
Section A				
<b>Multiple Choice Questions</b>				
Direction: Each question is followed by FOUR possible answers. Choose the correct				
answer and write it down in the space provided. [1x5= 5 marks]				
<ol> <li>The raising of animals for various products like meat, milk, leather, wool, and eggs is called         A. substantial farming.     </li> </ol>				
B. livestock farming.				
C. mushroom farming.				
D. mixed farming				
Ans:				
2. Some of the ways to reduce pollution are				
A. proper management of waste and planting trees.				
B. clearing forests and burning the trash.				
C. driving automobiles-cars and building factories.				
D. construction of roads and buildings.				
Ans:				
3. Apa Dorji uses chemical fertilizers and pesticides in his potato field to increase				
production. The consequences of using such chemicals will lead to				
A. air pollution				
B. noise pollution				
C. water pollution				
D. land pollution				
Ans:				

4. Mr. Sonam owns an automobile workshop in Phuntsholing. The type of waste				
from his workshop will be				
A. bottles, leftover food, vegetable peels, and eggshells.				
B. cans, papers, clothes, and torn shoes.				
C. harmful chemicals, lubricants, scraps, and poisonous gas.				
D. sawdust, wood, pat bottle, and broken furniture.				
Ans:				
5. In your community, local leaders are putting effort to replant trees in the areas				
affected after the construction of the farm road. The above-mentioned way of				
conserving the environment is called				
A. deforestation.				
B. reforestation.				
C. afforestation.				
D. forestation.				
Ans:				
Section B				
[True or False]				
Direction: Write TRUE or FALSE for each statement in the space provided below.				
[1x5=5				
1. Human activities such as rearing livestock and practicing agriculture affect th				
environment. (				
2. Plastic, paper, glass, and metal are examples of agricultural waste.				
()				
3. The best ways to manage waste are to reduce, reuse, recycle and recreate.				
()				
4. Planting trees in an area where there are no trees is called afforestation.				
()				
5. The best way to dispose of degradable waste is composting. (				

### **Section C**

## **Short Answer Questions**

Direction: Read the following questions carefully and answer the questions in the spaces provided. Intended marks for the questions are given in the brackets [].

# [10 marks]

1.	Why is agriculture important for the country? (1)
	Ans:
2.	How does air pollution affect human health? (1) Ans:
	AMS.
3.	
	Ans:
1	How are you going to manage the waste produced in your school? (2)
4.	Ans:
	of the state of th
5.	Discuss two ways to reduce water pollution in your locality. (2)  Ans:
6.	Explain two ways to conserve the environment. (2)  Ans:

# APPENDIX C IOC OF LEARNING ACHIEVEMENT TEST



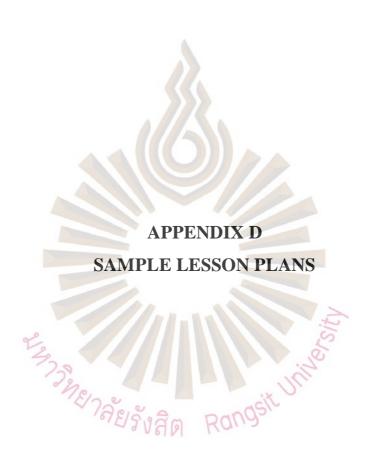
# IOC FOR LEARNING ACHIEVEMENT TEST BY THE EXPERTS

