



**THE EFFECTIVENESS OF VIRTUAL FIELD TRIPS ON
LEARNING ACHIEVEMENT OF SOCIAL STUDIES
FOR GRADE 6 BHUTANESE STUDENTS**

**BY
PEMA CHODEN**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR
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Abstract

The study investigated the effectiveness of incorporating virtual field trips (VFTs) on learning achievement and satisfaction of grade 6 Bhutanese students in learning social studies. It was conducted over a month at a Higher Secondary School in Thimphu, the capital of Bhutan, using both quantitative and qualitative methods. Quantitative data was collected through pretests and posttests and analyzed using paired sample t-test with a significance level of $p < .05$. Qualitative data was gathered through semi-structured interview and analyzed thematically. The results showed improvement in learning achievement, with the posttest mean ($\bar{x} = 15.02$) notably higher than the pretest mean ($\bar{x} = 11.35$), resulting in a mean difference of 3.7 and a significance value of 0.01. The qualitative analysis revealed that students experienced increased learning satisfaction and motivation, developing positive relationships. Therefore, the use of Virtual Field Trips is recommended as an alternative tool for teaching Social Studies. They elicit excitement and involvement through virtual journeys, allowing students to embark on virtual adventures, travel, and explore sacred places. The researcher concludes that incorporating VFTs into Social Studies instruction not only improves learning achievement but also promotes a more engaging and satisfying learning experience, making it a valuable tool for instruction.

(Total 133 pages)

Keywords: Social Studies, Virtual Field Trips, Learning Achievement, Learning Satisfaction, Grade 6

Student's Signature Thesis Advisor's Signature

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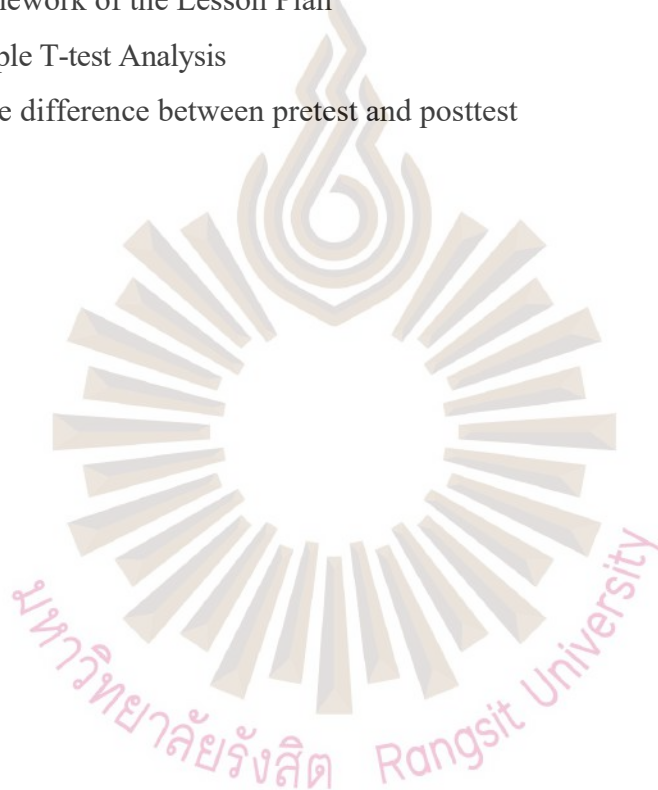
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ABBREVIATIONS

Abbreviations	Meaning
VFT	Virtual Field Trip
FT	Field Trip
REC	Royal Education Council
DCPD	Department of Curriculum and Professional Development
GNH	Gross National Happiness
MOE	Ministry of Education
MoESD	Ministry of Education and Skill Development
NAPE	New Approach to Primary Education
BCSE	Bhutan Council of School Examination
ICT	Information, Communication, and Technology
IOC	Objective Congruence
PPT	Power-Point Presentation
CBL	Competency Based Learning



CHAPTER 1

INTRODUCTION

This chapter highlights the background and the rationale of the study, followed by research objectives, research questions, and research hypotheses. The scope and the limitations of the study, conceptual framework, research operational definitions, and the significance outcomes of the study are also discussed sequentially.

1.1 Background and Rationale of the Study

Bhutan, a small nation renowned for its distinct cultural history and commitment to holistic development, has evolved from a traditional society to an active participant in regional and global spheres, owing its sovereignty to its distinct culture rather than size or economic prowess. It has made significant progress in modernization, preserving its cultural heritage while addressing 21st century challenges. Recognizing the significance of Bhutan's distinct culture, the Royal Government places an extreme priority on preserving its rich cultural legacy, incorporating the country's history into the Social Studies curriculum (Tenzin, 1993) beginning in the fourth grade.

Social Studies is an interdisciplinary field of education that combines social science and the humanities to develop civic competency. Within the wide scope of Social Studies, students study various fields like anthropology, archeology, economics, history, law, philosophy, and sociology, preparing them for responsible citizenship (National Council for Social Studies, 1994, as cited in Zanetis, 2010).

Bhutan's Social Studies curriculum was developed in 1992 and revised the following year in 2002. In 2010 and 2012, it underwent frequent evaluations, and revisions were made to the facts, statistics, maps, illustrations, diagrams, and language. The first Social Studies Curriculum Framework was created by the Royal Education Council (REC) in 2015. It was succeeded by the prioritized curriculum framework and the Adapted Curriculum Framework which were developed in response to the COVID-19 epidemic. The National School Curriculum, formally known as the New Normal Curriculum Framework, was created in 2021 for adoption. As stated by The Royal Education Council (2021), the New Normal Curriculum (NNC) aims to transform education from teaching "what" to learning "how and why," focusing on lifelong learning, 21st-century skills, adaptability, resilience, and transforming teachers into facilitators. It aims to cultivate socially responsible citizens for success in a rapidly changing global landscape.

According to the Department of Curriculum and Professional Development (DCPD) (2022), in Social Studies, learners not only gain a deeper understanding of the world around them but also develop critical thinking and problem-solving skills. By studying diverse cultures, societies, and historical events, students can make connections and analyze complex issues. This interdisciplinary approach cultivates a well-rounded education that prepares individuals for success in their personal and professional lives.

The Bhutanese Social Studies curriculum covers history, geography, and economics from grades four to six, with later divisions in grades seven and nine (Dorji, 2021) and the foundation for these three subjects is laid by early Social Studies education (Peldon, 2018). According to the DCPD (2022), the Bhutanese Social Studies curriculum, which includes strands such as "My World," "History, Civics, and Culture," "Human Wellbeing and the Environment," and "Living and Economy," allows for interdisciplinary education. This aligns with Bhutan's commitment to Gross National Happiness (GNH), which aims to cultivate vital skills like decision-making, critical thinking, and understanding of cultural identity. Bhutan's Social Studies education not only imparts academic knowledge but also promotes empathy, critical

thinking, global understanding, and responsible citizenship by equipping students with skills to advocate for justice, engage in local affairs, and tackle global issues (Euro School, 2013). In a world that is rapidly evolving, Social Studies education equips students with the responsibility and appreciation for diverse perspectives needed to navigate the complexities of today's world, contributing to the nation's vision of holistic well-being and cultural preservation.

Nathani (2021) emphasizes the lifelong journey of learning, stating that knowledge acquisition should not be limited to classroom walls, quoting Frank Herbert as stating "One learns from books and examples only that certain things can be done. Actual learning requires that you do those things" (as cited in Nathani, 2021). This idea is especially valid in the field of Social Studies, where the complexities of human society, culture, and history are explored in real-world circumstances. Experiential learning outside of the classroom can broaden students' perspectives on the subject and encourage the application of their knowledge in real-world circumstances (Çengelci, 2013). Teachers should adopt diverse teaching methods for 21st-century students, who are proficient in digital media. Failure to do so can lead to monotonous and unengaging lessons. Conducting virtual field trips (VFT) can help explore the world with students. Due to time and financial constraints, conventional teaching methods may be neglected, hindering the development of students' existing skills and conceptual understanding (Haris & Osman, 2015).

Grade 6 marks a significant transition in the Bhutanese education system as students move from elementary to middle school. This phase is crucial for the social and emotional development of students. Given the importance of Grade 6 as the final stage of primary education before entering more challenging middle school courses, organizing field trips becomes essential. These opportunities can enhance students' engagement with the material, broaden their perspectives, and improve their learning experience.

However, the education system faces challenges due to limited financial and human resources, which hinder infrastructure expansion and equal access to education (Gyeltshen & Zangmo, 2021). According to The Royal Education Council (2021), the Social Studies curriculum for classes 4 to 6 only includes four periods a week. Despite the curriculum's focus on real-world learning through outdoor activities, the limited time often confines lessons to the classroom (Tshering & Chalermnirundorn, 2023). Because of the limited number of teaching periods, teachers are unable to take the children on field trips, limiting their learning opportunities on various topics, especially 'Sacred Places,' which require firsthand visits for full understanding.

Relying solely on classroom instruction often leads to traditional teaching methods, emphasizing rote memorization (LaPrairie, 2014). The traditional methods of delivering Social Studies education, including field trips, have faced additional challenges due to the pandemic. Concerns about expenses, safety, and accessibility have further restricted students' access to diverse educational experiences. In response, educators have turned to innovative solutions such as virtual field trips (VFT) to overcome these barriers (Banyan, 2022).

The COVID-19 pandemic has emphasized the need for innovative solutions to ensure quality education for its citizens, particularly in Bhutan where the educational landscape has changed significantly since the pandemic. Hence, there has been a noticeable shift in the method of teaching and learning since Bhutan adopted the New Normal Curriculum (NNC). The current transformation of the educational system centers on competency-based learning (CBL), which is assisted by digital technology to integrate classroom instruction into real-world situations (Gyeltshen & English, 2021). Both teachers and students have had to adjust to a new curriculum and transition to online instruction methods (Drukpa, 2022), highlighting the need for digital literacy among both teachers and students.

Teachers and students were compelled to switch from traditional methods to innovative modalities like e-learning through national news channels, radio broadcasting, and social media platforms. Although the integration of technology in

education was foreseen in the education blueprint and ISherig ICT Master Plan, Bhutanese students have for the first time adopted digital tools exclusively for online learning (Ministry of Education [MOE], 2014). Due to the COVID-19 pandemic, educational institutions around the world have had to modify how they deliver their curriculum (Zhou, Wu, Zhou, & Li, 2020). Technology is now being used more than ever to support online learning (Adarkwah, 2021). The most common method for providing uninterrupted instruction globally is still online education (Kerres, 2020). Information technology significantly enhances education by facilitating knowledge dissemination (Haris & Osman, 2015) and interactive learning experiences, enabling students to engage with educational content in innovative and dynamic ways. The use of ICT methods like multimedia presentations, video podcasts, and PowerPoint slides can significantly enhance students' academic performance, skills, and attitudes. These techniques promote multisensory learning, active engagement, cooperative learning, communication enhancement, multicultural education, and student motivation, making them crucial for implementing the New Normal Curriculum (Gyeltshen & English, 2021).

The rapid transition to online teaching prompted by the pandemic highlighted the urgent need for the pandemic to accelerate the adoption of online teaching, causing concerns about the quality of instruction (Huber & Helm, 2020; Kerres, 2020). The Bhutan Education Blueprint 2014–2020 emphasizes the need for technology to improve education quality, with recommendations for scaling the ICT ecosystem. The Ministry of Education has developed iSherig-2—2019–2023, the ICT Masterplan 2, to sustain and advance ICT initiatives in education (Lhendup, 2020). To address these challenges and capitalize on technological advancements, Social Studies educators must adapt and innovate in their teaching approaches. Utilizing innovative methods like virtual field trips can provide enriching educational experiences, bridging the gap between traditional instruction and modern demands. By embracing these changes, educators can enhance student engagement and learning outcomes in Social Studies education.

Virtual field trips (VFTs) are an effective educational tool that provides accessibility to places and experiences that might be physically unreachable due to distance or cost. It enhances learning experiences by bringing subjects to life and eliminating safety concerns and logistical issues. They are cost-effective, open to various destinations, and can be tailored to specific curricular goals. They are interactive, inclusive, and flexible, contributing to environmental sustainability and maintaining educational continuity during public health crises like the COVID-19 pandemic. According to Banyan (2022), VFT excursions allow for flexible curriculum customization, allowing teachers to optimize engagement and match students' interests, unlike textbooks or set curriculums. Therefore, it complements traditional forms of instruction and adapts to the changing needs of education in the post-pandemic era

The researcher employed a VFT method to teach sacred places in a region, combining recorded and live video content for comprehensive understanding and personalized exploration. Further, VFT can also be more inclusive, allowing students to participate who might not be able to on traditional field trips due to physical limitations or health concerns. According to Norris, Shelton, Dunsmuir, Duke-Williams, & Stamatakis (2013), teaching with VFT is flexible and facilitates inclusive learning for various subjects and skill levels. Further Haris & Osman (2015) asserts that these approaches are inclusive, allowing a broader range of students to actively participate in exploring sacred places, enhancing the overall educational experience.

Therefore, this study aimed to explore the effectiveness of incorporating Virtual Field Trip in teaching Social Studies to grade 6 Bhutanese students and study their learning satisfaction of the use of VFT, thereby enhancing the quality of education for grade 6 students by addressing the limitations of traditional classroom instruction.

1.2 Research Objectives

1.2.1 To examine the effectiveness of virtual field trips in Social Studies of grade 6 Bhutanese students.

1.2.2 To study the learning satisfaction in Social Studies after using virtual field trips.

1.3 Research Questions

1.3.1 Would there be any improvement in grade 6 Bhutanese students' learning achievement in Social Studies after using virtual field trips?

1.3.2 Would there be learning satisfaction after using virtual field trips in teaching and learning Social Studies.

1.4 Research Hypotheses

1.4.1 There would be statistically significant improvement in grade 6 Bhutanese students' learning achievement in Social Studies after using virtual field trips.

1.5 Scope of The Study

The researcher conducted a study in a high school in Bhutan, focusing on a group of 30, grade 6 students. In Bhutan, teachers receive instructional guides with suggested learning experiences for various subjects. However, teachers have the flexibility to choose or create activities based on students' needs. The researcher used VFTs as a teaching method to enhance students' learning outcomes and promote a positive attitude toward Social Studies. This involved designing and implementing specific learning activities to achieve these goals.

1.5.1 Population and Sample

Population: The study focused on a specific group of students from a school located in Thimphu, the capital of Bhutan. The targeted population consisted of 7 sections totaling 210 students in grade 6. The researcher selected 30 students from this population to participate in the study. These participants had mixed abilities in Social Studies and were between the ages of 13 and 14 years old, comprising 15 male and 15 female students.

Sample: The researcher used a cluster random sampling method to select a single section of the population. The section consisted of 30 students chosen from 7 different sections.

1.5.2 Content of the Study

In this study, the researcher carried out a 90-minutes lesson on the Sacred places of Bhutan under the History, Civics, and Cultural strand using the VFT strategy. The researcher used the National School Curriculum Framework and Instructional Guide for Grade 6 Social Studies, developed by the Department of Curriculum and Professional Development [DCPD] (2022). The Social Studies Framework for grades IV to VI consists of five strands: My World, History, Civics, Culture, Human Wellbeing, and the Environment, Living and Economy, and the Process Strand. The first four strands help students gain a conceptual understanding of the subject, and the fifth strand, the Process Strand, focuses on helping students develop critical social skills. The researcher taught the following topics for one month.

Table 1.1 Table of content for the lessons

Week	Topic: Sacred Place	Activities
I (1 st Week of May 2024)	Dechenphug Lhakhang Session 1: Virtual Trip through recorded video. Session 2: Presentation on the background of Lhakhang.	- Pretest to capture students' prior knowledge. - Travel virtually using the recorded video of Dechenphug Lhakhang to explore the background story and know the significant spiritual values. - Read the handout, discuss, and express their ideas through creative presentation. - Presentation.
II (2 nd week of May 2024)	<u>Dodeydrak</u> <u>Monastery</u> Session 1: Virtual FieldTrip/ live video conferencing Session 2: Discuss and record the significant spiritual values and ways to preserve.	- Live video/ Virtual Field Trip to Dodeydrak Monastery with the lam (monk) to know the back story and the spiritual values of the monastery. -Question, answer session with the lam/monk. -Discuss and record the important points in groups. -Student explain the significant spiritual values of sacred places and explore ways to preserve it with reference to Dodeydrak Monastery.
III (3 rd week of May 2024)	<u>Samtengang Lake</u> Session 1: Virtual Field Trip to Samtengang Lake. Session 2: Reflect, connect, and share their opinions.	-Live video conference/ Virtual Field Trip to Samtengang Lake with local people to know the ancient story/ background story of the lake. -Interview with local people. Student notes the information and write brief story about the place. -Group 1 to 3: Let these 3group reflect on the story and make connection with that place and share their views. -Group 4 to 5: Let these 2group work on how to preserve the values and beauty of that lake.

Table 1.1 Table of content for the lessons (Cont.)

Week	Topic: Sacred Place	Activities
IV (4 th week of May 2024)	<p>Travelling to the places through the lens of an experts.</p> <p>Session 1: Play the recorded video from his collection on any Sacred place and share his experiences.</p> <p>Session 2: Virtual group presentation on a chosen sacred place.</p>	<p>-Welcoming the guest speaker with brief introduction.</p> <p>-Interact by sharing his experience while travelling to the Sacred place (talk on DO's and DON'T's).</p> <p>-Student will ask questions/inquire regarding the recorded video.</p> <p>-Share views on what they have learned and what would they do while visiting the sacred place.</p> <p>-Group presentation on chosen sacred place and take the class on a virtual trip.</p>

1.5.3 Location of the study

This research was carried out in one of the Higher Secondary Schools located in Thimphu, the capital of Bhutan. The school is located about 6 kilometers north of Thimphu at a rise of about 2500 meters. The school consist of grades ranging from grade 4 to grade 12. As of April 2024, the school has 1397 students enrolled and 79 teachers in total.

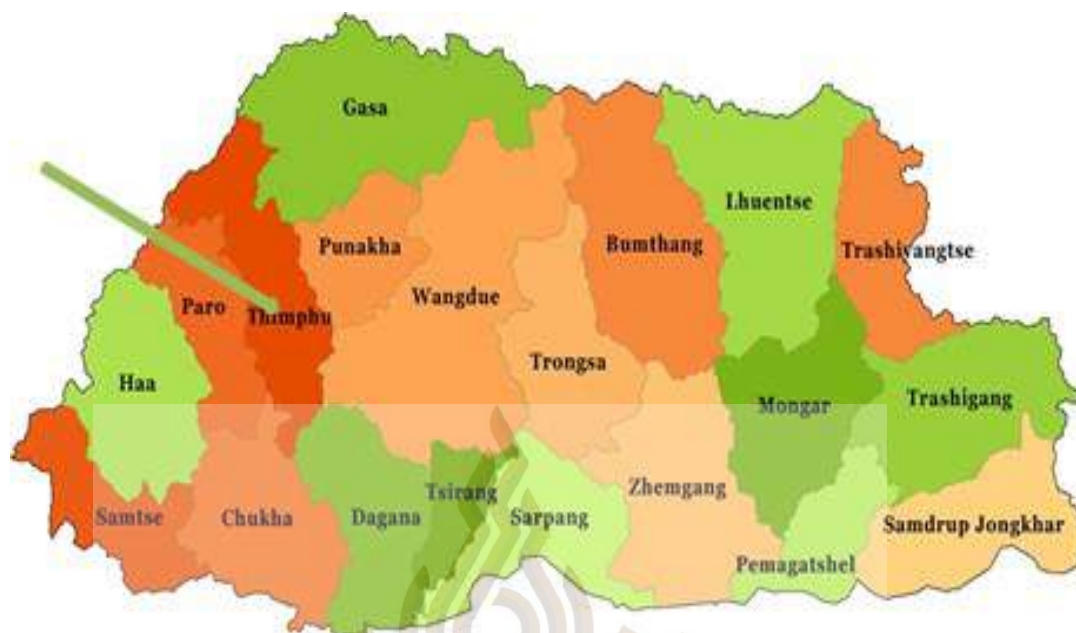


Figure 1.1 Location of the Study

Source: The Permanent Mission of Bhutan to the United Nations, 2023

1.5.4 Time Frame

The study was conducted in the first term of the 2024 academic year, from May to June. The researcher used VFTs as a teaching method in a weekly 90-minute Social Studies lesson for grade 6. The study aimed to assess the effectiveness of the VFTs method in enhancing students' understanding of the subject matter.

