Innovative Teaching Approaches in Social Science Education—A Case Study of Government Model Middle School, Pashkum, Kargil, Ladakh

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Abstract

Traditional teaching methods have long been favoured by educators. But feedback from students and stakeholders reveals both positive and negative aspects of their effectiveness. In Ladakh, government schools have shown improvement since 2016–17, gaining recognition as potential models for other institutions. The Progressive Growth Index (PGI) report for the year 2021–22 of the Government of India highlights significant advancements in Ladakh's education sector, attributing some of this success to innovative teaching and learning approaches (PGI Report, 2021-22).. This case study, conducted at Government Model Middle School, Pashkum, Ladakh, focuses on academic years 2021–22 to 2023–24, during which two nearby defunct primary schools were amalgamated to create a healthier learning environment. The school, which started with just 12 students in 2021, boasted an enrollment of around 50 students in less than two years. The adoption of intensive on-site classes (field study) in the social science discipline sets this school apart, as teaching methodologies have shifted towards inquiry, research, projects, exploration and critical thinking. This transformation has significantly enhanced student engagement, fostering a heightened motivation to attend classes regularly.

Keywords: *Ground Classes, ICT, Parliamentary Classroom Approach, Museum Classroom, Cave Classes*

Introduction

Social science has been a topic of discussion among students and teachers over many years with regard to its contents, teaching methodology, teaching aids, syllabus, textbooks, etc. The National Council of Educational Research and Training (NCERT) and state boards in India have time to time come up with new sets of syllabus, contents, textbooks, etc., as per the changing times, needs and demands of stakeholders. Further, the history discipline of social science often remains a boring subject among students for its bulky syllabus and text-heavy textbooks (Christou, 2016) . It was observed that a majority of students intentionally missed history classes due to lack of interest in the discipline.

To unravel the reasons behind learners' waning interest, absenteeism, boredom and poor academic performance, it became imperative to embark on an action research journey. There were questions such as *Are the contents in the textbooks too bulky to retain interest? Does the subject teacher follow appropriate pedagogical approaches suitable to achieve the desired learning outcomes? Do the textbooks contain attractive visuals? Do the syllabi prescribed by the national and state boards have enough relevance for the target groups and their environments? Have the thematic approaches in writing textbooks been getting the desired results?* So, there were a number of questions to raise and respond. Under such circumstances, it was difficult for a social science teacher to respond to and manage every issue pertaining to the pedagogical approaches at the school level.

Problem Area

The study focuses on addressing key challenges encountered in the social science classroom at Government Middle School Pashkum (Kargil), Ladakh. Some of the identified issues include the following.

1. Poor reading fluency: Students in Class 6 to 8 struggle to read sentences fluently, hindering their comprehension and engagement with the subject matter.

2. Reluctance towards social science classes: There is notable reluctance among students, particularly towards history classes, which impacts their attendance and participation.

3. Lack of interest and retention: Students find it challenging to maintain interest in the topics being taught, leading to disengagement.

4. Perceived complexity of syllabus and texts: Both students and teachers perceive social science syllabus as lengthy and textbooks as overly dense, resulting in difficulties in understanding and timely completion of curricular goals.

These issues underline the urgency for adopting innovative approaches as a part of action research to enhance social science learning experiences and outcomes at Government Middle School, Pashkum.

Literature Review

Action research has gained recognition in the social science discipline as a transformative approach to address challenges in teaching and learning (Brydon-Miller, et al., 2011). It emphasises collaboration, participation, and cycles of reflection and action (Stringer, 2013). This study aligns with the literature that underscores the importance of action research in shaping innovative pedagogical practices.

In the context of social science education, traditional teaching methods often fail to captivate students' interest, leading to disengagement and lack of understanding (Reason & Bradbury, 2008). The NCERT and state boards continually adapt the syllabi,

but the effectiveness of teaching methods remains a concern (Kemmis & McTaggart, 1988).

In such circumstances, action research becomes crucial for identifying the root causes of disinterest and implementing interventions. It promotes a participatory approach, involving teachers, students and other stakeholders in the process of educational transformation (Carr & Kemmis, 1986). The identified problematic areas, such as students' reluctance to attend social science classes and struggles to retain interest, align with the literature that highlights the need for context-specific interventions (Coghlan & Brannick, 2014).

The proposed interventions recommended by the National Education Policy (NEP) 2020, ranging from game-based learning to ICT (Information and Communication Technology) integration, draw inspiration from existing literature on innovative teaching methods. Moreover, NCF 2023 strongly recommends providing more opportunities to the students where they can apply their knowledge in creating models and artefacts (NCF, 2023). The use of toy-based pedagogy aligns with the idea of hands-on approaches and experiential learning (McNiff, 2013). The introduction of museum classrooms resonates with the literature emphasising the importance of visual aids and interactive learning environments (Reason and Bradbury, 2008).