No.         1         2         3           1.         Multiple Choice Question 1         +1         +1         +1         +1         +1         Congruen           2.         Multiple Choice Question 2         +1         +1         +1         +1         +1         Congruen           3.         Multiple Choice Question 3         +1         +1         +1         +1         +1         Congruen           4.         Multiple Choice Question 4         +1         +1         +1         +1         +1         Congruen           5.         Multiple Choice Question 5         +1         +1         +1         +1         +1         Congruen           6.         True or False Question 1         +1         +1         +1         +1         +1         +1         Congruen           7.         True or False Question 3         +1         +1         +1         +1         +1         +1         Congruen           9.         True or False Question 4         +1         +1         +1         +1         +1         Congruen           10.         True or False Palse	ence
Question 1       2.       Multiple Choice Question 2       +1       +1       +1       +1       +1       +1       Congruen         3.       Multiple Choice Question 3       +1       +1       +1       +1       +1       +1       Congruen         4.       Multiple Choice Question 4       +1       +1       +1       +1       +1       Congruen         5.       Multiple Choice Question 5       +1       +1       +1       +1       +1       Congruen         6.       True or False Question 1       +1       +1       +1       +1       +1       Congruen         7.       True or False Question 2       +1       +1       +1       +1       +1       +1       +1       +1       +1       +1       +1       Congruen         9.       True or False Question 4       +1       +1       +1       +1       +1       +1       +1       +1       +1       Congruen	
2.       Multiple Choice Question 2       +1       +1       +1       +1       +1       +1       Congruen         3.       Multiple Choice Question 3       +1       +1       +1       +1       +1       +1       Congruen         4.       Multiple Choice Question 4       +1       +1       +1       +1       +1       Congruen         5.       Multiple Choice Question 5       +1       +1       +1       +1       Congruen         6.       True or False Question 1       +1       +1       +1       +1       +1       Congruen         7.       True or False Question 2       +1       +1       +1       +1       +1       +1       +1       +1       Congruen         9.       True or False Question 4       +1       +1       +1       +1       +1       +1       +1       +1       -1       Congruen         10.       True or False +1       +1       +1       +1       +1       +1       +1       +1       +1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1       -1	nt
Question 2       3.       Multiple Choice Question 3       +1       +1       +1       +1       +1       Congruen         4.       Multiple Choice Question 4       +1       +1       +1       +1       +1       Congruen         5.       Multiple Choice Question 5       +1       +1       +1       +1       +1       Congruen         6.       True or False Question 1       +1       +1       +1       +1       +1       Congruen         7.       True or False Question 2       +1       +1       +1       +1       +1       Congruen         9.       True or False Question 4       +1       +1       +1       +1       +1       +1       Congruen         10.       True or False True or False Palse Pals	
3.       Multiple Choice Question 3       +1       +1       +1       +1       +1       +1       +1       Congruen         4.       Multiple Choice Question 4       +1       +1       +1       +1       +1       +1       Congruen         5.       Multiple Choice Question 5       +1       +1       +1       +1       +1       Congruen         6.       True or False Question 1       +1       +1       +1       +1       Congruen         7.       True or False Question 2       +1       +1       +1       +1       +1       Congruen         9.       True or False Question 4       +1       +1       +1       +1       +1       +1       Congruen         10.       True or False True or False Hall Properties       +1       +1       +1       +1       +1       +1       Congruen	nt
Question 3         4. Multiple Choice Question 4       +1       +1       +1       +1       +1       Congruen         5. Multiple Choice Question 5       +1       +1       +1       +1       +1       Congruen         6. True or False Question 1       +1       +1       +1       +1       +1       Congruen         7. True or False Question 2       +1       +1       +1       +1       +1       Congruen         8. True or False Question 3       +1       +1       +1       +1       +1       +1       Congruen         9. True or False Question 4       +1       +1       +1       +1       +1       Congruen         10. True or False Applied to the properties of	
4.       Multiple Choice Question 4       +1       +1       +1       +1       +1       +1       +1       +1       +1       Congruen         5.       Multiple Choice Question 5       +1       +1       +1       +1       +1       +1       Congruen         6.       True or False Question 1       +1       +1       +1       +1       +1       Congruen         7.       True or False Question 2       +1       +1       +1       +1       +1       +1       Congruen         9.       True or False Question 4       +1       +1       +1       +1       +1       +1       -1       Congruen         10.       True or False True or False Puestion 4       +1       +1       +1       +1       +1       +1       +1       +1       -1       Congruen	nt
Question 4       +1       +1       +1       +1       Congruen         Question 5       +1       +1       +1       +1       +1       Congruen         Question 1       +1       +1       +1       +1       Congruen         Question 2       +1       +1       +1       +1       Congruen         Question 2       +1       +1       +1       +1       Congruen         Question 3       +1       +1       +1       +1       Congruen         Question 4       +1       +1       +1       +1       Congruen         10.       True or False       +1       +1       +1       +1       +1       Congruen	
5.       Multiple Choice       +1       +1       +1       +1       +1       -1       Congruen         6.       True or False       +1       +1       +1       +1       +1       Congruen         7.       True or False       +1       +1       +1       +1       -1       Congruen         Question 2       -1       +1       +1       +1       +1       -1       Congruen         9.       True or False       -1       +1       +1       +1       +1       -1       Congruen         10.       True or False       +1       +1       +1       +1       -1       Congruen	nt
Question 5         6.       True or False       +1       +1       +1       +1       Congruen         7.       True or False       +1       +1       +1       +1       Congruen         Question 2       4       +1       +1       +1       +1       Congruen         9.       True or False       +1       +1       +1       +1       +1       Congruen         10.       True or False       +1       +1       +1       +1       +1       Congruen	
6.       True or False       +1       +1       +1       +1       +1       Congruen         7.       True or False       +1       +1       +1       +1       +1       Congruen         Question 2       4       +1       +1       +1       +1       Congruen         9.       True or False       +1       +1       +1       +1       +1       Congruen         10.       True or False       +1       +1       +1       +1       +1       Congruen	nt
Question 1       7.       True or False Question 2       +1       +1       +1       +1       +1       +1       Congruen         8.       True or False Question 3       +1       +1       +1       +1       +1       +1       Congruen         9.       True or False Question 4       +1       +1       +1       +1       +1       Congruen         10.       True or False       +1       +1       +1       +1       Congruen	
7. True or False	nt
Question 2       41       +1       +1       +1       +1       Congruen         Question 3       4       +1       +1       +1       +1       Congruen         9.       True or False       +1       +1       +1       +1       Congruen         10.       True or False       +1       +1       +1       +1       Congruen	
8.       True or False       +1       +1       +1       +1       +1       Congruen         9.       True or False       +1       +1       +1       +1       Congruen         Question 4       +1       +1       +1       +1       Congruen         10.       True or False       +1       +1       +1       +1       Congruen	nt
Question 3       +1       +1       +1       +1       Congruen         9.       True or False       +1       +1       +1       +1       Congruen         10.       True or False       +1       +1       +1       +1       Congruen	
9.       True or False       +1       +1       +1       +1       +1       Congruen         Question 4       +1       +1       +1       +1       Congruen         10.       True or False       +1       +1       +1       +1       Congruen	nt
Question 4         10.         True or False         +1         +1         +1         +1         Congruen	
Question 4         10.         True or False         +1         +1         +1         +1         Congruen	nt
	nt
Question 5	
11. Short Answer +1 +1 +1 Congruen	nt
Question 1	
12. Short Answer +1 +1 +1 Congruen	nt
Question 2	