Table 1.2 Time frame for the research process

Activities	Research Time Frame			
	From		To	
	Month	Year	Month	Year
Literature Review	January	2024	March	2024
Research Proposal	March	2024	April	2024
Data Collection	May	2024	June	2024
Data Analysis	July	2024	August	2024
Final Defense	August			2024

1.6 Conceptual Framework of The Study

The study focused on the variables used in the research work, using virtual field trips to improve Social Studies achievement among grade 6 Bhutanese students. This approach was driven by challenges like the COVID-19 pandemic, natural disasters, physical disabilities, and health issues, which often hindered students from participating in traditional field trips and limited their learning opportunities. The researcher used two variables, independent variables and dependent variables. Independent variables of this research included the use of VFTs for teaching Social Studies to grade 6 students and the dependent Variables were the students' learning achievement and students' learning satisfaction. The framework is illustrated below.

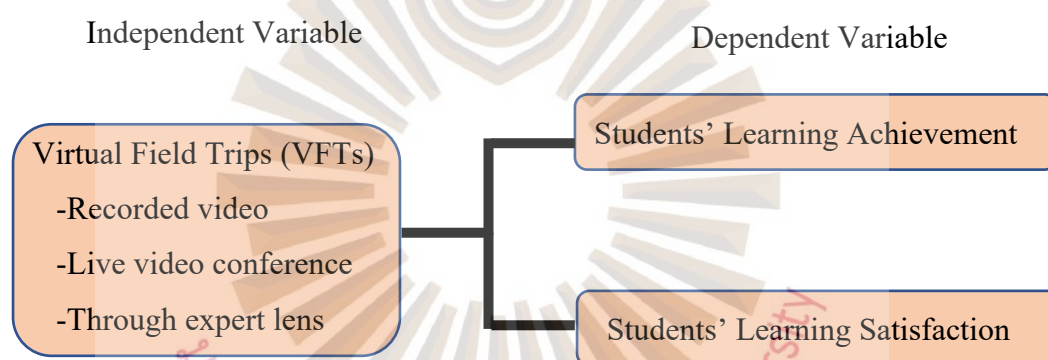


Figure 1.2 Illustration of the independent variable and dependent variable

1.7 Operational Definitions

Virtual Field Trip: The researcher applied VFTs as a learner-centered strategy for the study of sacred places. This study explored the usage of VFTs as a teaching method that combines live video conferencing and recorded video using relevant websites and vlog, and interaction with experts to raise the bar. Live video conferencing promotes real-time interaction creating a dynamic learning environment, while recorded videos use pre-existing footage to offer a carefully selected visual experience. The involvement of experts provided valuable insights by sharing their experiences with the learners. VFT in this study will be carried out in 3 stages as follows:

1) Activity Description: Students were given the opportunity to participate in Virtual Field Trips (VFTs) where they watched recorded videos, joined live video conferences, and interacted with experts. During these trips, they felt as if they were directly visiting the locations. A monk or Lam guided them through the monastery, explaining the significance of each architectural feature and sharing the monastery's history. Additionally, a local leader (Gup) led a virtual trip to Samtengang Lake, narrating the lake's backstory and significance. Experts shared their experiences and pre-recorded videos, while students took notes, asked questions, and engaged with the experts during the sessions.

2) In-Class Activity: After watching videos, attending conferences, and interacting with experts, the students were divided into 6 groups of 5 members each, with diverse abilities to ensure a mix of skills and perspectives in each group. Within their teams, students discussed and shared their views on the chosen topics. This collaborative discussion allowed them to refine their understanding and plan how they would creatively express their insights. Each group expressed their findings using diverse platforms, including video presentations, PowerPoint slides, writing, drawing, composing songs and poems, dancing, or dramatizing their insights through short plays or skits.

3) After- Class Activity: Each team participated in a gallery walk, moving around to view and learn from the work of other groups. This activity allowed students to gain insights from their peers' projects and understand different perspectives on similar topics. Also, the presentations included a variety of platforms, such as video presentations and PowerPoint slides. Through these presentations, students virtually guided the class to different sacred places in Bhutan, providing a comprehensive and immersive understanding of these locations.

The teacher provided an assessment rubric for each team chart. As students observed the displays and presentation on sacred places through virtual trip they wrote feedback, suggestions, or encouraging remarks on the provided rubrics. (Teacher used the same rubrics)

Reflection and Feedback:

Class Reflection: After the presentations, the class engaged in a reflection session where students shared their experiences, challenges, and what they learned from the activity. This reflective practice encouraged students to think critically about their work and the overall learning process.

Feedback and Evaluation: Both teachers and peers provided constructive feedback to each team, highlighting strengths and suggesting areas for improvement. This feedback was valuable for students' future projects and presentations, promoting a growth mindset and continuous improvement.

Note: Parents and the research school were informed about the VFT strategy being introduced in the research school. Researcher explained regarding the benefits of the said strategy as well as the value of providing assistance and encouragement to the students and the researcher.

Students' Learning Achievement refers to the improvement in students' learning achievement in Social Studies after using the VFTs method. This can be identified from their achievement test scores of pretest and posttest in Social Studies.

Students' Learning Satisfaction refers to research participants' positive responses towards using VFT in teaching and learning Social Studies on sacred places. The satisfaction of the research participants was measured from semi-structured interview with 5 open-ended questions after implementing of VFT strategy.

Social Studies: Social Studies is a subject that integrates various disciplines. It focuses on the connections, interactions, and interdependence among individuals and their environment. It helps one to explore and understand the world better. The researcher will carry out the lesson on "Sacred Places of Bhutan" under the strand History, Civics, and Culture to inculcate the value of history and culture of sacred places as Social Studies is the heart of the curriculum in Bhutan because it helps

preserve and respect the diverse cultural heritage of the country. By infusing the values, traditions, and customs of various ethnic groups, it teaches students to value cultural diversity. It also allows them to develop a sense of identity and belonging.

Grade 6 Students: refer to research participants from a higher secondary school in Thimphu, the capital of Bhutan. The research participants are of mixed genders and abilities, with ages ranging from 13 to 14 years old.

1.8 Significance of The Study

1.8.1 The use of virtual field trips improved learning achievement in Social Studies in grade 6 Bhutanese Students.

1.8.2 The Study showed positive learning satisfaction of grade 6 Bhutanese students after using Virtual Field Trip in learning Social Studies.

1.8.3 The study provided insight to teachers of Bhutan in using virtual field trips as one of their effective teaching strategies in teaching Social Studies.

1.8.4 The study emphasized the importance of contextualized learning experiences in Social Studies through virtual field trips.

1.8.5 The study provided insights into the potential of virtual field trips to address educational challenges.

1.9 Limitation of The Study

1.9.1 There were only 30 students who participated in the study. Therefore, the result of the study may not be generalized to the overall learning achievement of grade 6 Bhutanese students.

1.9.2 The study was limited to one chapter only from the grade 6 Social Studies textbook. Therefore, the findings of this study may not be generalized to other chapters in teaching Social Studies.

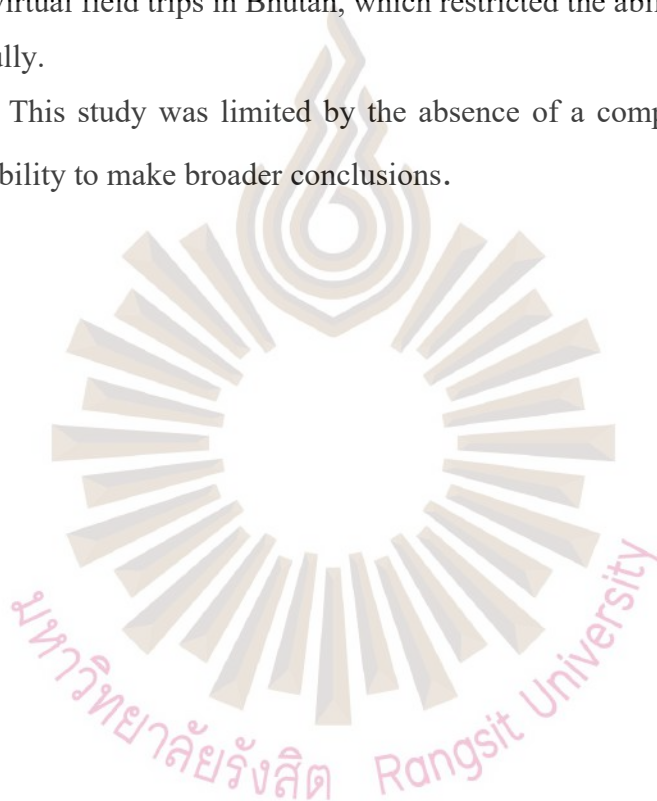
1.9.3 The study included only three types of virtual field trips: recorded video, live video conferencing, and virtual trip with experts. These were selected for their availability and convenience in teaching the topic. Consequently, the findings

may not apply to all types of VFTs.

1.9.4 While there is no restriction on photographing Bhutan's cultural heritage sites from the outside, many of the interiors of dzongs (fortresses), monasteries, temples, and sacred places are prohibited. This restriction aims to preserve the sanctity and privacy of these sites; however, without visual documentation, it poses a challenge for educators in illustrating the cultural intricacies and architectural details.

1.9.5 The study was constrained by the limited empirical research available on the use of virtual field trips in Bhutan, which restricted the ability to contextualize the findings fully.

1.9.6 This study was limited by the absence of a comparison group, which hindered the ability to make broader conclusions.



CHAPTER 2

LITERATURE REVIEW

This chapter presents the historical overview of the Bhutanese Education system, phases in curriculum, Social Studies curriculum in Bhutan, Teaching of Social Studies, definition of the virtual field trip (VFT), types of VFT, Stages of VFT, challenges of VFT, advantages of VFT, related learning theories, and another related research and studies.

2.1 Historical Overview of The Bhutanese Education System

Bhutan is a small country with a rich cultural heritage and dedication to holistic well-being. Bhutan is a constitutional monarchy that emphasizes Gross National Happiness (GNH) as a measure of progress. Bhutan believes that true progress lies in the happiness and well-being of its people over economic progress (Lepeley, 2017; Sithey, Thow, & Li, 2015).

Starting its inaugural development plan in 1960, Bhutan, recognized as one of the most isolated countries globally, struggled with illiteracy, raised infant mortality rates, foodshortages, and frequent natural disasters. Despite these significant hurdles, Bhutan's development strategies have yielded extensive and enduring impacts (Ura & Kinga, 2004).

Monastic body sowed the seed of education in the 1960s and it is still blooming brightly. According to Tobgye (n.d.) states that monastic education has significantly contributed to the development of language, arts, literature, and philosophy in Bhutan. Education has played a crucial role in shaping societies and civilizations, transmitting knowledge, values, and cultural practices, and empowering individuals to improve their lives and contribute to community progress.

Ancient mariners seek guidance from the North Star for safety, likewise, Bhutan has achieved significant progress with the generosity and integrity of those who embraced Bhutan's unique vision. The close neighbour, India, provided significant support for Bhutan's education system in its early years through five-year plans (Powdyel & Yakushik, 2022).

Bhutan's education system has seen significant changes under different monarchs. The first King, Gongsar Ugyen Wangchuck initiated the establishment of the first modern school in Haa in 1914 (Dorji, 2021). Following his reign, King Jigme Wangchuck expanded the education system, while the third king introduced free and universal primary education (Evans, 2006). Subsequently, King Jigme Singye Wangchuck emphasized education's role in promoting Gross National Happiness (GNH) and founded the Royal University of Bhutan (Munro, 2016). The nation's emphasis on formal education, free and universal primary education, and the provision of basic educational infrastructure all reflect the holistic approach to GNH, which takes into account spiritual, material, physical, and social needs (Sithey, Thow, & Li, 2015). Under the reign of the fifth king, Jigme Khesar Namgyel Wangchuck, prioritized education and improved the quality of education (Waiba, Sherab, & Hingmang, 2021). The government's focus on formal schools, free and universal primary education, and basic educational infrastructure reflects its commitment to improving the country's human capital and promoting GNH (Dharane, 2020). As per Article 9, Section 16 of the Constitution of Bhutan to provide free basic education up to the tenth standard for all school-going children including non-Bhutanese residents, with the Ministry responsible for ensuring inclusive and high-quality education (Gyeltshen & Zangmo, 2021).

2.2 Phases in Curriculum

Creating an effective curriculum is essential to helping students reach their full potential because it acts as a roadmap for learning giving, both teachers and students the structure and guidance they need. Kisirkoi & Cude (2022) also highlighted that developing a successful curriculum is important for student achievement, as it provides a structured roadmap. Teachers can create a learning environment that not only supports

students' acquisition of knowledge and skills but also encourages their creativity, curiosity, and lifelong love of learning.

According to Tenzin (2023), The Bhutanese school curriculum has transitioned towards Competency-Based education from neoclassical to learner-centered approaches, focusing on holistic development, values-based education, and cultural integration. This shift aligns with Gross National Happiness principles, promoting continuous learning, learner participation, and technology integration. Initiatives like the New Approach to Primary Education promote critical thinking, creativity, and environmental stewardship through hands-on learning and traditional arts.

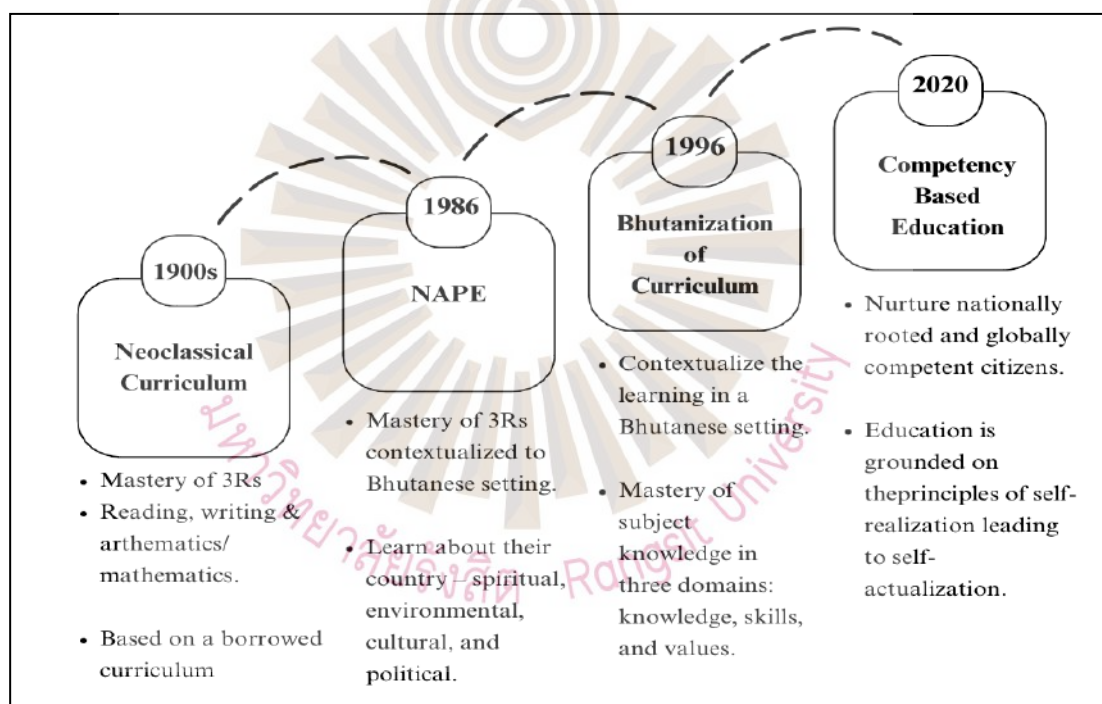


Figure 2.1 Phases of Curriculum Change

Source: Tenzin, 2023

2.3 Social Studies Curriculum in Bhutan

Social Studies is like a bridge that leads one to discover hidden treasure and actualize their potential. According to Royal Education Council (2021), the development of the subject in Bhutan is a reflection of the nation's distinct history and rich cultural legacy. Bhutan's Social Studies education has been significantly influenced by its rich history, culture, geography, and civic duties. Additionally, Tshewang (2019) states that over time, the curriculum has changed to meet the evolving needs of society and adapt to international trends in education. Recently, researchers such as Gyeltshen and Zangmo (2021), stated that education is now seen as more than just acquiring knowledge; it's about equipping individuals with the skills and abilities needed to succeed in a competitive world, empowering them to pursue their dreams and achieve a fulfilling life.

Social Studies is a crucial part of the school curriculum. According to REC (2021), the curriculum focuses on human-nature relationships and interactions, aiming to develop civic competence through scientific and historical knowledge, skills, and attitudes.

Social Studies is a comprehensive study of interpersonal relationships and human behaviour. It covers all essential life skills on an individual and collective level, integrating knowledge from the social sciences. By studying Social Studies, individuals gain a deeper understanding of how societies function and the factors that shape human behaviour. It also equips them with the necessary skills to navigate and contribute to a diverse and interconnected world. Social Studies are primarily intended to assist youth in becoming citizens of a democratic, culturally diverse society in an interdependent global community by fostering their ability to make well-informed and rational decisions for the common good. Royal Education of Council (REC, 2016 cited in Dorji, 2021) developed Social Studies textbooks for grade 6 that include chapters organized into 3 units in a systematic sequence to enable connections from one content to another: the environment, people, places, and society.

Bhutan's Social Studies curriculum was developed in 1992 and revised the following year in 2002. In 2010 and 2012, it underwent frequent evaluations, and revisions were made to the facts, statistics, maps, illustrations, diagrams, and language. The first Social Studies Curriculum Framework was created by the Royal Education Council (REC) in 2015. It was succeeded by the prioritized curriculum framework and the Adapted Curriculum Framework, which were created in response to the COVID-19 epidemic. The National School Curriculum, formally known as the New Normal Curriculum Framework, was created in 2021 for adoption.

2.4 Teaching of Social Studies

Social Studies is a broad subject with many uses, such as teaching political science (Sandahl, 2015), knowing human behavior and the modern world (Krogh & Morehouse, 2020) encouraging critical thinking, cultural sensitivity, and community involvement (Crisolo, Camposano, & Rogayan Jr, 2021).

The Bhutanese Social Studies curriculum aims to cultivate a strong sense of national identity. advance cross-cultural understanding, sharpen critical-thinking abilities, and get students ready for citizenship. History, geography, economics, political science, and sociology are just a few of the topics it covers. The curriculum attempts to create a balance between preparing students for participation in the global community and maintaining Bhutanese values and traditions.