The implementation of on-site/practical classes like parliamentary classroom sessions and cave classes reflects a commitment to bridging the gap between theory and practice, fostering a deeper understanding of social science concepts (Brydon-Miller, et al., 2011). The use of ICT aligns with the broader literature on leveraging technology for effective teaching (McNiff, 2013).

Objective

This study aims to put forward some of the interventions, creative pedagogical approaches adopted to address the aforementioned issues and findings, which

directly or indirectly guided students to develop curiosity, critical thinking ability and interest in the subject under discussion.

Methodology and Data Collection

The research methodology encompassed a diverse approach, incorporating field observations, samples of students' works, stakeholder interviews, and a combination of qualitative and quantitative research methods. The selected methods aimed to provide a thorough exploration of challenges and opportunities in the social science classroom at Government Middle School, Pashkum. The research was conducted on 20 students of Class 6 to 8 for academic years 2021–22 to 2023–24

Interventions and Implementation

To address the problems, the following pedagogical interventions and innovations were implemented. These activities were inspired by innovative strategies implemented by various award-winning schools across India from time to time.

1. **Game s of Great Bath, Race Court and Spin the Past**: The games of 'Great Bath', 'Race Court' and 'Spin the Past' are recent innovations developed by the researcher and Arushi Kapoor (M.Phil) for social science students across India. These games were created during a workshop organised from 12 to 16 December 2022 at NCERT, New Delhi. The games have been implemented and tested on students in the school where the action research was conducted while delivering various concepts.

   The three innovative games—Game of Great Bath, Race Court and Spin the Past—were designed to make social science learning engaging and effective for students.

   a. **The game of Great Bath**: Unlocking the Harappan Civilisation (Class 6) Explanation: Inspired by Ludo, this game serves as a fun assessment tool for the 'Harappan Civilisation' or 'The Earliest Cities' chapter in NCERT Class 6 curriculum.Learning outcomes: To recall the key features of the Harappan civilisation (e.g., town planning, drainage system and Great Bath to name a few) and reinforce the knowledge through interactive play

Figure 1: The students playing the game of Great Bath

How to play: Similar to Ludo, the players move tokens around the board based on how the dice rolls. Landing on specific squares triggers questions about the Harappan civilisation. A correct answer allows the players to move forward, while an incorrect answer might lead to a missed turn or moving backwards. The first player to reach the finish line wins.

   b. **The game of Race Court**: A journey through the Indian history (multiple classes)Explanation: This game helps to work with diverse topics like the Indian National Movement, social reformers and religious movements. Designed for two to three players, it transforms learning into a race to the finish line.

   Learning outcomes: To revise events and processes related to the chosen historical topics; and develop critical thinking skills by answering the questions

Figure 2: The making of the game 'Race Court'.

How to play: The players move tokens along a track, encountering red and green zones. The red zones pose challenging questions that require a deeper understanding. Answering correctly allows progress, while a wrong answer might incur penalties. The green zones offer opportunities to gain advantages through easier questions. The first player to reach the finish line wins.

   c. **The game of Spin the Past**: A whirlwind of events (for all classes)

     Explanation: This simple, self-playable game caters to individual or group learning. A cardboard spinner with historical events and details makes revision enjoyable.

     Learning outcomes: To enhance memorisation and communication skills through individual or group play

How to play: Spin the cardboard to land on a historical event or detail. Individually or in groups, discuss the details or answer the questions related to the spot where the cardboard has landed. The players can create questions or use pre-defined ones to enhance their learning.

Figure 3 and 4: Students playing the game of Spin the Past

2. **Toy-based Pedagogy**: The study developed interest among students by departing from the conventional method of teaching history, geography and political science, and adopting innovative approaches. Initially, the target group of students from Class 6 to 8 were encouraged to complete tasks, such as making replicas of historical monuments, drawing various styles of coins, creating terracotta toys, writing the inscriptions as on various things of historical significance, and developing still and working models of geography-based concepts and processes. Readily available materials, such as clay, sticks, pebbles, etc., were used to create replicas of the Priest-King, Great Bath, Unicorn Seal, etc., aiming to make the students realise the appropriate use of these low or zero-cost resources. Through this process, they also gained insights into the material remains of the past and the geographical significance of events and processes.
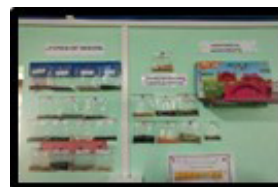

Figure 5

Figure 6   *Figure 7*

Figure 8

Figure 5, 6, 7 and 8: Glimpses of learning resources, games and toys

3. **Museum Classroom**: As a part of innovation, the traditional classrooms under study were upgraded with a learning room consisting of models (both still and working), replicas of monuments and objects of historical importance, and 3D and puzzle maps. Additionally, to foster research interest and aptitude, different types of soils and stone samples were displayed as teaching aids. The learning room featured an intensive use of teaching aids related to history, such as replicas of terracotta, the Great Bath, coins, seals, potteries (even broken ones), inscription and script samples, agricultural tools like plough, etc. Furthermore, puzzle images of historical monuments transformed this traditional classroom into a museum.
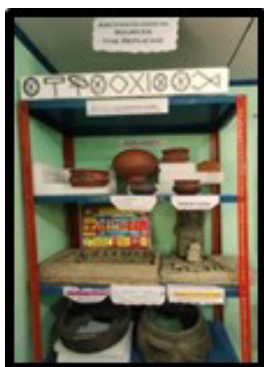