# IOC FOR LEARNING ACHIEVEMENT TEST BY THE EXPERTS (Cont.)

Sl	Item Test No.	Expert	Expert	Expert	Average	Congruence
No.		1	2	3		
13.	Short Answer	+1	+1	+1	+1	Congruent
	Question 3					
14.	Short Answer	+1	+1	+1	+1	Congruent
	Question 4		<b>)</b> }			
15.	Short Answer	+1	+1	+1	+1	Congruent
	Question 5	911 B.		7		
16.	Short Answer	+1	+1	+1	+1	Congruent
	Question 6					
Overall Average			-		+1	Congruent





Appendix D Sample Lesson Plan

Lesson Plan: 1 (session 1 & 2)

Class: V Subject: Social Studies

Class strength: 32 Period: .....

Topic: People and the Environment Time: 90 minutes

**Lesson objectives**: a child will be able to;

Identify human activities in their locality.

• Discuss the impact of human activities on the environment.

• Suggest ways to reduce the effects of human activities on the environment.

**Teaching-learning materials:** worksheet, video, projector, laptop, chart, marker, and sticky pad.

**Teaching strategy:** Placed-Based Education (Community as a classroom)

#### 1. To Engage: (10 minutes)

The teacher will divide the students into groups consisting of four members each. Each group will be provided with the reading material on the topic "People and the Environment". The group leader will read the reading materials to other group members. They will be given five minutes to read the material.

After that, the teacher will ask students to discuss and write answers to the question, "Why is the environment important to us?" After the discussion, one of the group members can paste their work which will be written on a sticky pad. Students will display their group work in their designated corners. Finally, students will read other groups' work by doing a gallery walk.

#### 2. To Explore: (40 minutes)

To explore the impact of human activities, the teacher will take students in their community to identify human activities. The following instructions will be provided to students before visiting their community.

#### # Must to-do list before the field visit:

• All the students must take a worksheet each from their group leader.

- They must read the worksheet and fill up the table individually.
- Students must be in groups during the field visit.
- Any pertaining issue must be reported immediately to the teacher by their group leaders immediately.
- After completion of the individual worksheet, the group members must submit their work to their team leaders.

The teacher will provide them with a table as shown below;

# Exploring human activity in your locality Team name: Number of members:

Sl. No	Human activities in your locality	Impact on the environment	Measure to conservation
Example	Road construction	Cutting down the trees	Replantation of trees after construction of road
1.			
2.			ity
3.	1 m		11/2

#### 3. To Explain: (10 minutes)

Then, the teacher will highlight the following key points on how people and the environment are dependent on each other by using a prerecorded video presentation by the teacher. After that, the teacher will provide students with the following notes.

- People are dependent on the environment. It is important to understand the interrelationship between people and the environment. Thus, it is important to conserve and protect the environment.
- **Human Activities:** People carry out different activities such as the rearing of livestock, practicing agriculture, constructing roads, and building industries to make a living. These activities affect the environment in the long run.