The relationships, interactions, and interdependence that exist between people and the natural world are at the heart of Social Studies. It aims to provide civic competence through scientific and historical knowledge, abilities, and attitudes to make the students capable of taking on the roles of decent citizens in an evolving world (REC, 2021). It encourages the integration of knowledge from diverse subject areas while fostering interdisciplinary skills, concepts, and values. It also cultivates critical thinking, creativity, cooperation, and teamwork, which promotes involvement and engagement in the learning process (REC, 2020).

The Social Studies curriculum in Bhutan integrates geography, economics, and history, forming a strong foundation for these subjects. These components are interwoven throughout the lower elementary classes, spanning from grades 4 to 6, providing students with a comprehensive understanding of the interconnectedness of these disciplines (Dorji, 2021). Social studies curriculum and subject matter are strongly influenced by the local community and surroundings of students (Dorji, 2022). Nuryani, Komariah, and Wahyuningsih (2022) also highlighted, that the way individuals interact with one another both inside and outside of the classroom is related to Social Studies education. This integrated approach to Social Studies education gives students the tools they need for lifelong learning and informed citizenship in addition to enhancing their academic experiences.

2.5 Introduction to Virtual Field Trips In Education

Field trips have long been an integral part of the educational experience, allowing students to interact with real-world learning situations. However, logistical obstacles like time and location limitations frequently restrict their scope. Access to conventional education and field trip opportunities has been further limited by the COVID-19 pandemic (Sharma, 2023). Fortunately, advancements in technology and interactive learning platforms have introduced virtual field trips (VFTs) that revolutionize traditional field trips, offering immersive and engaging experiences that go beyond the limitations of traditional field trips.

2.5.1 Definition and Conceptualization of VFTs

Virtual field trips (VFTs) are a transformative educational instrument that employs digital technology to provide immersive and interactive experiences for students, allowing them to explore real or simulated environments from the comfort of their classrooms. Many academics have defined virtual field trips (VFTs) as multimedia presentations or online experiences that allow students to virtually visit remote areas, museums, or cultural sites (Klemm & Tuthill, 2002; Stannard & Jill, 2010). These experiences are designed to improve students' understanding of various

cultures, historical landmarks, and natural wonders, encouraging curiosity and deeper involvement with the subject matter.

Moreover, VFTs function as digital tools that leverage images, videos, and relevant content to render exploring and researching remote locations easier. This concept, which was put forth by Hurst (1998), Woerner (1999), Stainfield, Fisher, Ford, & Solem (2000), and Tuthill and Klemm (2002), emphasizes the diverse ways that VFTs can be interpreted and indicates that they can be designed to provide to a range of educational needs. VFTs are an effective teaching tool that can boost interest, expand students' comprehension, and keep them more involved in the material. VFTs are accessible to a wide range of schools and learners, as noted by Sharma (2023) and Neendoor (2023), and they provide real-world, authentic learning experiences that are as engaging as traditional field trips. Educators are increasingly turning to virtual field trips to lessen the challenges associated with traditional field trips, such as prep time, scheduling limitations, and financial constraints. Hehr (2014) notes that integrating technology into education has become essential, and VFTs present a convenient means to enhance student achievement and broaden classes beyond the classroom. VFTs enable students to participate in interactive exploration and understand diverse themes and topics by complementing classroom theories with experiential learning. By utilizing VFTs, instructors can provide students with memorable educational experiences that improve learning outcomes and encourage active engagement.

The Bhutanese education system, which has previously depended on traditional methods of instruction, is becoming more aware of the significance of embracing innovative pedagogies and technology-enhanced learning experiences. Despite curriculum revisions and regulatory changes, traditional lecture-based teaching techniques remain dominant, limiting students' access to real-world experiences and outdoor learning opportunities (Rigzin, 2021).

However, the emergence of VFTs provided an alternative strategy to bridge this gap and improve the quality of education in Bhutan. To increase student interest and comprehension, researchers like Rabgay (2012, 2015) advocate a shift to student-

centered pedagogies and the integration of virtual learning experiences. Educators can provide students with the opportunity to study diverse places, cultures, and societies without leaving the classroom by incorporating VFTs into their curriculum.

2.5.2 Types of Virtual Field Trips (VFTs)

Virtual field trips (VFTs) provide diverse experiences that may be executed using a variety of means, such as websites, videos, or films with teacher commentary, as noted by Kenna and Potter (2018). Poor (2021) emphasizes the dynamic nature of virtual field trips, classifying them into two primary categories: synchronous and asynchronous, which are further categorized into four types by Christine (2023). They are live-streaming, interactive exploration, video visits, and scheduled and guided virtual field trips (VFTs), highlighting experiences for their students. Students and experts engage in real-time, synchronous virtual field trips that are enabled by video conferencing platforms such as Zoom, or Google Meets. This live engagement allows for instantaneous communication and feedback, which enhances the learning experience (Mitchell, McMillan, & Lobchuk, 2019). On the contrary, asynchronous virtual field trips consist of pre-recorded experiences that provide access flexibility, enabling students to interact with the material at their leisure and pace (Poor, 2021). During asynchronous trips, students can still benefit from the carefully selected text, video, and audio resources on subjects even while they are unable to engage with presenters in real time (Zanetis, 2010). Both forms of virtual field trips have distinct advantages, such as providing access to previously inaccessible regions and allowing interactions with professionals who have specialized knowledge. These learning opportunities enhance student engagement and enthusiasm in various subjects while also supplementing the curriculum and adhering to academic standards.

2.5.3 Phases of Virtual Field Trips (VFTs)

Traditional teaching approaches in Bhutanese education have often hindered students' life long learning (Dolma, Nutchey, Watters, & Chandra, 2018), emphasizing the necessity of a shift to student-centered pedagogy (Rabgay, 2015). To encourage

involvement and curiosity, this transition demands new teaching approaches (Rabgay, 2012), such as virtual field trips. According to Cassady, Kozlowski, & Kommann (2008) and Kisiel (2006), traditional and virtual field trips should be complementary to one another, sharing similar instructional strategies and offering comparable advantages in terms of grabbing students' interests and comprehension. Virtual field trips (VFTs) attempt to supplement traditional learning experiences and provide students with the resources they need for real-world field research rather than replacing traditional learning experiences (Spicer & Stratford, 2001). Educational virtual field trips necessitate careful planning and consideration throughout three essential phases: pre-planning, implementation, and assessment (Kenna & Potter, 2018).

2.5.3.1 Pre-planning Phase

According to Kenna and Potter (2018), the phase before embarking on a VFT requires thorough planning and preparation for meaningful and educational experiences for students. During the pre-planning phase, teachers carefully prepare by selecting destinations that resonate with curriculum objectives and ensuring that students have access to the appropriate tools (Admin, 2023). Along with giving a summary of the goals, schedule, and activities of the trip, this also introduces the idea of the chosen topic and explains its significance. Students' comprehension is improved when guidelines are established for navigating the virtual tour and when they are encouraged to investigate the given topic using readily available resources.

This phase also includes encouraging student engagement through research and topic-related debates, which lays the framework for a full learning experience (Tshering & Chalermnirundorn, 2023). Giving students pre-trip assignments guarantees their active participation and preparation, which helps them develop a greater respect for the places they will be virtually touring.

2.5.3.2 The Implementation Phase

During the implementation phase, a stable internet connection and functional audio-visual equipment are essential for successful virtual field trips (VFTs). It is important to provide students with a comprehensive overview of the virtual field trip's objectives, schedule, expectations, and goals as well as familiarize them with the platform that will be used (Jacobson, 2009; Kundu, 2016; Meyer, 2016). Educators must keep students interested by addressing potential distractions and implementing engaging activities (Kenna & Potter, 2018; Tanoos, 2019). Many interesting activities complement students' positive impact of interactive and engaging activities during the VFT. According to Tanoos (2019), students can ask questions and interact with the commentary in real time through a guided live virtual tour. Adding recorded video or multimedia teaching techniques as a supplement provides thorough descriptions and up-close looks at important details Schott (2020). Additionally, Barrett (2008) found that through out the tour, students are kept engaged and encouraged to participate actively through interactive activities like polls, quizzes, and discussions. Live video sessions with experts and multimedia supplements allow students to comprehend and engage throughout the trip (Barret, 2008; Schott, 2020).

2.5.3.3 The Assessment Phase

The assessment phase becomes essential for assessing the success of the learning and for reinforcing it after the virtual field trip (Bitgood, 2007). Students can express their comprehension while developing a deeper understanding through live reflection sessions, sharing their ideas, insights, and reflections on the experience and post-trip assignments (de Freitas, Rebolledo-Mendez, Fotis Liarokapis, & Poulouvassilis, 2009; Procter, 2012). Post-trip reflection helps measure effectiveness and refine future virtual experiences. The incorporation of virtual experiences into the curriculum guarantees learning continuity and enhances students' comprehension by relating it to real-world situations (Lan, 2020). According to Wagner (2008) and Ferguson (2011), extended activities improve students' learning further by encouraging active participation and critical thinking skills. Overall, by following the virtual field

trip phases, educators can create relevant and engaging learning experiences in a variety of subject areas (Jones & Washko, 2021).

2.6 Advantages of Virtual Field Trips (VFTs)

Virtual field trips offer numerous educational benefits, as evidenced by their growing popularity (Pantelidis, 2010). They offer incomparable access to educational resources such as historical sites, museums, and cultural icons, which are sometimes inaccessible owing to logistical or geographic constraints (DeWitt & Storksdieck, 2008; Jones & Washko, 2021). Virtual field trips enhance students' comprehension of diverse topics and perspectives, enriching their educational experience (Shahzad, 2023). These experiences promote student engagement and curiosity, encouraging them to actively participate in the learning process.

Moreover, virtual field trips offer an enriched learning experience by incorporating engaging and dynamic learning opportunities outside the traditional classroom setting (Raja & Priya, 2021). Students interact meaningfully with the curriculum through multimedia tools and simulated experiences, which promote deeper knowledge and critical thinking skills (Squire & Klopfer, 2007). According to Valentins and Muracova (2019), virtual field trips (VFTs) are cost-effective, eliminating the need for expenses associated with traditional trips, such as transportation and admission fees. This accessibility guarantees that students from all socio economic levels have access to experiential learning opportunities (Yu & Richards, 2018).

Virtual field trips emphasize safety, convenience, and accessibility (Zickuhr, 2013). They eliminate the need for supervision and transportation, lowering safety hazards and allowing all students, including those with mobility issues, to participate in the learning process (Henderson & Ferdig, 2014; Hsu & Tsai, 2017). Virtual field trips (VFTs) also offer a variety of destination options to accommodate varied curriculum objectives and student interests (Pugsley et al., 2022). Virtual field trips (VFTs) provide a multimodal approach that engages auditory, visual, and kinesthetic

learners, promoting deeper understanding and memory retention (Harrington, Bledsoe, Jones, Miller, & Pring, 2021) and ensuring that all students can interact with the material in a way that resonates with them (Fitzsimons & Farren, 2016).

Moreover, virtual field trips (VFTs) prioritize inclusivity by accommodating students with disabilities or health issues (Feig, Atchison, Stokes, & Gilley, 2019). Customizable settings and alternate navigation options ensure that every student actively participates in the learning process (Feig et al., 2019). Virtual field trips (VFTs) also provide scheduling flexibility, allowing teachers to organize and incorporate them into the curriculum at times that best meet students' needs and lesson objectives (DeWitt, 2008). Given the circumstances, virtual field trips (VFTs) offer an engaging and dynamic method of instruction that improves students' comprehension of a variety of subjects and encourages participation, critical thinking, and diversity (Jones & Washko, 2021).

2.7 Challenges of Virtual Field Trips (VFTs)

Virtual field trips have evolved as a valuable tool for educators seeking to improve student learning, especially in disciplines like Social Studies, which encourage exploration and real-world experiences (DPCD, 2023). They allow students to visit remote regions virtually and apply their knowledge in real-world situations, consistent with inquiry-based instruction methods. Despite the benefits, incorporating virtual field trips into the curriculum presents multiple challenges for both teachers and students.

One significant challenge is technical issues, as virtual field trip programs need strong technology infrastructure, including appropriate devices, a high-speed internet connection, and technical support (Chiu, 2021). Connectivity challenges, software compatibility issues, and technological difficulties majorly disrupt the learning experience, compromising the effectiveness of virtual field trips (Lukes, 2014). Furthermore, developing interesting and instructional virtual field trip content that aligns with curriculum requirements and learning objectives is a challenging task

(Jacobson, 2009; Jones, 2021; Procter, 2012). The integration of virtual field trips into teaching practices is further complicated by the fact that teachers often lack the necessary assistance and training in content development and instructional strategies (Lei, 2015).

Maintaining student engagement during virtual field trips is yet another challenge, as students may struggle to concentrate in the absence of physical interaction and acute sensory stimuli provided by the real-world environment (Jacobson, 2009). Sustaining attention and engagement throughout the virtual experience might be further exacerbated in the absence of a guide or expert.

Assessing the effectiveness of virtual field trip programs and evaluating student learning outcomes tends to be more complicated. Thorough planning and assessment methods are needed to create suitable assessment tools, gauge student participation, and determine how virtual field trips affect academic performance. Furthermore, inconsistencies in students' access to technology and internet connectivity worsen the challenges of incorporating VFTs in the education curriculum, thereby limiting equal participation and learning results (Jacobson, 2009).

Resource constraints pose further challenges. Competing priorities within educational institutions, limited funds, and time limits can all impede the development and sustainability of virtual field trip programs (Taddeo, 2006). It can be difficult to secure funds for content creation, technological upgrades, and continued support. To overcome these challenges, effective collaboration, professional development, strategic planning, and continual assessment are necessary (Fitzsimons & Farren, 2016).

Virtual field trips (VFTs) are becoming more and more common in education because of all of their benefits (Pantelidis, 2010). By virtually taking students to historical sites, museums, and cultural landmarks that might not otherwise be accessible, they provide increased access to a variety of learning opportunities. Students gain a deeper understanding of a wider range of topics and viewpoints as a result of this exposure. VFTs ensure accessibility for all students by removing the

financial burden and allowing for the scheduling flexibility associated with traditional field trips (Cox & Su, 2004). Furthermore, VFTs provide a safe, regulated learning environment where students can concentrate on their studies, engage with multimedia resources to improve their learning outcomes and explore risky or expensive locations.

Students can access a vast range of educational resources through VFT that would not otherwise be available to them due to distance or inaccessibility, such as historical sites, museums, and cultural landmarks. Students gain a broader understanding of a variety of topics and viewpoints as a result of this exposure. According to Shahzad (2023), students can be introduced to a variety of locations through the use of VFT. Through immersive journeys, these virtual experiences allowed teachers to lead students in an interactive exploration of their surroundings. Learners may be benefited from the following ways that the incorporation of virtual strategies, like VFT, improves the educational experience and encourages active engagement.

2.8 Related Learning Theories

In simple terms, learning theories are ideas about how students learn, process, and retain knowledge and information. These theories of learning provide a variety of frameworks that teachers can integrate with the teaching and learning process to cater to students' diverse learning styles academic needs and preferences. Learning theories are not just helpful to students absorbing knowledge and information being taught but also help teachers manage students' behaviours. Thus, this allows teachers and educators to develop an inclusive and conducive atmosphere to learning both online and in traditional classrooms.

Each one of them is significantly different from the other. However, one common thing about all these theories is that they help to understand and explain the learning process so that teachers can adopt the most appropriate, effective, and efficient approaches accordingly. There are numerous learning theories, with new ones emerging while others becoming obsolete. Amongst many theories related to VFT in

teaching Social Studies, only a few common ones are addressed in this study. They are Ecological Constructivist, Experiential Learning, and Cognitive Theory of Multimedia Learning, are discussed in detail below.

2.8.1 Ecological Constructivist

Ecological constructivist learning theory is a branch of knowledge that describes the nature of human knowing, its methods, and limitations. The ecological constructivists, believe that the process of knowing and the idea of knowledge are entrenched in the different components of the ecological environment (Bronfenbrenner, 1990; Ehindero, 2006; Oswalt, 2008; Maslow & Nakamura, 2008 as cited in Obadiora, 2016). The principle of ecological constructivist is the belief that individual ecological environment and particular cultural patterns determine one's beliefs and value systems. This influence defines how an individual acts, decides, judges, thinks, and solves issues. In addition, Ecological constructivist is also concerned with the quality of an environment, widespread socio-cultural foundation, belief systems, language, norms, beliefs, values, education system, the schools, and their curricula as fundamental factors determining how and to what extent learners can construct their learning and meaning of learning (Ehindero, 2006).

There are two sources of knowledge for the learners through the Ecological constructivist learning theory: The first source is the knowledge acquisition from interaction with the environment by the learners. The person's reality and something the person believes in is influenced by language, culture, the physical environment, parents, friends, and people around. The second source of knowledge is school knowledge, which is someone else's interpretation of reality and the world (Bell, 1993). Ecological constructivist supports the implementation of VFT as emphasized in this study thereby believing that education should provide immense opportunities for students to develop their knowledge of the self and the world through socio-cultural settings. This is vital to give students more space and time to discover their personal realities, ideas, and knowledge with clarity and efficacy.

This research provides a deeper understanding of how the Ecological Constructivist Learning Theory supports the Virtual Field Trips (VFTs) strategy. Through VFT, students can engage in interactive learning activities and virtually travel to places they may not be able to visit physically. This virtual experience develops a sense of connection by allowing students to understand the background stories and values of these locations. Engaging in VFT activities encourages students to explore and learn more about these places, promoting a sense of belonging and involvement in real-life contexts. As a result, it helps students develop respect for these places and gain diverse perspectives on social, cultural, and environmental issues.

2.8.2 Experiential Learning

Experiential learning means that learners often participate in learning activities such as listening, reading, observing photographs, experiments, and outdoors. It was proposed by American psychologist Kolb (1939). He mentions the models of Dewey (1859), Lewinism (1890), and Piaget (1896) as background to his theory (Valentine & Cheney, 2001). According to Kolb's theory of experiential learning, learning is a process through which knowledge is obtained from an experience. It is an action-based process in which learners learn new knowledge based on evaluating real-life experiences. This experiential learning theory by Kolb is more holistic in approach and emphasizes experience, including perceptual, environmental, and emotional factors that are associated with the learning process (Arnold & Paulus, 2010).

Experiential learning theory consists of four phases of learning, such as Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation. The first phase is Concrete Experience. In this phase, you experience something new, open and unbiased. Learners learn through particular activities that are directly related to real-life situations. The second aspect is Reflective Observation. In this phase, learners reflect on activities through experience, discovery, meaning, sharing, analyzing, discussion, and agreement on systematic perception. It is necessary to evaluate and analyze the facts, of the experience, through the reflection of the experience for oneself. The third is Abstract Conceptualization. This phase creates

concepts that use observations into logical theories. Learners construct new ideas or knowledge based on existing concepts. Finally, in the Active Experimentation phase, learners use the theory or concept to build new learning-decision making and problem-solving (Mcleod, 2023). The following Figure 2.2 illustrates Kolb's Experiential learning cycle.

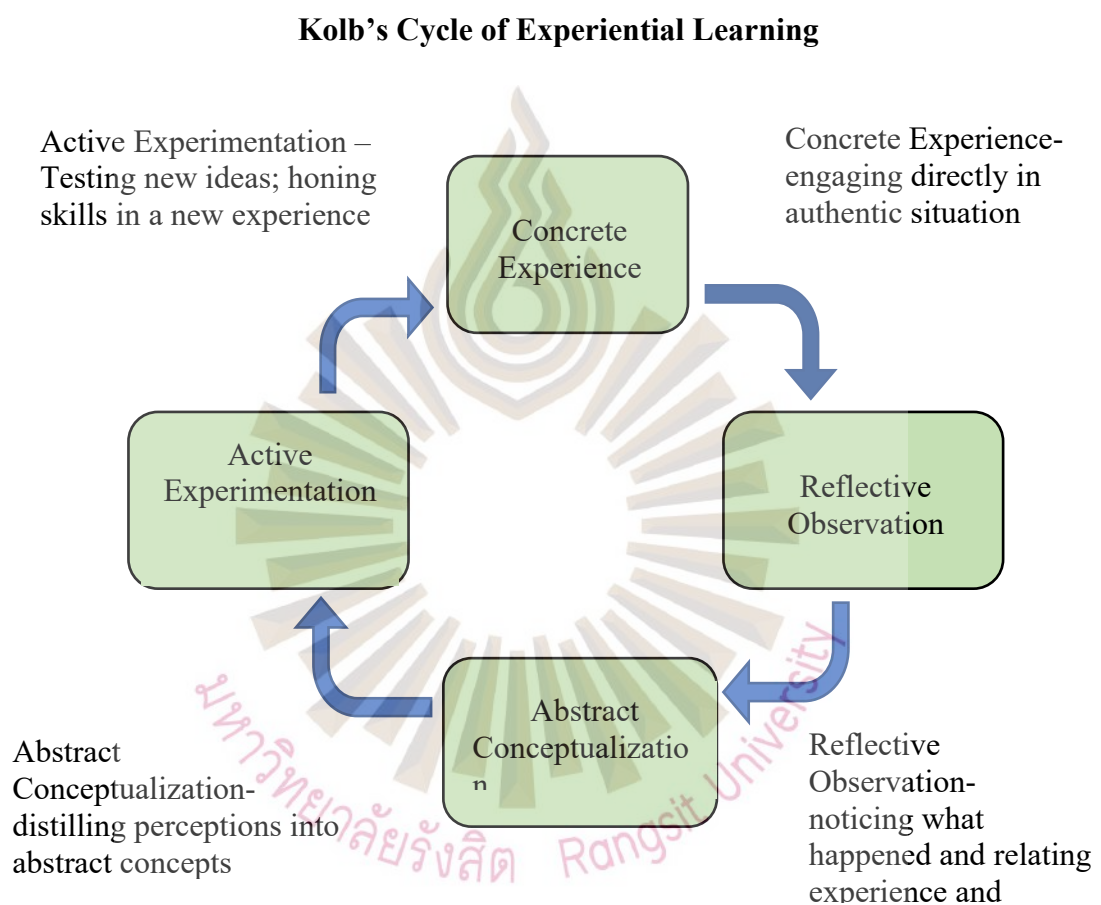


Figure 2.2 Kolb's Learning Styles and Experiential Learning Cycle

Source: Mcleod, 2023

A Virtual Field Trip which is also based on experiential learning theory provides students with first-hand experience, reflection, conceptualization, and experimentation. A VFT as experiential learning takes learners away from the traditional classroom setting to a new mode of learning environment. In simple terms, it can be taking students out on the school grounds or out-of-state excursions. This way, Field trip helps students expand their hands-on experiences, knowledge, and

value systems toward their life and the planet at large (Nabor, Ewards, & Murray, 2015). Kolb's experiential learning cycle was selected to guide the development of hands-on activity learning situations through the experiences of field trips. It promotes students' knowledge through first-hand experience, reflection, conceptualization, and experimentation which is therefore applicable to VFT activities (Randolph, 2013).

Experiential learning through VFT is one method where teachers can implement specific content into the curriculum and at the same time give students a different learning situation (Djonko-Moore & Josph, 2016). Learners develop a deeper connection to their heritage and a feeling of belonging when they understand the historical and cultural significance of sacred places. Through Virtual Field Trips (VFTs), they can deeply engage with and understand the importance of these locations. Furthermore, VFTs enable students to virtually explore, document, and create video blogs (Vlogs) about the sacred places they visit. This activity not only enriches their learning, but also allows them to share their insights and discoveries, helping others to understand and appreciate the cultural significance of these locations.

Besides improving academic achievement and learning environment, field trip also broadens their worldviews on cultural diversity and relate them to real-life experiences and situations. Experiential learning gives opportunities to create knowledge and link text knowledge to real-life situations. Furthermore, it assists students in developing confidence, building interpersonal relationships, and learning management skills to live meaningful life (Young, 2017).

2.8.3 Cognitive Theory of Multimedia Learning

The cognitive theory of multimedia learning was popularized by the work of Mayer and other cognitive researchers who believe that multimedia supports the way the human brain learns. They argue that people learn more deeply from words and pictures than from words alone, which is referred to as a multimedia principle. Multimedia is defined as the combination of text and pictures; and suggests that multimedia learning occurs through mental representation of these text and pictures.

The words can be spoken or written, and the pictures can be any form of graphical imagery, such as illustrations, photos, animation, or video (Soden, 2013). However, simply adding words to pictures is not an effective way to attain multimedia learning. The goal is to instructional media in the light of how the human brain works. This theory proposes three main assumptions when learning with multimedia (Mayer, 2002).

1) There are two different channels (auditory and visual) for processing information (sometimes referred to as dual coding theory).

2) Each channel has a limited (finite) capacity (similar to Sweller's notion of Cognitive load).

3) Learning is an active process of filtering, selecting, organizing, and integrating information based on prior knowledge.

At a time, humans can only process a small (finite) amount of information in a channel, and the incoming information makes sense through actively creating mental representations. Mayer (2002), mentions the role of three memory stores: sensory (which receives stimuli and stores them for a very short time), working (where we actively process information to create mental constructs (or 'schema'), and long-term (the repository of all things learned). Mayer's cognitive theory of multimedia learning says that the brain doesn't interpret multimedia presentation of words, pictures, and auditory information mutually; rather, these elements are organized to produce logical mental constructs.

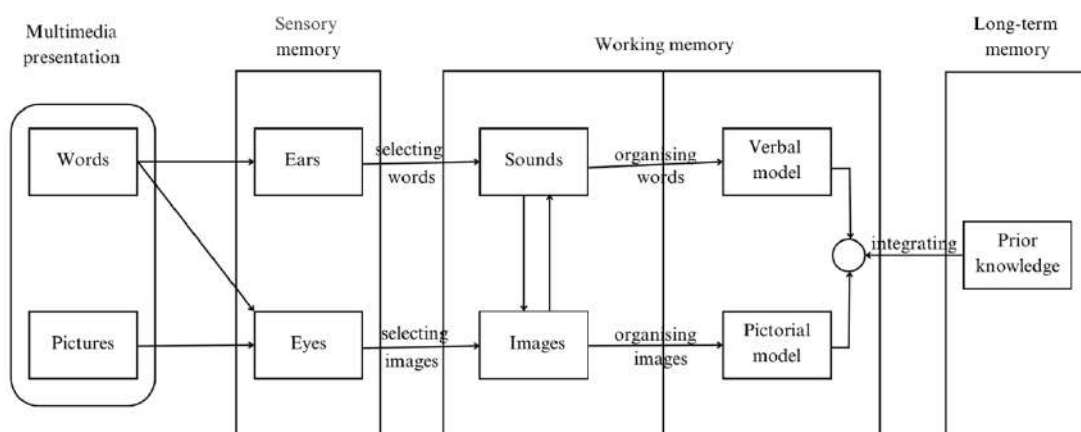


Figure 2.3 Mayer's Theory of Multimedia Learning Learning

Source: Mayer, 2010

The use of video is widely integrated in different schools around the world. It is used as one of the multimedia instructional tools for interactive learning mediums. The interactive session between the teacher and students would be enhanced after the multimedia tool (video) is used in the lessons. It allows the students to organize thoughts and communicate understandings through meaningful interaction. Moreover, the use of multimedia technology in the classroom helps improve students' motivation, engagement, and learning first-hand experiences. Therefore, teachers must be aware of how multimedia technology should be used in the classrooms (Anwar, Kahar, Rawi, Nurjanah., & Rosalina, 2020).

2.9 Related Research and Studies

There are numerous studies conducted by researchers around the world on the integration of VFT in subjects like Geography, Social Studies, Science, and History to different levels. The results of all these studies revealed that VFT was effective in teaching the above-mentioned subjects. Some of the recent findings on the integration of VFT are discussed below.

The study by Obadiaro (2016) employed the non-equivalent pre-test and post-test control group design. Two public schools were randomly selected for the study. Each of the two schools was randomly assigned either the VFT or Field Trip strategies. The two groups were taught the same topic but with different strategies (i.e. VFT and FT). The result revealed that students in the VFT did well in both pre-test (VFT mean: 6.03 and FT mean: 5.35) and post-test (VFT mean: 17.98 and FT Mean: 12.32) compared to the students in FT. Thus, VFT was more effective than FT on students' knowledge of Social Studies among Osun State Secondary Schools students.

Research conducted by Stinson (2001) found that VFT or virtual field experiences of grade 6 students' learning revealed that VFT provided several advantages to students' learning and the learning experiences of the students were as valuable as those who attended a museum in person.

Ferderbar (2013) carried out a quasi-experimental method to investigate the effectiveness of virtual field trips and in-nature experiences on pro-environmental attitudes and behaviors and environmental knowledge. One hundred and thirty-one K-8 school students were employed by using a survey questionnaire to collect the data. A comparative analysis was drawn from the pre-treatment and post-experience survey of environmental attitude and behavior. The study showed that there was a significant improvement in content knowledge and further, it helped improve students' positive environmental attitudes and behavior.

Haris and Osman (2015) conducted a mixed-method study with 60 students from one of the schools in the state of Selangor, Malaysia. The treatment group was taught using the VFT module and the control group was taught using conventional methods. The instrument used in the study was the formative test to measure students' achievement in the topic of Colonization and Succession in Mangrove Ecosystems designed by the researcher. The group of students who were taught using the VFT module showed the overall results of the post-test (mean=65.80 and SD=11 248) higher than the pretest (mean=26.73 and SD=16 438). Those students who were taught using the conventional method showed post-test scores (mean=29.00 and SD=16 871) higher than pretest scores (mean=20.60 and SD=12 574). Based on the findings, it was evident that the achievement of students taught using the VFT module was higher than the students taught using the conventional method. This is due to the usability and effectiveness of the VFT module used by the researcher in this study.

Kweku, Ato, and Takyiwaa (2022) study sought to inquire about the relevance of VFTs in the assessment of Social Studies lessons at Winneba Senior High School. As a result, the students expressed the view that VFTs have benefited them during the teaching and learning of Social Studies to have a clear understanding of the concepts discussed in the classroom. Moreover, teachers were also asked to express their views on how VFTs influence their teaching and evaluation of the subject. The result revealed that all teachers agreed that VFTs were – helpful in teaching the subject because it provided students with a real-life experience of whatever was taught in the classroom.

A total of 28 students in 10 groups took part in the Virtualized Virtual Field Trip (VVFT). It took them between 46 to 90 minutes. The guided interviews were used according to the research question, ‘What effects do VFTs have on learning especially from the perspective of the students?’ The study found that the VFT contributed to high-quality experiences, which stand out from the current teaching strategies as acknowledged by the students interviewed (Christian, Florian, Mario, & Heinrich, 2020).

Kennedy (2014) conducted a study on the benefit of a field trip using a qualitative approach in elementary schools in the south-eastern region of the United States. The study employed 5 pre-service teachers and 5 veteran teachers to share their views regarding previous experiences with field trips and their perception of the benefits of field trips. A thematic approach was used to analyze the data collected through interviews. The result showed that field trips were impactful on learning as students were exposed to different environments that enhanced their skills.

2.10 Conclusion

Many educators have turned to technology to overcome difficulties imposed by traditional field trips. Through technology, teachers can provide students with new experiences, such as connecting with people and places through video conferencing or using the internet to access websites. VFTs allow teachers to provide opportunities for students within their controlled environment and remove many logistical factors from the experience for both teachers and students. Moreover, they can also offer access to locations that otherwise would be difficult to visit on traditional field trips.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter outlines the overall plan for conducting the study, including the methods and procedures to be used. It includes research design, research instrument, participants, validity and reliability of research instruments, data collection procedure, and data analysis of the study.

3.1 Research Design

The researcher used a quasi-experimental design that integrates quantitative and qualitative methodologies to provide a comprehensive approach to the study. According to Dawadi, Shrestha, & Giri, (2021), research using mixed methods, which is popular in modern times, provides a thorough way to look into research questions by combining data from both qualitative and quantitative sources. Additionally, Damyanov (2023) states that this approach allows for a more thorough investigation, tackling complex research questions that neither qualitative nor quantitative research can fully address on its own. Researchers can develop a more comprehensive understanding of their research topic and produce richer, more nuanced findings by combining the strengths of both approaches. Poth and Munce (2020) assert that a mixed-methods design, which combines multiple data sources, offers significant advantages over a single method in providing comprehensive insights into research phenomena that may be difficult to understand through qualitative or quantitative approaches. Furthermore, Small (2011) supports this strategy by integrating qualitative and quantitative methods to provide a comprehensive understanding of a research topic, improving the validity and reliability of the findings.

The researcher used a quasi-experimental design to study the effectiveness of VFT in grade 6 Bhutanese students. Consequently, the researcher aimed to study the learning achievements and learning satisfaction through the topic ‘Sacred Places of Bhutan’ under the History, Civics, and Cultural strand in Social Studies using VFT.

To gather quantitative data from research participants before and after their virtual field trip experience, the researcher conducted pretest and posttest respectively. The pretest gathered quantitative data, while the posttest collected quantitative data through semi-structured interviews. Semi-structured interviews were used to determine the learners’ satisfaction and achievements after using the VFTs method. The research design for the study is shown in Figure 3.1 below.

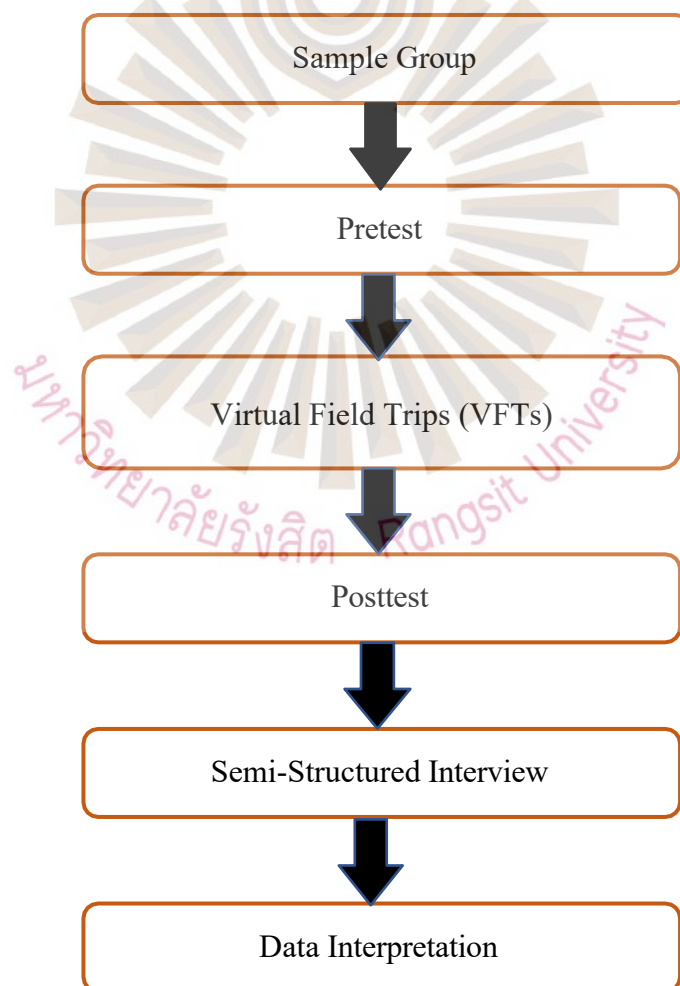


Figure 3.1 Illustration of Research Design

3.2 Location of The Study

This research was carried out in one of the Higher Secondary Schools located in the Western part of Bhutan in Thimphu. The school is located about 6 kilometers north of Thimphu at a rise of about 2500 meters. The school was initially established in the year 1960 with a small number of students. The school consists of grades ranging from grade 4 to grade 12. As of March 2024, the school had 1397 students enrolled and 79 teachers in total.

3.3 Population and Sample

The researcher decided to use a limited population for their study, as the research school includes 7 sections of 30 students in each class, making a total of 210 students. To obtain the best possible results, the researcher planned to use clustered random sampling to select one section of 30 students as research participants. The approach ensured that the study was representative of the population under investigation. The age range of the individuals in question was between 11 and 14 years. Table 3.1 presents the details with numerical data research of the research participants.

Table 3.1 Demographic profile of the research participants

Gender	Male	Female	Total
Number of the students	15	15	30
Age group	11- 14	11- 14	

3.4 Research Instruments

A research instrument is a tool used to gather or measure information about a research variable. It is important to have a valid instrument that is consistent and appropriate for obtaining accurate data about research outcomes. This is essential for drawing conclusions that reflect the actual circumstances (Yusup, 2018). The

researcher combined qualitative and quantitative data to evaluate information. Qualitative data explored student perceptions, while quantitative data allowed for statistical analysis. To get authentic information, the researcher integrated these sources with lesson plans to provide a comprehensive view of teaching effectiveness. Using both types of tools aimed to improve research outcomes. The instruments used for data collection included lesson plan, pretest and posttest (achievement test), and semi-structured interview. Achievement tests were conducted before and after the intervention and a semi-structured interview was carried out after the post-test for qualitative insights.

Table 3.2 Framework of the Lesson Plan

Week	Topic: Sacred Place	Activities	Method
I	Virtual Trip to Dechenphug Lhakhang	-Travel virtually using the pre-recorded video of Dechenphug Lhakhang to explore the background story and know the significant spiritual values. -Read the handout, discuss, and express their ideas through creative representation.	-Watching pre-recorded video followed by discussion and presentation
II	Virtual Field Trip/ live video conference to Dodeydrak Monastery	-Live video conference/ Virtual Field Trip to Dodeydrak Monastery with the lam (monk) and tour guide. -Question, answer session with the lam -Students explain the significant spiritual values of sacred places and explore ways to preserve them.	-Live video conference followed by question answer session and expressing their views and thoughts.

Table 3.2 Framework of the Lesson Plan (Cont.)

Week	Topic: Sacred Place	Activities	Method
III	Virtual Field Trip to Samtengang Lake	-Live video conference/ Virtual Trip to Samtengang Lake with local people/ local leader (Gup) -Interview with local people. -Discuss in team and do the presentation.	Virtual trip/ live video conference followed by interviewing, discussion and presentation.
IV	Travel virtually through the lens of an experts.	-Interact by sharing his experience -Students ask questions/inquire regarding the recorded video. -Students shares their thoughts. - Group presentation on chosen sacred place and take the class on a virtual trip.	Interaction with experts followed by sharing their thoughts, questioning and group presentation virtually.