- **Livestock:** The raising of animals for various products like meat, milk, leather, wool, and eggs. Raising a large number of animals for livestock farming leads to overgrazing and damage to the environment.
- Industry: It is a place where goods and services are produced. Some of the
  goods include food, clothes, mobiles, and cars while services include job
  opportunities, transportation, and communication. Industries help in the
  development of a country.
- Industries are important for development; however, they affect the environment.
   The release of gas, oil, and waste from industries causes air, water, and land pollution. Such pollution affects humans and other forms of life.

#### 4. To Elaborate: (10 minutes)

Then the teacher will let students identify a common human activity in their locality that they have listed in the previous activity. After identifying the common human activity, the group will write down the impact of human activity on the environment that they have listed in the community in the group. Then, they will come up with the best solution to reduce the effects of human activity that they have identified in the group.

#### 5. To Evaluate: (20 minutes)

As a follow-up to the previous activity, the teacher will ask each team to present their findings to the whole class. As the team presents their group work, the teacher will assess using the presentation rubric given below.

#### Direction for group presentation:

- The teacher will randomly pick a member from each group to do the presentation.
- Each presenter will get a maximum of two minutes to present their group work.
- The teacher will provide constructive feedback based on assessment rubrics.
- After the presentation, they will display their work in their group corner.

# **Rubric for group presentation:**

		Criteria				
Domain Key Areas		Exceeding	Meeting	Approaching	Beginning	Remarks
		(4)	(3)	(2)	(1)	
		Demonstrate a	Contains	Contains any	Contains	
		clear and	any three	two	any one	
	Preparednes	logical flow of	componen	components.	componen	
	_	ideas	ts.		t.	
C1	S	supported by				
Social		relevant visual				
Knowledg		aids.				
e		Present a	Presents	Presents	Presents	
		variety of ideas	some ideas	limited ideas	ideas that	
	Content	that are	that are	that are	are not	
		relevant to the	relevant to	relevant to the	relevant to	
		topic.	the topic.	topics.	the topic.	
		Communicatio	Contain	Contains any	Contains	
		n the ideas,	any three	two	any one	
	Presentation	attains to all	componen	components.	componen	
Working	T T C SCHOOL TO	the audiences,	ts.		t.	
Sociable	skills	uses proper		£.		
	900	gestures and		5		
	320	completes	I B B A	ille		
	220	within time.		" All.		
		Seek	Contains	Contains any	Contains	
		suggestions,	any three	two	any one	
		responses to	componen	components	componen	
Social	Collaboratio	the queries and	ts.		t	
Value	n	show a				
		positive				
		learning				
		attitude.				

(Adapted from Royal Education Council, 2021)

Lesson Plan: 2 (session 1 & 2)

Class: V Subject: Social Studies

Class strength: 32 Period: .....

Topic: Impacts of pollution Time: 90 minutes

**Lesson objectives**: a child will be able to;

• List down different types of pollution in their locality.

• Write down the cause of the different types of pollution in their community.

• Identify preventive ways to reduce the impact of pollution.

**Teaching-learning materials:** video on types of pollution, worksheet, projector, laptop.

**Teaching strategy:** Placed-Based Education (Community as a classroom)

#### 1. To Engage: (15 minutes)

The teacher will divide the students into four groups. Each group will be provided with the worksheet as given below;

Type of pollution	Measure to reduce the pollution
Land (group 1)	
Water (group 2)	ine s
Air ( group 3)	Personal Dangsit
Noise (group 4)	TUTVAR ROLLS

Then, in groups, they will come up with at least three ways to reduce pollution. They will get five minutes to complete the activity. After the group discussion, they will have to present their work to the whole class.

#### 2. To Explore: (40 minutes)

To explore the impact of pollution, the teacher will take students to a nearby waste dumping yard. In groups, they will investigate the types of pollution in their community. After identifying the types of pollution, they will discuss the causes and consequences

on the environment and human life. Then, they will also suggest measures to reduce pollution in their community. The teacher will provide the worksheet given below before the activity.

Types of pollution in my community	Cause of the pollution	Consequences of pollution	Measure to minimise the impact of pollution

### **3. To Explain** (10 minutes)

The teacher will present the following information using a PowerPoint slide to explain the 'Impacts of Pollution.

Types of pollution	Impact of pollution to the environment and human
Air	Smoke from factories and vehicles causes lung cancer, asthma, and various breathing problems. It also damages plants and animals.
Water	Wastes released into lakes, rivers and other water bodies harm plants and animals in the water. Water pollution causes water borne diseases in people.

#### Land



Dumping of wastes, use of chemical fertilisers and pesticides in agriculture pollute the land by increasing chemical content in the soil. These chemicals affect the lives of plants and animals.

#### Noise



Noise produced by aircrafts, vehicles, industries and loudspeakers result in loss of hearing, annoyance, sleep disturbance, and increase in blood pressure.