3.4.1 Lesson Plans

Hall (2019) highlighted that lesson plans play an important role in structuring and organizing content, as well as in selecting suitable activities and materials. Further, Farhang, Hashemi, and Ghorianfar (2023) supports that lesson plans are crucial for achieving set objectives and providing a more thorough summary of key points.

The researcher prepared 4 lesson plans of 90 minutes each, and 1 lesson plan as 2 sessions. to teach Social Studies to grade 6 Bhutanese students on the topic “Sacred Places of Bhutan” using a virtual field trip strategy. The researcher implemented the lessons using virtual trips through pre-recorded videos and the expertise of professionals, as well as live video streaming to connect with the world, explore, and learn about cultures and historical places without leaving the classroom. This approach made learning memorable, enriching, and effective.

3.4.2 Quantitative Data Collection Instrument

3.4.2.1 Learning Achievement Test

The researcher developed 10 multiple-choice questions (10 marks), 5 True or False questions (5 marks), and five short answer questions (5 marks) on the topic of Sacred places of Bhutan based on the requirements of the Bhutanese Education framework established by Royal Education (REC) and Bhutan Council of School Examination (BCSE), which follows Bloom's Taxonomy. To compare the students' learning achievements before and after the intervention, a learning achievement test (pretest and posttest) was carried out. Pretest was conducted before receiving the intervention, and the same group of students carried out the posttest after the intervention.

3.4.3 Qualitative Instruments

3.4.3.1 Semi-Structured Interview

According to Kurkowska-Budzan, Soroko, and Stasiak (2021), a semi-structured interview is a qualitative research method used to gain in-depth insight into a respondent's feelings and perspectives on a particular issue. As a result, semi-structured interview were useful for getting a thorough knowledge of a particular topic taught. The researcher conducted semi-structured, face to face interview to gather information about the application of virtual field trips after the intervention. The aim was to examine the participants' learning satisfaction with the approaches. The semi-structured interview consisted of five questions (refer Appendix F for the interview questions). For the convenience of the participants and to accommodate time constraints, the interview sessions were conducted in groups of 6, with 5 members in each group, for a duration of 5 to 6 minutes. Individual students who wished to share their opinions about the use of VFTs were encouraged to do so during break times. Participants had the option to respond in either Dzongkha or English. The researcher recorded their responses on audio for subsequent translation into English. The data

obtained from these semi-structured interview were then analyzed using thematic analysis.

3.5 Validity and Reliability of Research Instruments

3.5.1 Content Validity

According to Piemontese et al. (2022), described the term "validity" as how well an assessment tool captures the various aspects of the subject matter it is intended to assess. The reliability of the study tools, lesson plans, test items, and semi-structured interview questions were validated by three professionals: a professor from Rangsit University in Thailand and two seasoned Social Studies teachers from Bhutan. The validity of the instruments was done using the Item Objective Congruence Index (IOC). The researchers calculated the Item Objective Congruence (IOC) of the instruments to determine if the items align with the learning objectives. The criteria for validating the IOC index range from -1 to +1 as mentioned below:

- 1) A score of +1 indicates that the items are congruent with the research objectives.
- 2) A score of 0 signifies improbability regarding the alignment of the items with the research objectives.
- 3) While -1 indicates that the items are irrelevant to the objectives.

IOC was calculated by applying the following formula: $IOC = \sum(r/n)$, where 'n' is the total number of experts and 'r' is the score, each expert provided. Test items were considered accurate and acceptable if their values fall between 0.67 and 1.00. On the other hand, values less than 0.67 indicated that the items need to be rephrased as per the experts' recommendations and comments.

All the research instruments were validated by three experts using the Item-Objective Congruence (IOC) method, as discussed below.

- 1) The experts rated all four lesson plans with a +1, indicating that

the items were consistent with the research objectives. Therefore, all items were validated for use in the study (refer Appendix C)

2) The experts rated all test questions as +1 in IOC, indicating congruence and validity for both pretest and posttest (refer Appendix E).

3) The IOC for the semi-structured interview was above 0.67 which confirmed that the items were valid for the study (refer Appendix G).

Accordingly, all the instruments used for data collection were considered valid and reliable according to the research objectives.

3.5.2 Reliability

Middleton (2023) stated, if the same outcome can be consistently obtained using the same procedures under the same circumstances, the measurement is regarded as reliable. To check the reliability of the achievement test, the researcher conducted a pilot test consisting of 10 marks for multiple choice questions, 5 marks for true or false, and 5 marks for short answer questions with 30 students of grade 7 students from the same school. The researcher used Kuder- Richardson formula (KR-20) to find out the reliability coefficient of the learning outcome of the test. The KR-20 coefficient needed to be 0.70 or higher for the instruments to be considered reliable. The KR-20 coefficient obtained was 0.76 (refer Appendix J for the Reliability Test Report) which was greater than 0.70. Thus, the coefficient of 0.76 showed that the test items were reliable.

3.6 Data Collection Procedures

According to Bhandari (2022), the process of gathering observations or measurements through a systematic approach is called data collection. It enabled researchers to get original insights and first hand knowledge about their research problem. To collect data, the researcher followed the following procedures:

3.6.1 Ethical Consideration

3.6.1.1 Approval

The researcher got approval from the Research and Development Institute of Rangsit University. Before starting with the data collection, the researcher obtained consent from various authorities, including the Ministry of Education and Skill Development (MoESD) in Bhutan with reference number DSE/SLCD (05)2024/508, the school Principal, the Head of the Department of Humanities, and the relevant subject teacher. Since most of the research participants were under 18 years old, the researcher made sure that each participant's parents read and understood the consent letter before signing it. This step helped minimize any potential violation of the participants' rights throughout the study.

3.6.1.2 Anonymity and Confidentiality of the Participants

Throughout the study, the specifics, perspectives, and opinions of the research participants will be kept private and anonymous through the use of numbers. Research participants were referred to as students code number (student 1), student code number 2 (student 2), and so on to protect confidentiality.

3.7 Data Analysis

The researcher analyzed the collected data in two areas, in line with two research objectives. The first data set was analyzed based on the participants' learning achievement, while the second one was based on their learning satisfaction. To collect the quantitative data, the researcher conducted a pretest and posttest for the students. Additionally, the qualitative data for learning satisfaction were collected through semi-structured interview.

3.7.1 Analysis of students' Learning Achievement

To find out how well students were learning Social Studies, the researcher used VFT approach and conducted pretest before interventions, followed by posttest. The data was analyzed using appropriate software, with a paired sample T-test applied to determine if there was a significant difference between the pretest and posttest scores. The analysis focused on the mean, standard deviation, and significance value, which was expected to be below ($p < .05$)

3.7.2 Analysis of Students' Learning Satisfaction

The study used a mix-methodologies, such as semi-structured interview, to comprehend students' learning satisfaction with the use of the VFT approach in Social Studies. According to (Kiger & Varpio, 2020), thematic analysis is a suitable approach for interpreting experiences, thoughts, or behaviors across a data set by actively constructing patterns or meanings that address a research question, rather than just summarizing or categorizing codes. Additionally, Schreiber and Asner-Self (2011), mentioned that content/ thematic analysis is used to identify themes from data gathered through various tools. Thus, the researcher recorded and transcribed the interview to English to understand the students' learning satisfaction. Themes and patterns were then established through coding, utilizing the thematic analysis approach, to assess the collected data from these interview.

CHAPTER 4

RESULT AND DATA ANALYSIS

In this chapter, the researcher presents the findings of a study on the effectiveness of virtual field trips on the learning achievement of grade 6 Bhutanese students in Social Studies. The study aimed to determine the effectiveness of using virtual field trips to teach the concept of the Sacred Places of Bhutan within the History, Civics, and Cultural strands. The learning achievement tests were administered to the target group before and after the intervention to assess the student's learning achievement and learning satisfaction. The research utilized the following instruments for data analysis: Pretest, Posttest, and Semi-Structured Interview. Quantitative data was collected through pretest and posttest to address Research Question One. Qualitative data for Research Question Two was obtained through a Semi-Structured Interview and analyzed thematically. In this chapter, the findings from the data are discussed as follows:

- 4.1 Analysis of Students' Learning Achievement (Quantitative Data Analysis)
- 4.2 Analysis of Students' Learning Satisfaction (Qualitative Data Analysis)

4.1 Analysis of Students' Learning Achievement (Quantitative Data Analysis)

The study analyzed the results of pretest and posttest to determine whether using Virtual Field Trips (VFTs) improved the learning achievement of grade 6 students in a Bhutanese classroom. A total of 30 students took pretest and posttest, including 10 multiple-choice questions, 5 true-false questions, and 3 short answer questions. To examine the effectiveness of using VFTs, the researchers compared the students' scores before and after the intervention using a paired sample t-test. Mean, standard deviation, and significance level (p-value) were compared.

4.1.1 Pretest and Posttest Comparison

The achievement of grade 6 Bhutanese students before and after the intervention was compared using data from the pretest and post-test scores, as shown in Table 4.1. The table presents the findings of the descriptive /statistical analysis for the achievement test results for the target group. The pretest and posttest scores were 11.35 and 15.02, respectively. The data shown in Table 4.1 indicates a mean difference of 3.67 between the post-test mean scores. The substantial mean score of the post-test shows the effectiveness of Virtual Field Trips (VFTs). Furthermore, the p-value was .01, which is below the significance value of .05 ($P < .05$). This p-value of .01 indicates a significant statistical increase in the posttest scores compared to the pretest scores. These showed that VFTs are among the most effective teaching methods for enhancing students' learning achievement.

Table 4.1 Sample T-test Analysis

Group	Pretest		Posttest		Mean Difference	t	P-Value
	\bar{x}	SD	\bar{x}	SD			
Sample Group	11.35	2.77	15.02	1.90	15.02 – 11.35 = 3.67	-8.546	.000
Significance level (p): < 0.05-Significant							

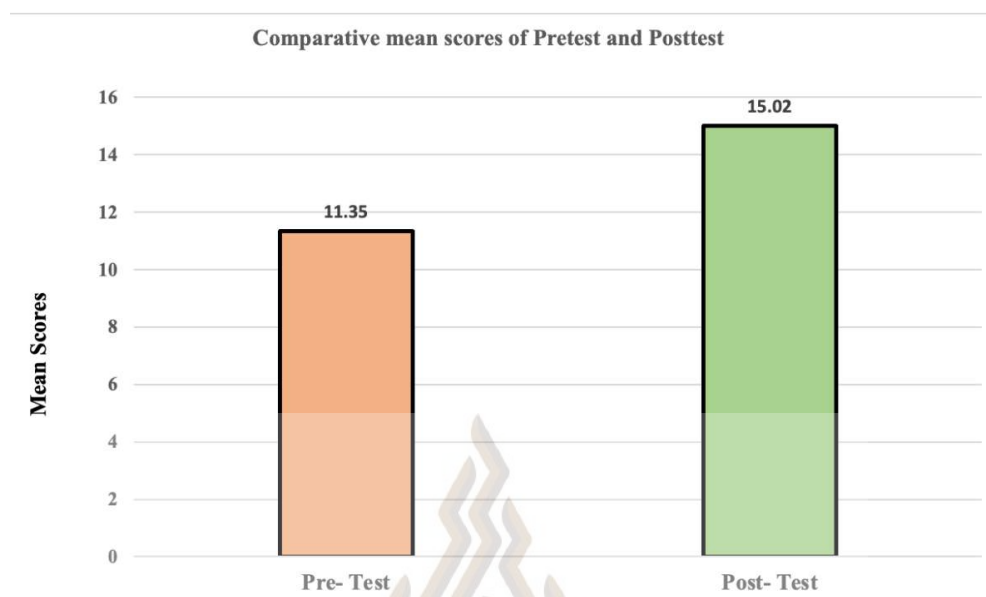


Figure 4.1 Graphical representation of pretest and posttest means

Figure 4.1 The mean scores for the pretest and posttest were 11.35 and 15.02, respectively. The post-test's mean scores were higher than the pretest, showing that the intervention improved the students' academic achievement. These scores indicated the success of the intervention in using Virtual Field Trips (VFTs) to enhance the academic performance of grade 6 Bhutanese students in Social Studies. Therefore, the result showed that the first research question led to a positive outcome, supporting the first research objective and hypothesis.

Table 4.2 Score difference between pretest and posttest

Student code	Pretest Score (20)	Posttest Score (20)	Improved Score
01	9.5	18	8.5
02	13.5	15	1.5
03	12	17.5	5.5
04	10.5	13	2.5
05	7.5	14.5	7
06	12	12.5	0.5

Table 4.2 Score difference between pretest and posttest (Cont.)

Student code	Pretest Score (20)	Posttest Score (20)	Improved Score
07	13	15.5	2.5
08	9.5	14.5	5
09	10.5	12.5	2
10	14.5	14.5	0
11	14.5	15	0.5
12	8.5	11.5	3
13	13.5	13.5	0
14	8.5	13.5	5
15	11	16	5
16	12	16.5	4.5
17	10.5	16	5.5
18	13	16.5	3.5
19	15	16	1
20	15.5	17.5	2
21	9	14.5	5.5
22	8.5	11.5	3
23	8.5	15.5	7
24	7	12	5
25	14.5	17	2.5
26	12	13	1
27	16	18	2
28	5.5	15	9.5
29	13.5	16	2.5
30	11	15	4

Table 4.2 is provided to enhance the descriptive statistical analysis results and thoroughly understand how each student's scores progressed from the pretest to the posttest. Research participant- student code 28 showed the most improvement, scoring 9.5 marks higher in the posttest than in the pretest. On the other hand, participants 10 and 13 showed no progress at all scoring equal score on both the pretest and the posttest.

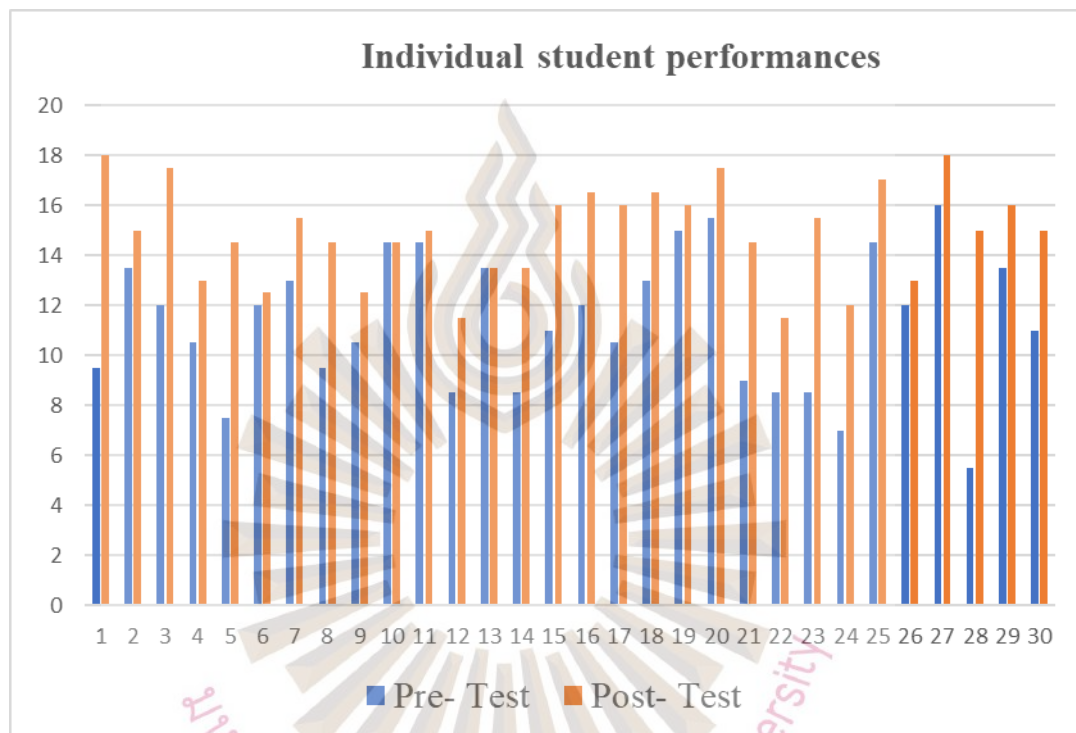


Figure 4.2 Comparative graphical representation of individual student learning achievement scores in Pretest and Posttest

Figure 4.2, shows the individual student's learning achievement scores in the pretest and posttest. The blue line represents the marks obtained by individual students from the pretest, and the orange line represents the posttest scores. The highest marks obtained in the pretest and posttest were 16 and 18 respectively. While the lowest possible score was 0 in both tests, these were excluded from the analysis to focus on more representative data. As a result, the lowest scores considered were 5.5 for the pretest and 11.5 for the posttest. The graphical presentation shows that 28 participants scored higher in the post-test, while 2 had equal scores on both tests after the intervention of virtual field trips (VFTs).

4.2 Analysis of Students' Learning Satisfaction (Qualitative Data Analysis)

To address the second research objective, semi-structured interview were conducted to obtain qualitative data. The study aimed to evaluate the learning satisfaction of grade 6 Bhutanese students in Social Studies using virtual field trips (VFTs). During the interview, the researcher asked five open- ended questions to explore the students' satisfaction using virtual field trips (VFTs) in their lessons.

The researcher interviewed the research participants at the end of the intervention. The students were identified using the same codes used during the pretest and posttest to maintain their privacy. They were given the freedom to express their views in any language they preferred, and most chose to speak in Dzongkha, the national language of Bhutan. The sessions were recorded, translated into English, and transcribed for analysis. Due to time constraints and for the convenience of the research participants, the interview sessions were conducted in groups of 6 with 5 members in each group for a duration of 5 to 6 minutes.

Thematic analysis was then employed to examine the data and conclude how these virtual field trip methods improved the students' learning experiences and satisfaction. The data were analyzed and organized under 5 themes based on the student's experiences, feelings, and insights.: 1) Virtual Adventures 2) Memorable Learning Experiences 3) Deepening Historical and Cultural Insights 4) Discovering New Passions, and 5) Reform in Learning. The majority of students responded positively to using VFTs to learn Social Studies.

4.2.1 Virtual Adventures

The students' reactions during the interview about virtual adventures showed a shared feeling of excitement and involvement. They explained that the experience was like going on an adventure, highlighting how it felt as if they were in a movie while learning about historical sites. The use of virtual field trips in Social Studies made them feel like they were traveling and exploring sacred places, providing a sense

of journeying when physical travel was not possible. Overall, the students valued the immersive learning experience, which combined educational content with the excitement of virtual exploration.

"For me, it felt like an adventure, like a trip. And it felt like a movie also. Because it was like we were learning about histories and a lot more about Dechenphug and Dodeydrak. And there are some lakes also." (Student 05, Group 3, personal communication, June 5, 2024)

"After using the virtual field trip approach, it looks like I am learning history and traveling the sacred places in Bhutan." (Student 09, Group 2, personal communication, June 5, 2024)

"After using the virtual field trip approach in Social Studies, I feel like I'm learning the history and traveling the sacred places in Bhutan. And also felt like we were on a journey." (Student 16, Group 1, personal communication, June 5, 2024)

"I felt like learning about the history and traveling places in Bhutan after using the virtual field trip. And felt like I'm on a journey where I couldn't go physically." (Student 18, Group 4, personal communication, June 5, 2024)

"I feel like I am traveling the places after having the virtual field trip approach in social study and I feel like I am on a journey." (Student 25, Group 5, personal communication, June 5, 2024)

4.2.2 Memorable Learning Experiences

Incorporating Virtual Field Trips (VFTs) in Social Studies offered several benefits: it improved learning and teamwork through interactive activities. Students gained valuable experience using technology to research and present on sacred places, which they found engaging and enriching. Combining virtual and physical trips further

enriched the learning experience. This approach also deepened cultural and traditional understanding and provided interesting educational experiences. During the interview, the following question was asked to evaluate their learning experience.