#### 4. To Elaborate: (15 minutes)

To elaborate the lesson on 'Types of Pollution' the teacher will play a three minutes video. After that, students will write down the answers to the following questions;

- 1. List the types of pollution which are common in Bhutan.
- **2.** What are the common causes of pollution in Bhutan?
- 3. What measures would you suggest to minimise pollution in our country?

As a follow-up activity, the teacher will assess their answers and provide necessary feedback.

#### 5. To Evaluate: (10 minutes)

The teacher will ask the following questions to the whole class and lead a discussion. This will help to check students' understanding of the lesson. The following are the questions;

- ✓ How do people pollute the environment?
- ✓ Discuss ways to reduce air pollution.
- ✓ What would you do to reduce water pollution in your locality?

✓

Lesson Plan: 3 (session 1 & 2)

Class: V Subject: Social Studies

Class strength: 32 Period: .....

Topic: Waste Management Time: 90 minutes

**Lesson objectives**: a child will be able to;

• Segregate the waste into degradable and non-degradable.

• List the measures to reduce waste in their school.

• Identify the effects of waste on the environment.

**Teaching learning materials:** projector, downloaded video, garbage bags, hand gloves, and face mask

**Teaching strategy:** Placed-Based Education (Schoolyard as a classroom)

#### 1. To Engage: (18 minutes)

In order to engage the students, the teacher will play the video on waste management which is 1:23 minutes. After watching the video they must answer the following questions;

- List wastes produced in your kitchen.
- Categorize the waste into degradable and non-degradable

#### 2. To Explore (40 minutes)

The teacher will divide students into groups of 8 groups with 4 members each. In order to explore more about waste, a teacher will take students outside within school campus. In groups, they must collect waste. The teacher will provide the following gadgets for hygienic and safety purposes. Before going out for the waste collection, teaching will caution students about the safety rules.

#### # Safety rules while collecting waste:

- Wear a face mask at all times.
- Handle safely the harmful waste such as chemicals, broken glasses, and poisonous gases.
- They must wear gloves while handling the waste.
- *Group members are together and help each other in an emergency.*
- They will get 20 minutes to collect waste in and around the school campus.

Then, the teacher will let students collect waste within the school campus.

#### 4. To Explain (10 minutes)

The teacher will explain waste and how to manage waste using PowerPoint slides. The content of the presentation will be as follows;

- Wastes are unwanted materials that are no longer useful. It is also known as trash, garbage, or rubbish. It can be in the form of solid, liquid, or gas. Wastes pollute the environment and also cause health issues.
- Waste can be categorised as degradable and nondegradable.

•

Degradable waste	Non-Degradable waste		
Waste which is easily rot by microorganisms.	Waste that cannot be decomposed by microorganisms.		
Examples; leftover food, vegetable peels, egg shells used oil, and bones.	Examples; harmful chemicals, lubricants, scraps, poisonous gases.		

• It is important to manage and dispose of waste properly. Some ways to manage waste are reducing, reusing, recycling, and recreating.

#### 5. To Elaborate (7 minutes)

After waste collection, the teacher will let them complete the following table in groups. They must write at least five different wastes that they have collected.

Sl. No	Waste	Effects on	Measure to reduce waste
		environment/human	

#### 6. To Evaluate (15 minutes)

In order to evaluate and assess group work, the teacher will use the following rubrics to assess their answers from the previous activity.

Parameters	Exceeding (4)	Meeting (3)	Approaching(2)	Beginning(1)
A. Types of waste in school	List four common waste in	List common three	List two common waste in school campus	List one common waste in school campus
campus	school campus	waste in school campus		
B. Common cause of	Write four common	Write three	Write two	Write one common causes
waste in school	causes of waste in school	causes of waste in school	of waste in school	of waste in school
C. Measure to minimise waste in school	Suggest four effective measures to minimise in school	Suggest three effective measures to minimise in school	Suggest two effective measures to minimise in school	Suggest one effective measures to minimise in school

Lesson Plan: 4 (session 1 & 2)

Class: V Subject: Social Studies

Class strength: 32 Period: .....

Topic: Waste Management Time: 90 minutes

Lesson objectives: a child will be able to;

• Define afforestation and reforestation.

• Suggest some of the effective ways to conserve the environment.

Teaching-learning materials: chat, watercolor, sketch pen and

**Teaching strategy:** Placed-Based Education (Community as a classroom)

#### 1. To Engage: (17 minutes)

The teacher will provide a hand-out on "Effective ways to protect the environment". After paired reading for 5 minutes, the teacher will let them list down three effective ways to protect their community forest. Then, the teacher will let them share with the whole class.

#### 2. To Explore (40 minutes)

The teacher will divide the class into eight groups with 4 members each. Each group will design a poster on the conservation of the environment. The teacher will provide the following instruction.