How did the Virtual field trip benefit your learning?

"After going virtually, we could display our understanding through drama, doing group work, discussing in the group made us realize the importance of teamwork and sacred places." (Student 01, Group 1, personal communication, June 6, 2024)

"I liked displaying our group work and participating in gallery walk, writing feedback, giving suggestions or good remarks on our work. It encouraged us to do better next time." (Student 07, Group 3, personal communication, June 6, 2024)

"We were asked to do research on the chosen sacred place, prepare a presentation, and do the presentation virtually in the lab. It was so interesting to use a laptop, browse on our own, and do the presentation. It was our first time doing such activities. I'm thankful to madam for giving us this opportunity." (Student 29, Group 2, personal communication, June 6, 2024)

"I have one suggestion if mam could request other teachers to use virtual field trips and take to ICT lab frequently so that our learning would be fun." (Student 23, Group 4, personal communication, June 6, 2024)

"I have one feedback to visit nearby sacred places (Nye) so that we can understand and take us to far away sacred places virtually so we know many sacred places." (Student 13, Group 5, personal communication, June 6, 2024)

"It would be better if students from classes 4 to 6 are taught using VFT and take students virtually so the lesson will be interesting, will learn better and

will know about our culture and tradition of sacred places and will know the value of each sacred place." (Student 18, Group 6, personal communication, June 6, 2024)

4.2.3 Deepening Historical and Cultural Insights

During the interview, the students emphasized that they gained a better understanding of cultural and historical aspects. They acquired new insights into sacred places, traditions, and cultural norms through virtual field trips, significantly enhancing their comprehension. Exploring these sites virtually allowed them to explore each place's history, narratives, and ethical values. They particularly appreciated learning about the origins and significance of the sacred places, noting the captivating stories and meaningful beliefs they discovered. Their virtual exploration provided valuable lessons on the history and cultural importance of these sites. Interactions with local leaders further deepened their knowledge, as they received detailed explanations and had their questions answered, enhancing their overall appreciation and understanding of these cultural landmarks.

"We got new knowledge about sacred places, traditions, and culture. We could understand much better after using the virtual field approach." (Student 14, Group 6, personal communication, June 5, 2024)

"We could learn and know about our history, culture, values, and traditions of our sacred places. We knew the backstory of that particular sacred place." (Student 04, Group 5, personal communication, June 6, 2024)

"Learned about history and could reach the place where we won't be able to go." (Student 12, Group 4, personal communication, June 6, 2024)

"I love the story of the Dechenphug Lhakhang and Dodeydrak Monastery. Because it has an interesting story like how it got its name and the beliefs. And it

has good values and story also." (Student 21, Group 3, personal communication, June 6, 2024)

"From all the lessons, I liked the Samtengang Lake because the story was very interesting and gave us a big lesson about Samtengang Lake. And the local leader (Gup) was kind enough to tell the detail story by showing the lake and answered our doubts and questions that we asked him." (Student 03, Group 1, personal communication, June 6, 2024)

4.2.4 Discovering New Passions

During the interviews, students shared that virtual field trips (VFTs) kindled a new found passion for learning. They were able to explore, document, and create vlogs of both well-known and less-visited places. These experiences heightened their interest in history and Social Studies, making these subjects more engaging and dynamic compared to traditional methods. Students valued the chance to virtually explore inaccessible sacred places in Bhutan, which broadened their perspectives and cultural understanding. Their interactions with local people, monks, and guest speakers enriched their learning, sparking curiosity about geography, anthropology, and cultural studies. Moreover, creating vlogs helped them develop technology, storytelling, and media production skills, influencing their academic interests and career aspirations.

"It did change because I love histories, I love the story of the Dechenphug. Because it has an interesting story. And it has good values and story also." (Student 02, Group 1, personal communication, June 6, 2024)

"After virtually experiencing it, I want to explore more of our country's sacred places and natural wonders." (Student 30, Group 6, personal communication, June 6, 2024)

"I think my interest in social study grew much after the virtual field trip because they told us about the sacred place in Bhutan." (Student 11, Group 2, personal communication, June 6, 2024)

"Yes, it did change our perception because till now, we didn't understand much as teachers always teach from text book but now because of the virtual field trip, we could understand better and the learning was much better." (Student 19, Group 3, personal communication, June 7, 2024)

"My perception grew much after the virtual field trip approach in Social Studies because they took us to the sacred places of Bhutan which wouldn't be possible without VFT." (Student 06, Group 5, personal communication, June 7, 2024)

"To be frank, I didn't have much interest in Social Studies because we didn't know or learn about the history of the sacred places of our country. We were taught more about the other world but because of the virtual field trip we could know more about our places and interviewing the local people, lam (monk), and guest speakers or experts was very interesting." (Student 08, Group 6, personal communication, June 7, 2024)

"I found a new interest in me for learning. I'll record a video when I go to sacred places and upload in my page by telling the value and the story of that place which might help people to know the beautiful story of that place especially to people who can't walk." (Student 12, Group 5, personal communication, June 6, 2024)

4.2.5 Reform in Learning

During the interview, students highlighted that virtual field trips brought about innovative changes in their learning experience. By replacing traditional teaching methods with immersive virtual experiences (VFTs), students were able to

explore the world at their convenience and from any location. They found this new learning approach (VFTs) interesting and recommended a combination of in-person and virtual visits for a more comprehensive learning experience. The VFTs imparted important knowledge about respectful behavior in culturally significant locations like sacred places. Overall, they felt that VFTs made learning more engaging and accessible without requiring changes to the already effective Social Studies curriculum.

"The virtual field trip gave me tips about what to do and what not to do if we ever visit a sacred place like Jhomolhari mountain." (Student 10, Group 6, personal communication, June 7, 2024)

"The virtual field trip gave me tips about what to do and what not to do if we ever visit sacred places." (Student 14, Group 2, personal communication, June 7, 2024)

"Till now, we didn't understand much as teacher always teach from text book and never went out to experience the sacred place but now we can travel to the world virtually because of the virtual field trip." (Student 20, Group 4, personal communication, June 7, 2024)

"We can learn anytime or anywhere virtually." (Student 15, Group 3, personal communication, June 7, 2024)

The students' responses highlighted their clear appreciation and enjoyment of learning through virtual field trips (VFTs). The students were highly engaged and motivated by these virtual experiences, which included interactions with local people, local leaders, lam (monk), and exchanges with experts. These methods facilitated exploration, allowing students to embark on virtual adventures and embrace innovative changes in teaching and learning. This approach created memorable learning experiences and deepened their historical and cultural insights, inspiring new passions through collaborative efforts. It contributed to a positive learning

environment and enriched their understanding of various places and values. Additionally, these methods lifted students' confidence by enabling them to apply learned values in real-world scenarios during visits to sacred places. Overall, the integration of VFTs not only improved academic performance but also significantly increased student satisfaction and engagement in their studies.

The majority of research participants expressed excitement about learning Social Studies through the VFTs teaching approach. Data collected from student group interview indicated that VFTs were considered a fun and engaging method for teaching and learning Social Studies. A thorough analysis of the focus group interview indicated that most learners enjoyed virtual learning.

The researcher concluded that incorporating virtual field trips (VFTs) into Social Studies instruction has not only enhanced learning achievement but also positively influenced students' satisfaction with their learning. This, in turn, is directly linked to the improvement of students' overall academic performance.



CHAPTER 5

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

This chapter describes the use of achievement tests and semi-structured interview to collect both quantitative and qualitative data. It included a detailed analysis of the results, evaluating how effectively the research objectives and questions were addressed. It summarizes the results, examines the findings, and concluded with recommendations for improving practice and suggestions for future research. The chapter is organized into three main sections:

- 5.1 Conclusion
- 5.2 Discussion
- 5.3 Recommendations

5.1 Conclusion

The researcher addressed the main goal of the research and provided a background for the subsequent analysis, supporting the research objectives by addressing the two research questions.

- 1) Would there be improvement in grade 6 Bhutanese student's learning achievement in Social Studies after using virtual field trips?
- 2) Would there be learning satisfaction after using virtual field trips in teaching and learning Social Studies?

The study collected data using pretest and posttest results from learning achievement tests to evaluate learning outcomes. Additionally, semi-structured interviews were conducted to determine satisfaction levels with the learning process. This approach provided both quantitative and qualitative information to address the research questions.

5.1.1 The Result of Learning Achievement Test (Test Score Analysis)

The main aim of this study was to examine whether using Virtual Field Trips (VFTs) as a teaching method would improve the learning outcomes of grade 6 students in Bhutan. To examine this, a learning achievement test was conducted with the target group both before and after using the VFTs method to teach the topic "SACRED PLACES OF BHUTAN" in the History, Civics, and Culture strand of grade 6 Social Studies. This test aimed to achieve the first research objective.

A paired sample t-test was conducted to assess the differences in achievement levels between the pretest and posttest within the target group. The mean score for the pretest was 11.35, while the mean score for the posttest was 15.02 indicating an average increase of 3.67 points. As shown in Table 4.1 in Chapter 4, the analysis revealed that the posttest mean score was higher than the pretest mean score.

The significance value (.01) indicated that the sample group's posttest scores were higher than their pretest scores, except for two students (student code numbers 10 and 13). Despite no measurable improvement in scores, these two students expressed enjoyment and increased engagement during semi-structured interview. They stated, "I want to explore more of our country's sacred sites, learn about history, and visit places I wouldn't otherwise be able to go after virtually experiencing the journey and felt like I was traveling to these places." Although VFTs significantly enhanced student engagement and enthusiasm, the study found that this did not always translate to improved test scores, and engagement does not immediately translate to better retention. This could be due to individual learning styles, a slower adaptation to new approaches, or extrinsic factors such as test anxiety and personal circumstances. To motivate or improve their test score or the learning style, use Kahoot (fun, game type) to overcome the extrinsic (anxiety) while conducting test.

Furthermore, the test may have yet to accurately assess the conceptual and experiential knowledge gained from VFTs. Overall, students' favorable feedback supported that VFTs can increase learning satisfaction and interest in Social Studies.

However, further study is needed to determine an effective strategy for incorporating VFTs into the curriculum and to analyze their influence on academic performance.

Overall, the study found that participants performed better and achieved higher scores on the posttest compared to the pretest. The data analysis showed that incorporating the Virtual Field Trips (VFTs) teaching strategy guided to a significant improvement in post-test scores. This was indicated by the statistics of the mean, standard deviation, and significance value calculated using the paired sample t-test. As a result, the Virtual Field Trips (VFTs) strategy has proven to be an effective method for teaching Social Studies, significantly improving the learning outcomes of grade 6 Bhutanese students.

5.1.2 The Result of Semi-Structured Interviews

The focus of the second research question was to study the satisfaction of grade 6 Bhutanese students with their learning after using virtual field trips (VFTs) in Social Studies. Qualitative data was collected through interview with the research participants. Thematic analysis was used to analyze the data by transcribing, interpreting, and thematically analyzing the focus group interview data. The researcher identified 5 themes to categorize and assess the participants' responses: 1) Virtual Adventures, 2) Memorable Learning Experiences, 3) Deepening Historical and Cultural Insights, 4) Discovering New Passions, and 5) Reform in Learning.

The interview results showed that the students were passionate and motivated to learn Social Studies using the Virtual Field Trips (VFTs) instructional approach. The researcher concluded that participants exhibited significant learning satisfaction when the Virtual Field Trips (VFTs) approach was executed. Most participants appreciated the virtual adventures, which allowed them to explore Bhutan's sacred places and deepen their historical and cultural values through a virtual journey.

The new method of learning through Virtual Field Trips (VFTs) has inspired students and encouraged active participation throughout the virtual journey. The VFTs

have made the learning experience lively and effective, positively impacting and enhancing students' learning in Social Studies. Many students reported that VFTs helped them understand the subject better, preferred using VFTs to learn other topics, and suggested incorporating VFTs from lower grades. Additionally, VFTs empowered students to explore, record, and create their vlogs when visiting different sacred places, which could help others appreciate the cultural values of those locations.

The second research question, which examined students' learning satisfaction with VFTs, was effectively addressed using qualitative instruments. The findings proved that VFTs enhanced the learning satisfaction of Bhutanese grade 6 students in Social Studies.

5.2 Discussion

The study aimed to investigate how virtual field trips (VFTs) enhanced the learning achievement and learning satisfaction of grade 6 Bhutanese students in Social Studies. The results indicated that using VFTs was effective in teaching Social Studies, leading to increased learning satisfaction. The significant difference in mean scores between the pretest and posttest highlighted the positive effect of VFTs on students' academic achievement. Overall, the study demonstrated that VFTs not only improved academic achievement but also improved the learning satisfaction of grade 6 Bhutanese students in Social Studies.

5.2.1 Students' Learning Achievement

The study demonstrated that the use of Virtual Field Trips (VFTs) significantly enhanced the teaching and learning of Social Studies. The findings showed a mean difference of 3.67 between the pretest (11.35) and posttest (15.02) scores, indicating higher posttest scores and improved student performance with the use of VFTs. This was further supported by a statistically significant p-value of .01. The result clearly indicates that VFTs improved students' learning outcomes in Social Studies, ultimately improving their achievement in the subject.

In a study conducted by Ofianto, Erniwati, Fitriasia, Ningsih, and Mulyani (2023), it was found that the newly developed VFT media had a significant impact on enhancing students' ability to use primary source evidence. This was evidenced by a t-test significance value of .01, indicating that virtual field trips (VFTs) are effective in improving student learning outcomes. The study demonstrated that the VFT teaching method significantly enhanced students' learning achievement not just in Social Studies but in other subjects as well.

Students gained valuable experience by actively participating in the learning process through online platforms, which contributes to long-term knowledge retention. This finding is in line with Kolb's (1984) experiential learning theory, which emphasizes learning through active engagement and real-life experiences. Similarly, virtual field trips (VFTs) had significant effect on students' learning by engaging them through live video conferences and interactions with experts via recorded videos. This approach supports Mayer's (2003) cognitive theory of multimedia learning, which suggests that students learn more deeply from a combination of words, images, and videos than from words alone. Integrating VFTs into lessons facilitated interactive sessions between teachers, students, and experts, thereby enhancing the overall learning experience.

The interview results regarding the use of virtual field trips (VFTs) indicated that students were enthusiastic and motivated to learn when they had the virtual experience. This allowed them to explore Bhutan's sacred places and deepen their historical and cultural knowledge, which would not have been possible without the VFTs approaches. These findings were in line with a study by Abidin et al. (2020), which found that using VFTs in history classes during the COVID-19 pandemic can enhance students' independence in discovering new information, improve their communication skills, and foster a sense of responsibility. Additionally, Wibowo et al. (2020) supported these findings, observing that incorporating the Virtual Tour Museum (VTM) into online history education during the pandemic not only motivated students but also provided entertainment. Moreover, these results were consistent with a study by Ofianto et al. (2023), which found that students were more engaged and

have more enjoyable learning experience with VFTs because they were able to see, hear, and interact with various real-life environments (Jacobson, Militello, & Baveye, 2009). Furthermore, Ho (2020) revealed that VFTs enhanced motivation, engagement, and student learning outcomes.

All study participants, with the exception of two individuals who retained the same scores, exhibited improvement from the pretest to the posttest. They described the class as an adventurous and memorable learning journey, enabling them to explore places that would otherwise be inaccessible. This experience developed respect and responsibility for preserving historical and cultural values. Furthermore, it sparked a new passion among participants to pursue careers as vloggers and YouTubers, with the goal of inspiring and raising awareness through online platforms. They obtained from the direct experience, as students actively engage in the learning process. This active engagement contributed to the long-term retention of acquired knowledge through online platforms. Additionally, students' feedback indicated a positive perception of the VFTs learning approach. The study concluded that using VFTs significantly enhanced students' learning achievement and learning satisfaction.

5.2.2 Students' Learning Satisfaction

The second major finding of the study revealed that students experienced positive learning environment and positive learning satisfaction while using virtual field trips (VFTs) in Social Studies. Analysis of structured interview using thematic techniques showed that students appreciated and responded enthusiastically to VFTs. This innovative approach transformed their perception of learning, making it more engaging, enjoyable, and memorable.

Based on the interview findings, virtual field trips proved to be highly effective in engaging students, surpassing traditional classrooms in numerous ways. The interactive features, such as real-time Q&A sessions and discussions with experts, encouraged participation and curiosity. The high-quality visuals and immersive storytelling transported students to sacred places, providing an entertaining and captivating learning

experience. According to Mead et al. (2019) findings, the results indicated that the engaging visuals and delivery method sparked students' enthusiasm, suggesting that most students were interested in the iVFT experience. The opportunity to explore actual views and listen to guided narrations made the historical and cultural significance of these sites more real, capturing students' attention better than fixed images or textbook descriptions. These findings align with a study conducted by Ariesta, Maftuh, Sapriya, and Syaodih (2024), which demonstrated that students using virtual museum tours (VFT) exhibited significantly higher engagement compared to those using traditional textbooks. This highlights the potential of virtual museum tours to enhance student engagement, cultural appreciation, and national identity among primary school students.

Students described the lessons as adventurous and interesting, similar to a movie, as they explored into the histories and hidden stories of sacred places. This engaging approach significantly enhanced their learning motivation, awakening new found excitement for history and Social Studies. Furthermore, the findings of the research align with the Ecological Constructivist Learning Theory (Bronfenbrenner, 1990; Ehindero, 2006; Oswalt, 2008; Maslow & Nakamura, 2008, as cited in Obadiora, 2016). This theory suggests that an individual's knowledge and understanding are significantly impacted by their environmental and cultural surroundings, shaping their beliefs, values, and learning methods. The virtual field trips (VFTs) allowed students to explore and understand cultural and traditional values they may not have encountered otherwise. Through virtual journeys and live interactions with local leaders, monks, and experts, they gained valuable insights into the significance and origins of various sacred places in Bhutan, enriching their learning experience and providing a comprehensive understanding of the subject matter.

The students highlighted that virtual field trips (VFTs) created a positive and interactive learning environment, encouraging collaboration and active participation among peers. This hands-on approach allowed students to practically apply theoretical knowledge, enhancing the relevance and impact of their learning experiences. Furthermore, by documenting their virtual journey stories, students developed technical skills such as video recording, editing, and sound mixing, which are essential

in the digital age. Additionally, discovering, narrating, and sharing hidden stories improved their communication skills, enabling them to express historical and cultural concepts clearly and engagingly. VFTs stimulated students' passion for content creation such as video blogging and producing digital media for platforms like YouTube. This experience not only deepened their understanding of the subject matter but also uplifted their confidence in using digital tools and expressing themselves creatively, promoting a broader engagement with cultural heritage.

Based on positive feedback from participants, the researcher concluded that virtual field trips (VFTs) are highly effective for teaching Social Studies to grade 6 students in Bhutan. The positive effects were attributed to students' engagement with various virtual platforms and the use of relevant and reliable online resources during lessons. Throughout the learning process, students exhibited curiosity, active participation, and motivation. With consentient positive opinions from the participants, the researcher confirmed that integrating VFTs into Social Studies education significantly enhances learning outcomes for Grade 6 students in Bhutan.