#### # Direction for designing the poster;

- Use chart papers, watercolor, pencil, and sketch pen provided to the group.
- You will get 20 minutes to complete the task.
- Every member of the group must participate in the group work

#### 3. To Explain (15 minutes)

Divide the students into a group consisting of 4 students each. Let the group brainstorm on "Why conservation of the environment is important?" for 5 minutes. After the group discussion, the teacher will lead the whole class discussion on the topic. Key points to draw out or make after the whole class discussion:

- Conservation of the environment is important for human survival.
- It is one of the pillars of Gross National Happiness which is the guiding philosophy of development in our country.
- Afforestation and reforestation are some ways to conserve the environment.
- Afforestation: Planting of trees in areas where there are no trees.
- **Reforestation:** Planting of trees in the areas where trees have been cut.

#### # Some of the ways to conserve the environment

• No plastics bags

- 4 R Recycling
- Planting trees
- Waste segregation
- Cycling instead of fuel cars

#### 4. To Elaborate (10 minutes)

The teacher will take students to the school waste disposal area. Let them clean the area and segregate degradable and nondegradable and dispose of them properly.

#### **5.** To Evaluate (8 minutes)

In order to evaluate and assess group work, the teacher will use the following rubrics to assess their answers from the previous activity.

Parameters	Exceeding(4)	Meeting(3)	Approaching(2)	Beginning(1)
Conservation of	List five ways to conserve the	List four ways to conserve	List three ways to conserve the	List one way to conserve
environment (Social Skills)	environment.	the environment.	environment.	the environment.
Commitment to conserve the environment (Social Values)	Make five commitments to conserve environment	Make four commitments to conserve environment	Make three commitments to conserve environment	Make two commitments to conserve environment



#### IOC FOR LESSON PLANS BY THE EXPERTS

Item	Attributes	Expert	Expert	Expert	Average	Congruence
No	Attributes	1	2	3		
1	Lesson plan	+1	+1	+1	+1	Congruent
2	Lesson plan	+1	+1	+1	+1	Congruent
3	Lesson plan	+1	+1	+1	+1	Congruent
4	Lesson plan	+1	+1	+1	+1	Congruent
Overa	all Average				+1	Congruent



# APPENDIX F SEMI-STRUCTURE INTERVIEW QUESTIONS



#### Appendix F Semi-Structured Interview

Age: ..... Gender: Male/Female

#### **Semi-Structured Interview**

Student No: ..... Date of interview: ..... Time of the interview: .....

Venue	,,			
learnir	ellowing semi-structured interview question will be to ag satisfaction with the use of Place-Based Education Studies.	C		
Sl. No	Learning Satisfaction Questions	+1	0	-1
1.	How did you find learning Social Studies using Place-Based Education?			
2.	Are you satisfied with learning Social Studies using Place-Based Education? Why or why not?	Corsity		
3.	What did you like most from the lesson? Explain.			
4.	How did place-based education help you to improve your learning?			
5.	Would you prefer to learn other topics through the use of Place-Based Education? Why or why not?			
6.	Share your overall view on Place-Based Education in Social Studies?			

[Adapted from Lhamo (2021), Rigzin (2021)

## APPENDIX G IOC FOR SEMI-STRUCTURE INTERVIEW QUESTIONS



## IOC FOR SEMI-STRUCTURE INTERVIEW QUESTIONS BY EXPERTS

Sl.	Items	Expert	Expert	Expert	Average	Congruence
No		1	2	3		
1.	How did you find learning Social Studies using Place- Based Education?	+1	+1	+1	+1	Congruent
2.	Are you satisfied with learning Social Studies using Place-Based Education? Why or why not?	+1	+1	+1	+1	Congruent
3.	What did you like most from the lesson? Explain	+1	+1	+1	+1	Congruent
4.	How did place-based education help you to improve your learning?	+1	+1	+1	+1	Congruent
5.	Would you prefer to learn other topics through the use of Place-Based Education? Why or why not?	+1	+1 Ran	ysit Urin	1250	Congruent
6.	Share your overall view on Place-Based Education in Social Studies?	+1	+1	+1	+1	Congruent
Ove	rall Average			<u> </u>	+1	Congruent



#### **Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	8.37	31	4.189	.752
	Posttest	14.45	31	5.421	.974

#### **Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	Pretest &	31	.564	.001
	Posttest			

### **Paired Samples Test**

	Paired Differences								
				95	%				
				0.77000	Confi	dence			Sig. (2-
				Std.	Interva	l of the			(2-
			Std.	Error	Diffe	rence			tailed
		Mean	Deviation	Mean	Lower	Upper	t	Df	)
Pair 1	Pretest -	-6.081	4.617	.829	-7.774	-4.387	-7.333	30	.000
	Posttest					S			
Tostest Janes Pangsit University Par Rangsit Par									