5.3 Recommendations

The study found that virtual field trips (VFTs) effectively helped teachers meet prevailing educational standards in the post pandemic era. VFTs improved Bhutanese students' learning effectiveness and satisfaction in Social Studies. As a result, the researcher provided recommendations for future researcher. These suggestions, based on the study's findings, aimed to help teachers and researchers incorporate VFTs into Social Studies to enhance student performance, deepen understanding of the subject, and promote a positive attitude towards the subject.

5.3.1 Recommendations for Implementation

1) Incorporating Virtual Field Trips (VFTs) into Social Studies teaching has been shown to have a positive effect on students' learning achievement. The research findings indicated that students scored higher in posttest than in pretest.

Therefore, it is highly recommended to integrate the VFT approach into the teaching and learning of Social Studies and other subjects. These results strongly support the integration of VFTs into regular classroom instruction to enhance student performance.

2) The study examined the effectiveness of virtual field trips (VFTs) focusing on the topic of 'Sacred Places'. Teachers may implement the VFT approach for various subjects to evaluate its effectiveness.

3) Virtual field trips are not limited to Social Studies; they can be effectively used in various subjects. However, teachers must carefully plan to ensure the lesson content is appropriate and relevant. To avoid complications, VFTs should be well-organized by the teacher. This includes getting approval from relevant people or experts and arranging necessary resources before the actual trip.

4) The virtual field trip approach enables active engagement, adventurous exploration of new concepts, and stimulate motivation, curiosity, and effective communication with participants and experts. VFTs have the potential to enhance student interest and promote active participation in the classroom.

5) The study suggested that virtual field trips helped students develop digital skills, improve communication through storytelling, and trigger interest in content creation, such as video blogging and publishing on platforms like YouTube.

5.3.2 Recommendation for Future Study

The researcher would like to recommend the following suggestions for future researchers considering the study's drawbacks and encouraging further research.

1) The study was limited to 30, Grade 6 Bhutanese students. Future researchers are encouraged to conduct comparative studies with various grade levels, larger sample sizes, and longer durations to strengthen the findings

2) The study focused on three types of virtual field trips: recorded video, live video conferencing, and virtual tours with experts. Exploring additional types of VFTs in the future could improve learning effectiveness.

3) Incorporating virtual field trips could benefit subjects such as English, Mathematics, Science, and other instructional areas.

4) The researcher's instrument selection for this study was limited. Future researchers should incorporate a variety of research tools for a more comprehensive investigation.

5) A comparable study may be conducted with different grade levels and a larger sample size in primary schools to strengthen the findings.

6) Considering the limited empirical studies on the use of Virtual Field Trips in Bhutan, the researcher recommends that a similar study be conducted to explore this topic further.

Virtual field trips offer an alternative to traditional field trips, allowing you to provide inclusive experiences to your students without incurring costs or facing logistical challenges. Many students may never have the chance to travel beyond their immediate environment, and organizing such trips can be challenging. Virtual field trips provide unique opportunities and experiences that students might only think of especially benefiting those who are physically challenged or have health issues. Furthermore, VFTs enhance the teaching and learning experience, making it more enjoyable, memorable, and enriching in learning journey.

Global research consistently shows that virtual field trips result in improved student outcomes. Teachers are encouraged to integrate VFTs in teaching and learning to prepare students for the future. This learner-centered method enhances academic performance and increases satisfaction, especially in subjects like Social Studies. Integrating VFTs is an effective strategy in post pandemic era. Through the use of VFTs, teachers can enhance assessment results, deepen subject knowledge, and create a more engaging and enjoyable learning environment, ultimately leading to significant improvements in learning outcomes and student satisfaction.

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The logo of Rangsit University, featuring a stylized flame or sunburst design in the center, surrounded by a circular arrangement of radiating lines. The text "มหาวิทยาลัยรังสิต" and "Rangsit University" is written in a semi-circle below the logo.

APPENDIX A
LETTER OF APPROVAL

มหาวิทยาลัยรังสิต Rangsit University



དཔལ་ལྷན་འབྲུག་གཞུང་། ཤེས་རིག་དང་རིག་ཚུལ་གོང་འཕེལ་ལྷན་ཁག།

Royal Government of Bhutan
Ministry of Education and Skills Development
Department of School Education



DSE/SLCD (05)2024/ 5 08

April 24, 2024

Chief Dzongkhag/Thromde Education Officers
 Paro and Wangdue Dzongkhags
 Thimphu and Samdrupjongkhar Thromdes

Subject: Approval to collect data for research studies.

Dear Sirs/Madams,

The Director of the Master of Education Program in Curriculum and Instruction at Suryadhep Teachers College, Rangsit University in Thailand, has approached the Department of School Education seeking permission for the following five M.Ed candidates to collect data for their research study:

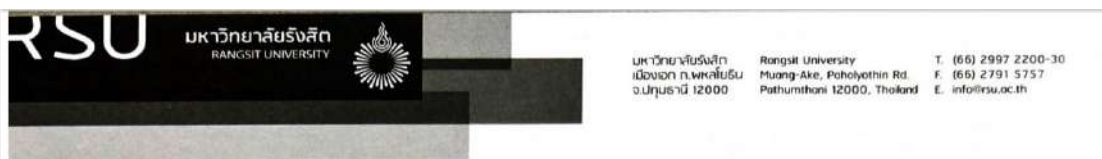
Candidates	Research title	Location
Tshering Dolkar	The use of Bar Model Method for addition and subtraction word problem achievement of grade 4 Bhutanese students	Dewathang Primary School, Samdrupjongkhar Thromde
Chimi Seldon Dorji	The effectiveness of experiential learning approach on science learning achievement for grade 6 Bhutanese students	Jigme Losel Primary School, Thimphu Thromde
Pema Choden	The effectiveness of virtual field trips on learning achievement of social studies for grade 6 Bhutanese students	Dechencholing Higher Secondary School, Thimphu Thromde
Kuenzang Namgay	The development of English reading comprehension skill using flipped classroom with poems among grade 6 Bhutanese students	Gaselo Primary School, Wangdue Dzongkhag
Chimi Selden	The effectiveness of using differentiated instructions on science learning achievement for grade 5 Bhutanese students	Taju Primary School, Paro Dzongkhag

The Department of School Education is pleased to accord approval to collect data as proposed, considering the positive impact of the research to elevate teaching methods at the primary level. However, the researchers are requested to avoid any disturbances to the normal instructional hours.

Hence, you are kindly requested to allow the researchers to conduct the data collection for their research project please.

(Karma Galay)
Director General

- Cc: 1. Dasho Dzongdag/Thrompoen, Paro, Wangdue Dzongkhags and Thimphu, Samdrupjongkhar Thromde for kind information.
 2. Director, Master of Education Program in Curriculum and Instruction, Suryadhep Teachers College, Rangsit University, Thailand for kind information
 3. Chief Program Officer, School Liaison and Coordination Division, DSE for kind information



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

Date: April 12, 2024

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

Dear Sir, /Madam,

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 thesis in Bhutan in the period of May 3, 2024 to June 15, 2024. The details of the candidates are shown as follows:

Name	Research title	Research School
MISS CHIMI SELDON DORJI	THE EFFECTIVENESS OF EXPERIENTIAL LEARNING APPROACH ON SCIENCE LEARNING ACHIEVEMENT FOR GRADE 6 BHUTANESE STUDENTS.	Jigme Losel Primary School, Thimphu Thromde, Thimphu

Thank you for your kind consideration.

Truly yours,

Assistant Professor 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 Telephone: Number: +66-868846226

Telephone: +662997-2222 ext. 1275

The logo of Rangsit University, featuring a stylized flame or sunburst design in the center, surrounded by a circular arrangement of radiating lines. The text "มหาวิทยาลัยรังสิต" and "Rangsit University" is written in a semi-circle below the logo.

APPENDIX B
SAMPLE LESSON PLANS

มหาวิทยาลัยรังสิต Rangsit University

Lesson Plan: 3 (sessions 1 and 2)

Class: VI

Subject: Social Studies

Date:

Duration: 90 minutes

Topic: Samtengang Lake,
Sacred Places of Bhutan

Strand: History Civics and Cultures

Competency: Analyses the significance of spiritual values of Samtengang Lake, the sacredplace of Bhutan.

Lesson Description

In this lesson, students will take a virtual field trip to Samtengang Lake, an important cultural place that holds sacred significance. With the help of local experts and tour guides, the learners will be guided on a tour of the lake, uncovering its hidden stories and rich background, and gaining insights into its surroundings and its profound importance to the local community. Along the way, students will have the chance to conduct a brief interview with individuals who have a deep connection to Samtengang Lake, allowing them to ask questions and gather additional insights into its history, cultural significance, and community involvement. Through these immersive experiences, the students will develop a deeper understanding of the spiritual and cultural importance of Samtengang Lake, and develop a sense of appreciation and connection to this sacred place.

Lesson Objectives: At the end of the lesson, children should be able to engage in a virtual field trip to Samtengang Lake to:

- discover hidden stories, and connect with the local community.
- reflect on the significance of the lake.
- brainstorm ways to preserve its beauty and values.
- demonstrate the understanding of Sacred Place, Samtengang Lake on spiritual values through discussion and presentation.

Prior knowledge: Students know about how virtual field trip is conducted, and some sacred places of Bhutan.

T/L Material (s):

- Virtual meeting platform- Zoom
- Recording device (if recording the session for later reference)
- Papers
- Chart paper and marker pens

Teaching Strategies	10 Core Life Skills	GNH Values
-Interview/ question& answer -Discussion -Presentations -Gallery Walk	-Effective Communication -Intra-personal skills -Critical Thinking	identity, dignity, spirituality, local wisdom, Respect of diversity, Honour/Pride, cooperation, Self-Realization, Sustainability

Lesson Introduction (10 minutes)

- Start up the class with the exchange of greetings
- Recapitulate the previous lesson by questioning like
 - Where did we travel virtually in the last class?
 - What have they learned?
 - How did they feel traveling virtually?

(The tr. acknowledges the students for their participation and supplements on their points contributed).



- Show the picture and let them guess the place.
- Then introduce the lesson topic of the day, “Virtual trip to Samtengang

Lake”.

- Welcome the students to the virtual field trip session to Samtengang Lake.
- Give a brief summary of the objectives of the session, to learn about the lake's untold tales, form a connection with the neighborhood, consider the lake's importance, and talk about preservation initiatives.
- Start the live video through Zoom
- Introduce the local guide or community members who will lead the virtual tour.

Lesson Development

Activity I: Virtual Trip to Samtengang Lake (30 minutes)

- The guide will virtually take around providing local history and background stories about the lake and its surroundings and its significance to the local community.
- Students actively engage by observing, listening, and taking notes during the tour.
- Encourage students to share their opinions and pose questions in between.

Activity II: Interview with Local People (15 minutes)

- Interview with local people that are connected to Samtengang Lake to gather insight on its cultural significance, and history.
- Allow students to ask questions to learn more about the history, cultural significance, and community involvement of the lake and the present scenery of the place.
- Students take notes on the information learned during the virtual tour and interviews.

Activity III: Group Reflection (25 minutes)

- Divide students into three Groups (Group 1, Group 2, Group 3).
- Each group reflects on the story they heard and discusses the connections they felt with Samtengang Lake and writes on the chart.

- Encourage the sharing of viewpoints, insights, and personal connections within each group.
- Group 4 and group 5 will discuss Preservation Efforts
- Each group brainstorms and discusses ideas on how to preserve the values and beauty of Samtengang Lake.
- Emphasize the importance of sustainability, community involvement, and cultural preservation in their discussions.
- Every group should showcase their work in five different locations around the classroom. Suggest that each group participate in a **gallery walk** where they move around and view the work of the other group. They can also provide feedback, suggestions, or encouraging remarks on the paper provided below each chart.

Conclusion (10 minutes)

- Summarize the key insights and reflections shared during the group activities.
- Let a few students share their views on the topic.
- Thank the local guide, community members, and students for their participation and engagement in the virtual field trip.

Note: Share the recorded video of Samtengang Lake through group chat.

The teacher will use the following rubrics to assess their presentation skills to evaluate group work through presentation.

Lesson Plan: 4 (sessions 1 and 2)

Class: VI

Subject: Social Studies

Date:

Duration: 90 minutes

Topic: Exploring Sacred places through the lens of an experts.

Strand: History Civics and Cultures

Competency: Cultural Appreciation and Global Awareness

Lesson Description

In this lesson, the guest speaker or expert will talk with students share his experience, and show recorded videos from his collections. Exploring through the lens of experts plays a crucial role in facilitating a comprehensive understanding of sacred places, which enriches the learning journey. They also offer historical, cultural, and spiritual insights. They use recorded videos to highlight features and rituals, which enhance students' understanding. Personal stories and visual documentation deepen the connection, and archival material adds depth. It develops attentive listening and builds tolerance for different cultural settings.

Lesson Objectives: At the end of the lesson a child should be able to:

- Explore the sacred places through the lens of experts, and gain information on the spiritual significance and preservation of sacred places.
- Participate in discussions and conduct presentations to deepen their awareness of cultural heritage and global perspectives on sacred places.
- demonstrate an understanding of the cultural significance of sacred places and the importance of preserving them.

Prior knowledge: Students know about how virtual field trip is conducted, and some sacred places of Bhutan.

T/L Material (s):

- Recorded video (chosen by the experts)
- Presentation equipment (projector and screen)
- 5 Laptops each for 5 groups

- Notebooks

Lesson Introduction (10 minutes)

- Start up the class with the exchange of greetings
- Recapitulate the previous lesson by questioning like
 - Where did we travel virtually in the last class?
 - What is the takeaway from the previous lesson?
 - How did they feel traveling virtually?

(The tr. acknowledges the students for their participation and supplements their points contributed).

- Welcome students to the lesson and provide an overview of the session's objectives and activities.
- Welcome the guest speaker with a brief introduction.

Lesson Development

Activity I: Virtual Trip through the lens of experts (30 minutes)

- Guest speaker shares experiences while traveling to a sacred place, emphasizing DO's and DON'T's.
- The guest speaker will play a video about a sacred place that he chose from his collection. Pause and explain the important parts of the video.
- Ask students to actively listen and take notes.
- Students will interact by asking questions regarding the recorded video.

After the video, based on the insights shared, let students share their thoughts on what they have learned from the guest speaker's experiences and what they would do or avoid while visiting a sacred place.

(Thank the guest speaker and students for their participation).

Activity II: Group Discussion and Presentation (35 minutes)

- Divide the students into 5 teams and assign each team a sacred place to research and present.

- They can choose a sacred place from the provided list in the textbook (Singye Dzong, Baylangdra, Tang Membartsho, Chorten Kora, or any sacred place in their local area.

- Sacred Places of Bhutan and Aja Nye, Chumphu Nye, Gomphu Kora. – they can use these links for references.

- The team must discuss and work on these questions while working in the team for the presentation.

(The main focus of the project is to analyze the spiritual significance value of the chosen place and explore ways to preserve it. The students will be encouraged to involve the community, run awareness campaigns, and work collaboratively with local authorities to protect these sacred places. The ultimate goal is to ensure that these sacred places remain as spiritual and cultural landmarks, enriching the lives of all. Finally, the students will make presentations to the class, which will help to enhance understanding and appreciation for Bhutan's sacred place).

- Provide each group with a laptop
- Students research their chosen sacred place, focusing on its significance, preservation method, and visitor guidelines.
- Each group prepares a presentation, taking the class on a virtual tour of their chosen sacred place.
- Presentations should include multimedia elements, such as photos or videos, to enhance understanding.
- Encourage the class to ask questions and engage in discussions after each presentation.

Conclusion (15 minutes)

- Summarize the lesson by sharing views and the importance of preserving sacred places and respecting cultural and spiritual significance.
- Conduct test.



APPENDIX C

IOC FOR LESSON PLANS

มหาวิทยาลัยรังสิต Rangsit University

IOC FOR THE LESSON PLAN BY THE EXPERTS

Sl. no	Items	Expert 1	Expert 2	Expert 3	Average	Congruence
1.	Lesson plan 1	+ 1	+ 1	+ 1	+ 1	Congruent
2.	Lesson plan 2	+ 1	+ 1	+ 1	+ 1	Congruent
3.	Lesson plan 3	+ 1	+ 1	+ 1	+ 1	Congruent
4.	Lesson plan 4	+ 1	+ 1	+ 1	+ 1	Congruent
Overall Average		+1				Congruent





APPENDIX D

LEARNING ACHIEVEMENT TEST QUESTIONS

Learning Achievement Test

Objectives(s):

To evaluate the extent of learning achievement test of grade 6 students in social studies using a virtual field trip approach.

Class VI

Total Marks: 20

Subject: Social studies

Time: 1 hour

Student code number: _____

Section A

Question 1 Multiple Choice Questions (MCQ)

Direction: Each question is followed by FOUR possible answers. Choose the correct answer and write it down in the space provided. [10 marks]

1. What is the main religion practiced in Bhutan, which greatly influences its sacred places?
 - A. Hinduism
 - B. Buddhism
 - C. Islam
 - D. Christianity
2. What are the primary aspects that symbolize Bhutanese sacred places?
 - A. Architectural innovation
 - B. Economic development
 - C. Spiritual values and significance
 - D. Political influence

3. What is the main purpose of preserving Bhutan's sacred sites?
 - A. Generating tourism revenue
 - B. Maintaining historical accuracy
 - C. Preserving spiritual and cultural landmarks
 - D. Enhancing political power

4. How do the students contribute to the preservation of Bhutan's sacred places in their project?
 - A. By disregarding community involvement
 - B. Through awareness campaigns and collaboration with local authorities
 - C. By focusing solely on economic development
 - D. By ignoring spiritual and cultural significance

5. What is a common suggestion for keeping Bhutan's sacred places safe?
 - A. Building amusement parks
 - B. Implementing strict commercialization
 - C. Encouraging community involvement and awareness campaigns
 - D. Ignoring cultural heritage laws

6. What is one of the main reasons that Dechenphug Lhakhang is significant in the community?
 - A. Is it because of its architectural design
 - B. Its location in the capital city
 - C. Its role as a center for spiritual significance
 - D. Its connection to ancient trade routes

7. What could be a possible hidden story associated with Dechenphug Lhakhang?
 - A. A hidden treasure buried beneath the monastery
 - B. The finding of historic manuscripts within it
 - C. The escape of a legendary figure through secret tunnels
 - D. The presence of Geynyen Jagpa Melen guarding the Lhakhang

8. How can one prove that they understand the spiritual values of sacred places?
- A. By looking into its architectural characteristics
 - B. Participating in local festivals held at the monastery
 - C. Expressing through creative writing and drawing inspiration from its peace
 - D. By organizing social services like cleaning around the monastery
9. What makes Dodeydrak Monastery important?
- A. Because it's close to a popular tourist spot
 - B. Because it hosts significant political gatherings there
 - C. Because it is significant to the religious history and culture of Bhutan
 - D. Due to its modern architectural style
10. What will be the focus of experts in recorded videos on Bhutan's sacred places?
- A. Architectural design
 - B. Cultural festivals
 - C. Spiritual values and significance
 - D. Local cuisine/ food

Direction: Write TRUE or FALSE for each statement in the space provided below.