## APPENDIX I RESEARCH INSTRUMENT VALIDATORS



## NAMES OF THE EXPERTS WHO VALIDATED THE INSTRUMENTS

Sl.	Name	<b>Position Title</b>	Institution
No			
1	Mr. Gary Torremucha	Associate Professor	Rangsit English Language
			Institude (RELI); Rangsit
			University
		<b>&gt;&gt;&gt;</b>	
2	Mr. Jurme Thinley	Lecturer	Paro College of Education
	44	(Programme	Royal University of Bhutan
		Leader)	Paro: Bhutan
3.	Mrs. Kinley Dema T	Teacher	Damthang Primary School
		(HoD)	Haa District, Bhutan
	20		Sity

Para Rangsit Urive



## RELIABILITY OF ACHIEVEMENT TEST QUESTION

### **Case Processing Summary**

		N	%
Cases	Valid	28	100.0
	Excluded <sup>a</sup>	0	.0
	Total	28	100.0

### **Reliability Statistics**

	Cronbach's Alpha Based on	
Cronbach's Alpha	Standardized Items	N of Items
.713	.715	16



## APPENDIX K

CONSENT LETTER FROM PRINCIPAL, SUBJECT TEACHER,

AND PARENTS

Rangsit University

#### Principal Consent Letter

Sir/ Madam.

I am currently pursuing my Master of Education in Curriculum and instruction at Rangsit University, Thailand. As a part of my course requirement, it is mandatory to carry out research on "The Application of Place-Based Education in Social Studies of Grade 5 Bhutanese Students". The main focus of the study is to enhance students' learning achievement using Place-Based Education. The study will use 8 periods of Social Studies in grade 5 during the school hour for a period of four weeks from mid-July to mid-August, 2022.

Therefore, I would like to seek your prior consent to let grade 5 students of your school take part in this study. I assure you that their names, identifications, and schools will be kept confidential and anonymous. Confidentiality of all the information will be maintained at all times.

I look forward to your cooperation in approving your child to participate in this research study.

Thanking you

Yours sincerely

Researcher, Rungsit University, Thailand,

I give my consent to conduct the research study with grade 5 students of my school. I confirm and acknowledge that I am being made clear about the content of the research study and have read the letter provided by the researcher.

Class/Subject teacher

#### Parents' Consent Letter

#### Dear Parents

Thanking you

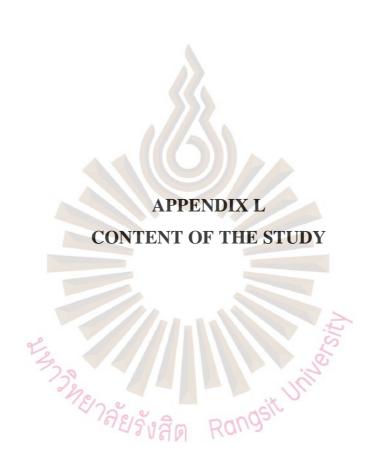
I would like to seek your kind approval to carry out my research in your child's class for a month starting from Mid-July to Mid-August, 2021.

I am currently enrolled at Rangsit University, Thailand and pursuing my Master of Education in Curriculum and Instruction. As part of my study, I am conducting a research study on "The Application of Place-Based Education in Social Studies of grade 5 Bhutanese students," and I have selected Jyenkhana Primary School to carry out my research. The research requires student participation. The instruments involved during the study are pretest and posttest, and semi-structured interview for obtaining the required data.

Therefore, I would like to seek your permission to let your child participate in this study as he or she is below 18 years. Their names, identifications, and schools will be kept confidential and anonymous.

I look forward to your cooperation in approving your child to participate in this research study.

Yours sincetely		in the same of the	ils.
Rescarcher	ve permission for my So	Rangsit Uri	Saldan
I, the undersigned give	ve permission for my So	in/Daughter IV ma	221400
to participate in the al	bove-mentioned research	1.	
Name: Chensho	Nidup	Relation to the	ne child:fatha(
Signature:	def	Date:2	2.07.23



## Chapter 10

### People and the **Environment**

- Explain the causes of the environmental degradation
- Discuss the impact of human activities on the environment
- Discuss ways to conserve the environment

People are dependent on the environment. It is a source of food, shelter and clothing. Life will be not possible on the Earth without environment. It is important to understand the inter-relationship between people and the environment. Therefore, it is important to conserve and protect the environment.

People carry out different activities to make a living. Some of these activities are rearing of livestock, practicing of agriculture, construction of roads and building of industries. These activities affect the environment in the long run.

The raising of animals for various products like meat, milk, leather, wool and egg is called livestock farming. Livestock is an important source of food and income for the people.

Raising of large number of animals for livestock farming leads to overgrazing and damages the environment. Excessive grazing in a particular area for long

time is called overgrazing. The wastes from the animals and the use of chemic cause water and air pollution.

Environmental pollution and degradation can be reduced by rearing less number of animals. It can also be reduced by using organic manures instead of chemical fertilizers for growing fodder.

Industry is a place where goods and services are produced. Some of the goods include food, clothes, mobiles and cars while services include job opportunities, transportation and communication.

Industries help in the development of a



Although industries are important for the development, they affect the environment. The release of gas, oil and waste from the industries cause air, water and land pollution. Such pollution affect the human and other forms of life.

Some ways to reduce pollution are proper management of waste, planting trees, use of clean energy sources and timely maintenance of machines. Therefore, it is important to promote the use of solar, wind and hydropower in Bhutan.

- 1. Divide into teams
- 2. Discuss the impact of agriculture and road construction on th

#### Follow-up Questions:

- 1. Explain the benefits of agriculture and road construction for the people.
- 2. How do agriculture and road construction affect the environment?

3. Suggest measures to reduce the negative impact of agriculture and road construction on the environ

#### 10.4 Impacts of pollution

Environmental pollution is a major concern in the world. It causes serious damage to the Earth

#### Table 10.1.

	es of ution	Impact
A	ir	Smoke from factories and vehicles cause lung cancer, asthma, and various breathing problems. It also damages plants and animals.
Wa	ater	Wastes released into lakes, rivers and other water bodies barm plants and animals in the water. Water pollution causes water borne diseases in people.
La	and	Dumping of wastes, use of chemical fertilisers and pesticides in agriculture pollute the land by increasing chemical content in the soil. These chemicals affect the lives of plants and animals.
No	ise	Noise produced by aircrafts, vehicles, industries and loudspeakers result into loss of hearing, annoyance, sleep disturbance, and increase in blood pressure.

## Learning Activity 10.2 Identifying preventive ways to reduce the impact of pollution

- Write ways to reduce the impact of pollution

Class V Social Studies

#### Follow-up Questions:

- 1. How do people pollute the environment?
- 2. Discuss ways to reduce air pollution.
- 3. What would you do to reduce water pollution in your locality?

#### 10.5 Waste Management

Wastes are unwanted things which are no longer useful or required. Wastes are also known as trash, garbage or rubbish. It can be in the form of solid, liquid or gas. Wastes pollute the environment and also cause health problems.

Wastes are categorized as degradable and non-degradable. Some degradable wastes are leftover food, vegetable peels, egg shells, used oil and bones. Some non-degradable wastes are bottles, cans, clothes, torn shoes and scraps.

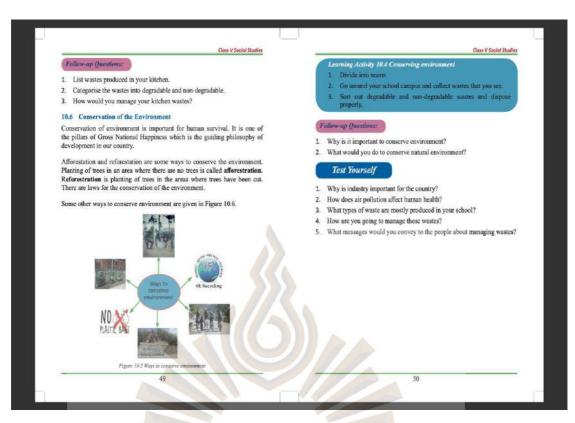
Harmful chemicals, lubricants, scraps and poisonous gases are some of the vastes from factories and industries

manage wastes are reduce, reuse, recycle and recreate

#### rning Activity 10.3 Managing wastes

- Divide into two teams
- Discuss possible effects of wastes on the environment.
- 3. Copy Table 10.2 and record the information.

SI. No.	Wastes	human	Measures to reduce wastes		



Party and Rangsit University

#### **BIOGRAPHY**

Name Leki Dorji D

Date of birth April 11, 1985

Place of birth Drameste, Bhutan

Education background Paro College of Education, Bhutan

Bachelor of Education, 2011

Samtse College Education

Post Graduate Diploma in Contemplative

Counselling and Psychology, 2018

Rangsit University, Thailand

Master of Education in

Curriculum and Instruction, 2022

Scholarship Trongsa Penlop Scholarship (TPS), 2022

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Lekidorjid85@education.gov.bt

Position and Office Ministry of Education, र्<sub>य</sub> रेश्वर विश्वर के स्थान के स्था के स्थान क

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Teaching Service,

Position: Teacher II