1. Hidden stories about sacred places are usually based on real events. (.....)
2. Sacred places are primarily known for their commercial activities (.....)
3. Dechenphug Lhakhang is important only for tourists. (.....)
4. The main deity of Dechenphug Lhakhang is Gyenen Jakpa Melan (.....)
5. Dechenphug Lhakhang and Dodeydra Monastery are located in Paro. (.....)

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. [5 marks]

1. What is the importance of visiting sacred places like Dechenphug Lhakhang in Bhutanese culture? (1)
2. Why is it important to follow Do's and Don'ts while visiting sacred places? (2)
3. What steps would you take to preserve the cultural and religious significance of a sacred place? (2)

TEST BLUEPRINT FOR COMPREHENSION TEST

Topic/Skill	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating	Total
Section A Multiple Choice	Q.1 (1 mark) Q.2 (1 mark)	Q.4 (1 mark)	Q.6 (1 mark) Q.8 (1 mark)	Q.3 (1 mark)	Q.5, Q.7, Q.9, & Q.10 (4 marks)		10
Section B True False	Q.2, Q.4, & Q.5 (2 marks)			Q.2 (1 & 3, 2 marks)	Q.2 (1, 1 mark)		5
Section C Short Answer Questions		Q.1 (1 mark)	Q.2 (2 marks)			Q.3 (2 marks)	5
	4	2	4	3	5	2	20



APPENDIX E

IOC FOR LEARNING ACHIEVEMENT TEST

IOC FOR LEARNING ACHIEVEMENT TEST

Sl. No	Item Test	Expert 1	Expert 2	Expert 3	IOC	Congruence
1	Multiple Choice Question 1	+1	+1	+1	+1	Congruent
2	Multiple Choice Question 2	+1	+1	+1	+1	Congruent
3	Multiple Choice Question 3	+1	+1	+1	+1	Congruent
4	Multiple Choice Question 4	+1	+1	+1	+1	Congruent
5	Multiple Choice Question 5	+1	+1	+1	+1	Congruent
6	Multiple Choice Question 6	+1	+1	+1	+1	Congruent
7	Multiple Choice Question 7	+1	+1	+1	+1	Congruent
8	Multiple Choice Question 8	+1	+1	+1	+1	Congruent
9	Multiple Choice Question 9	+1	+1	+1	+1	Congruent
10	Multiple Choice Question 10	+1	+1	+1	+1	Congruent
11	True or False Question 1	+1	+1	+1	+1	Congruent
12	True or False Question 2	+1	+1	+1	+1	Congruent
13	True or False Question 3	+1	+1	+1	+1	Congruent
14	True or False Question 4	+1	+1	+1	+1	Congruent

Sl. No	Item Test	Expert 1	Expert 2	Expert 3	IOC	Congruence
15	True or False Question 5	+1	+1	+1	+1	Congruent
16	Short Answer Question 1	+1	+1	+1	+1	Congruent
17	Short Answer Question 2	+1	+1	+1	+1	Congruent
18	Short Answer Question 3	+1	+1	+1	+1	Congruent
Overall Average		+1				Congruent





APPENDIX F

SEMI-STRUCTURED INTERVIEW QUESTIONS

Semi-structured interview questions

Student No: _____ *Date of interview:* _____

Time of the interview:

Age: _____ *Gender: Male/ Female*

Venue: _____

The following semi-structured interview questions will investigate students Learning perceptions of using Virtual Field Trips in teaching and learning Social Studies.

Sl. No	Questions
1	How do you view social studies as a subject after using the virtual field trip approach? Should it be the case, how?
2	How did the virtual field trip benefit your learning?
3	What did you like most about the lesson? Why?
4	Are you satisfied with virtual field trip approach in learning social studies? Why?
5	In your perspective, what additional improvements could be made to the virtual field trip approach to improve social studies learning outcomes?

Adapted from Dorji, 2022; Tshering, 2023; and Lhaden, 2023

The image features a large, faint watermark of the Rangsit University logo in the background. The logo consists of a central flame-like symbol above a semi-circular arrangement of rays, with the university's name in Thai and English below it.

APPENDIX G
IOC FOR SEMI-STRUCTURED INTERVIEW QUESTIONS

มหาวิทยาลัยรังสิต Rangsit University

IOC FOR SEMI-STRUCTURED INTERVIEW QUESTIONS

Sl. No	Questions	Expert 1	Expert 2	Expert 3	IOC	Congruence
1	How do you view social studies as a subject after using the virtual field trip approach? Should it be the case, how?	+1	+1	+1	+1	Congruent
2	How did the virtual field trip benefit your learning?	+1	+1	+1	+1	Congruent
3	What did you like most about the lesson? Why?	+1	+1	+1	+1	Congruent
4	Did the virtual field trip approach change your perception of social studies? If so, how?	+1	+1	+1	+1	Congruent
5	In your perspective, what additional improvements could be made to the virtual field trip approach to improve social studies learning outcomes?	+1	+1	+1	+1	Congruent
Overall average		+1				Congruent



APPENDIX H

RESEARCH INSTRUMENT VALIDATORS

มหาวิทยาลัยรังสิต Rangsit University

EXPERTS WHO VALIDATED THE INSTRUMENTS

Sl. No	Name	Qualification / Position Title	Institution
1	Mr. Gary Torremucha	Associate Professor	Rangsit University English Language Institute (RELI), Rangsit University; Thailand
2	Mr. Leki Dorji D	Teacher, Master of Education	Woochu Lower Secondary School, Paro Bhutan
3	Mr. Nima Tshering	Teacher, Master of Education	Trashi Gatshel Primary School, Chhukha Bhutan

Instruments:

1. Four Lesson Plans
2. Learning Achievement Test
3. Semi-Interview Questions



Consent Form for Disclosure of Validator's Name Research Paper

To
The Graduate School
Rangsit University
Thailand

I, Gary Torremucha, a professor of Rangsit English Language Institute, Rangsit University, here by give my consent to the researcher Mrs Pema Choden (6510232), a student of Master in Curriculum and Instruction, Suryadhep Teachers College, Rangsit University to disclose my name as a research Instrument validator in her thesis paper tiled -The Effectiveness of Virtual Field Trips on Learning Achievement of Social Studies for Grade 6 Bhutanese Students. I respect the terms and regulations of the Graduate School, thus, I also give my consent to the Graduate School, Rangsit university to contact me in case of any clarification regarding my consent.

Gary Torremucha



Signature

Date: 23 July, 2024



Consent Form for Disclosure of Validator's Name Research Paper

To
The Graduate School
Rangsit University
Thailand

I, Leki Dorji D , a teacher of Wochu Lower Secondary School, Paro Bhutan, here by give my consent to the researcher Mrs. Pema Choden (6510232), a student of Master in Curriculum and Instruction, Suryadhep Teachers College, Rangsit University to disclose my name as a research Instrument validator in her thesis paper tiled -The Effectiveness of Virtual Field Trips on Learning Achievement of Social Studies for Grade 6 Bhutanese Students. I respect the terms and regulations of the Graduate School, thus, I also give my consent to the Graduate School, Rangsit university to contact me in case of any clarification regarding my consent.

Leki Dorji D



Signature

Date: 23 July, 2024

Email: lekidorjid85@education.gov.bt

97517653363

Consent Form for Disclosure of Validator's Name Research Paper

To
The Graduate School
Rangsit University
Thailand

I, Nima Tshering , a teacher of Trashy Gatshel Primary School, Chhukha Bhutan, here by give my consent to the researcher Mrs Pema Choden (6510232), a student of Master in Curriculum and Instruction, Suryadhep Teachers College, Rangsit University to disclose my name as a research Instrument validator in her thesis paper tiled -The Effectiveness of Virtual Field Trips on Learning Achievement of Social Studies for Grade 6 Bhutanese Students. I respect the terms and regulations of the Graduate School, thus, I also give my consent to the Graduate School, Rangsit university to contact me in case of any clarification regarding my consent.

Nima Tshering



Signature

Date: 23 July, 2024



APPENDIX I

PAIRED SAMPLE T- TEST

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Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	11.35	30	2.777	.507
	Posttest	15.02	30	1.900	.347

Paired Sample Correlations

		Mean	N	Correlation	Sig.
Pair 1	Pretest & Posttest	11.35	30	.549	.002

Paired Sample Test

	Paired Differences					t	DF	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Pretest - Posttest	-3.667	2.350	.429	-4.544	-2.789	-8.546	29	.000



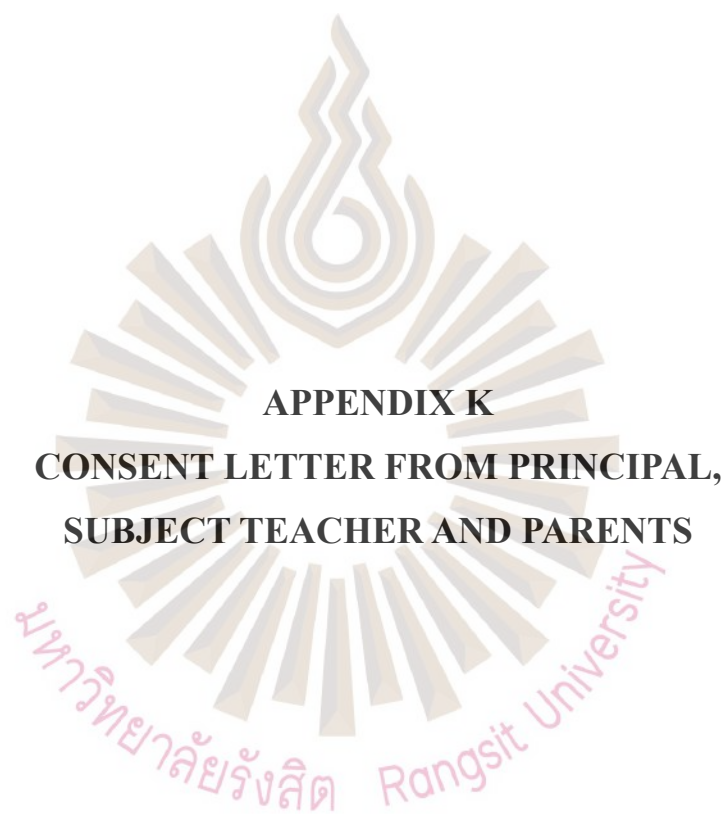
APPENDIX J

RELIABILITY TEST – KR 20

มหาวิทยาลัยรังสิต Rangsit University

RELIABILITY TEST RESULT

STUDENTS ID		TEST ITEMS/QUESTIONS															TOTAL SCORE
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	
1	Std 1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	13
2	Std 2	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	9
3	Std 3	0	0	0	0	1	1	1	0	1	1	1	0	0	0	1	7
4	Std 4	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	13
5	Std 5	1	1	1	1	0	1	0	0	1	1	1	1	1	0	1	11
6	Std 6	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	13
7	Std 7	0	0	0	1	1	1	1	0	1	1	1	0	1	0	0	8
8	Std 8	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	14
9	Std 9	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	13
10	Std 10	1	1	1	1	0	1	1	1	1	1	1	0	1	0	1	12
11	Std 11	0	0	0	0	1	0	1	0	0	1	1	0	0	0	1	5
12	Std 12	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	13
13	Std 13	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	13
14	Std 14	0	0	1	0	0	1	0	0	1	1	1	1	1	0	1	8
15	Std 15	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	13
16	Std 16	0	0	0	1	0	1	0	0	0	1	1	1	1	0	0	6
17	Std 17	0	0	0	1	0	0	1	1	1	1	1	0	0	0	1	7
18	Std 18	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	14
19	Std 19	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	14
20	Std 20	1	1	0	1	1	1	1	0	1	1	1	0	0	1	0	10
21	Std 21	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	5
22	Std 22	1	1	1	0	1	0	1	1	0	1	1	1	1	1	1	12
23	Std 23	1	0	0	0	1	1	0	0	1	1	1	0	1	1	1	9
24	Std 24	1	0	0	1	0	0	1	0	1	0	0	0	1	0	1	6
25	Std 25	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	14
26	Std 26	1	0	0	0	0	1	0	1	1	1	1	1	0	1	1	9
27	Std 27	1	0	0	1	0	1	0	1	0	0	1	1	1	0	1	8
28	Std 28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15
Total correct response		22	15	16	20	16	18	20	13	23	26	27	19	20	15	24	9.61
p		0.79	0.54	0.57	0.71	0.57	0.64	0.71	0.46	0.82	0.93	0.96	0.68	0.71	0.54	0.86	
q		0.21	0.46	0.43	0.29	0.43	0.36	0.29	0.54	0.18	0.07	0.04	0.32	0.29	0.46	0.14	
Σpq		0.17	0.25	0.24	0.20	0.24	0.23	0.20	0.25	0.15	0.07	0.03	0.22	0.20	0.25	0.12	2.834
SOLUTION METHOD A																	
K	15																
Σpq	2.83																
Var (σ ²)	9.61																
KR 20	0.755																



APPENDIX K
CONSENT LETTER FROM PRINCIPAL,
SUBJECT TEACHER AND PARENTS

Consent letter from principal and subject teacher

Date: 3rd May, 2024


Respected sir,

I am currently pursuing a master's degree in Curriculum and Instruction at Rangsit University, Thailand. As a part of my course, I am conducting a research study on the effectiveness of virtual field trips in teaching social studies to grade 6 Bhutanese students. I will be teaching eight lessons for four weeks from the first week of May to the end of May 2024, on chapter four on the topic "The Sacred Places of Bhutan" as per the Social Studies curriculum of Bhutan. During the research, I will be conducting a pretest before the lesson implementation, a posttest, and a semi-structured interview after implementing virtual field trips (VFTs) as my lesson approach to obtain the required data. The purpose of the study is to examine a significant improvement in learning, accustom students to the methodology, and learn hands-on experience after incorporating the VFT method.

I would like to request your permission to allow grade 6 students to participate in a study. I guarantee that the participants' identities and information, as well as the school's identity, will remain anonymous and confidential. Your support and approval for this research would be greatly appreciated.

Thanking you

Yours sincerely


Pema Choden

Researcher

I hereby provide my consent to participate in the research study with sixth-grade students in my school. I confirm that I have been fully informed about the research and have read the letter provided by the researcher.


Principal

Dechencholing HBB
Thim Throm



Subject Teacher

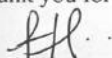
Consent letter from parents

Dear Parents /Guardian,

I am currently pursuing my Master's Degree in Curriculum and Instruction at Rangsit University in Thailand through the Trongsa Penlop Scholarship. My research study focuses on "The effectiveness of virtual field trips in teaching social studies to grade 6 Bhutanese students". The research requires student participants; thus, I have chosen Dechencholing Higher Secondary School as my research school. In this research, I would like to take grade 6 students as my research participants.

The purpose of the study is to examine a significant improvement in learning, accustom students to the methodology and learn hands-on experience after incorporating the virtual field trip method. I am writing to seek your permission to include your child in my research study. As the participants are under the age of 18, I am sending this consent letter for you to sign on behalf of your child. I want to assure you that I will maintain strict anonymity and confidentiality of all participants' identities and information. Your support in approving your child's participation in this study is greatly appreciated.

Thank you for considering this request.



Thanking you


Yours Sincerely

Pema Choden

Researcher

I have read and understood the consent letter provided by the researcher. As a parent/guardian, I permit my child, son/ daughter Tenzin Youden to participate in the research.

Name: Dechen Zangmo Relation to child: Mother

Signature: 

Date: 07/05/24



Chapter 4

Culture and Tradition

Learning objectives

- Explain culture and tradition.
- Discuss ways to preserve and promote our culture and tradition.
- Explain the significance of *Aju Nye*, *Chumbu Nye* and *Gomphu-kora Nye*.

Introduction

Every country has its own culture and tradition which are distinct from other countries. Bhutan has its unique culture and tradition. It is important to promote and preserve tradition and cultural values so that we know where we belong. It is the identity of the country.

4.1 Culture and Tradition

Culture is a way of life of people in a society. Culture includes values, religions, beliefs, customs, languages and food habits. Passing down of customs and beliefs from one generation to another is known as tradition. Respecting elders, saying prayers before meals, making offerings to god and goddess, showing love and kindness, playing traditional games are some examples of culture and traditions.

Culture is classified as tangible and intangible. Tangible cultures are those which are visible and concrete objects. Physical artefacts such as buildings, monuments, religious instruments, *nyes* and relics are some examples of tangible culture. Intangible culture are those practices which cannot be seen

and touched. Some of the examples of intangible culture are knowledge, skills, beliefs and rituals.

4.2 Preservation and promotion of culture and tradition

One of the greatest strengths of our country is having unique identity that comes from culture. It is culture that makes the Bhutanese distinct from the rest of the world. Preservation and promotion of culture and tradition has direct connection to the nation's independence and sovereignty. Thus, it is necessary for us to preserve and promote our culture and tradition as it is the symbol of Bhutan and being Bhutanese.

Various activities and programmes are carried out towards preservation and promotion of culture and tradition in different levels of societies. At the national level, government take culture and tradition as fundamental principle of Bhutan's development policy through which five years' development planning is done. Reconstruction of temples, monasteries and *dzongs*, promoting 13 arts by establishing arts institutions, setting up of small organization to uphold performing arts, setting up different monastic schools and promoting traditional way of celebrating important events are some of the activities carried out to preserve and promote our culture and tradition.

School plays vital role in preservation and promotion of culture and tradition. Singing National Anthem in the morning assembly, reciting prayers, setting up of small altar in classrooms, chanting grace during meals, wearing *gho*, *kira*, *kabney* and *rachu* are some of the good examples for preservation of culture.

We also respect elders, parents, and teachers, practice arts and craft, etiquette, conduct religious discourse, observe holidays, celebrate national events and erect prayers flags to preserve and promote our culture and tradition.

Learning Activity 4.1. Identifying cultural artifacts in different places in Bhutan

Instructions

1. Teacher draws a large outline map of Bhutan on newsprint paper.
2. Each student makes or draws cultural artefact of one's own interest.



APPENDIX M
VIRTUAL FIELD TRIPS IMAGES IN
TEACHING SOCIAL STUDIES

มหาวิทยาลัยรังสิต Rangsit University

Virtual Field Trips to Sacred Places of Bhutan



Virtual trip to Dechenphug Lhakhang
using Denka's Gate away Vlog



Live video conference with Gup
(local leader)



Virtual trip to Samtengang Lake



Virtual trip to Dodeydra Monastery



Live video conference with Principal of Dodeydra Monastery



A monk taking us through virtual trip



Virtual trip to Jangothang Ruins through the lens of an expert

Students' activities through various forms



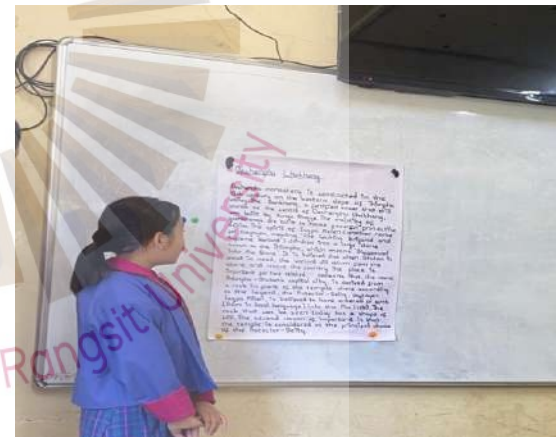
Working on handout provided



Working in team



Gallery Walk



Presentation



Presentation through dramatization



Students researching on chosen sacred place



Taking the class on virtual trip by students

BIOGRAPHY

Name	Pema Choden
Date of birth	September 3, 1979
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