Figure 9

Figure 11

Figure 10

Figure 12

Figure 9, 10, 11 and 12: Replica of artifact, terracotta toys, earthen pots, stone pots, and stone tools

4. **Ground classes—a near to real approach**: To change the stereotypical mindset of educators and students regarding the subject, the study placed emphasis on conducting ground classes and investigations, and encouraging inquiry-based learning. Ground classes involved helping the students learn about different social science concepts, events and processes by creating near-to-real situations. The students also participated in public gatherings like Gram Sabha and Panchayati Raj Institution (PRI) meetings; and visited public places like health centres, banks, tehsil offices, historical ruin sites, burial grounds, etc.

Once, the students were taken to the India–Pakistan Line of Control (LoC), where an abandoned heritage museum village was located. They visited these sites and saw the border village, army bunkers, and the national flags of India and Pakistan at their respective posts. In the heritage museum, they saw the remains of daily use like kitchen utensils, face cream container, shoe polish container, letters, books, water container, hearth, building structure, and many more.

The idea was to make the students experience life along the LOC, and develop in them a sense of belongingness, pride and respect for the soldiers who perform their duties and protect their countries in challenging situations. The students were also encouraged to write reports based on their observations from their visit to the LOC. They were also encouraged to hold talks with village elders to learn interesting facts about the previous local developments. Subsequently, the reports were collected as a part of their assignments. After every such ground classes, the students were asked to share their experiences in writing, which indicated that they found this way of learning interesting, joyful, engaging and stress free.

5. **Parliamentary classroom approach**: To familiarise the students with the ideas of democracy, republicanism and parliamentary form of government, the classroom seating was arranged to resemble the Indian Parliament. The teacher acted as the speaker of the Lok Sabha or State Assembly, or the chairperson of the Rajya Sabha, while the students assumed the roles of members of the House. In classrooms with sufficient number of students, the students were

divided into ruling and opposition groups. The ruling group prepared to speak on a specific topic. Sometimes, the topics included local issues, while at other times, and curricular topics were chosen. Both the groups were asked to prepare on the assigned topics. They were also guided to prepare their queries and responses. The Parliament or Assembly met on a scheduled day. The opposition group raised different questions, which were responded by the ruling group, leading to debates and discussions.

The learning outcome of the approach was to make the students aware of the parliamentary proceedings, and the roles and responsibilities of the ruling and opposition groups (parties), and duties of the speaker and chairperson of the House.

6. **Cave classes**: A learning room set-up specifically designed for Class 6, cave classes aimed to introduce the students to the lifestyle of prehistoric people. Upon discovering many caves in and around the school campus on the first day, it was learned that local residents had dug these caves during the Kargil War that took place between India and Pakistan from 1998 to 2002. The students were taken inside the caves. They were advised to experience and observe the base area; height, depth and thickness of the entry area; markings on the walls and roof; and the material remains. This approach aimed to develop preliminary research interest and curiosity among the students.

After this session, the students could easily learn about the lifestyle of prehistoric people and understand the environmental challenges they might have faced. They could also differentiate between engraved wall paintings and other material remains, and also identify their usage. Further, they were informed how these remains were used as archaeological sources for reconstructing histories.

Figure 13 and14: Cave class—students outside and inside of a cave

7. **The use of ICT in social science**: ICT has proved to be an excellent medium of instruction in social science classes. It was used to make the students understand different concepts and ideas. It was also used to demonstrate events and processes through animations, short video clips, history-based movie clips, short documentaries, digital dynamic maps, etc. Concept maps supported by lectures also became a favoured pedagogical approach. Assessment results showed substantial improvement in the students' understanding of concepts, processes and events. Some of the subject specific Free and Open Source Software (FOSS) applications popular among the sampled students were School Bhuvan, Stellarium, SkyView, Google Earth, Phases of Moon,

MindMaps, Kahoot, YouTube, Google Lens, etc. Sometimes, the students were also encouraged to watch relevant live sessions from PM e-Vidya channels.
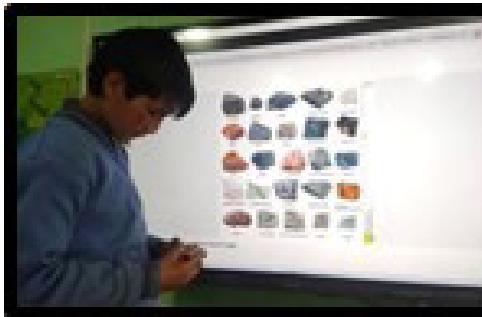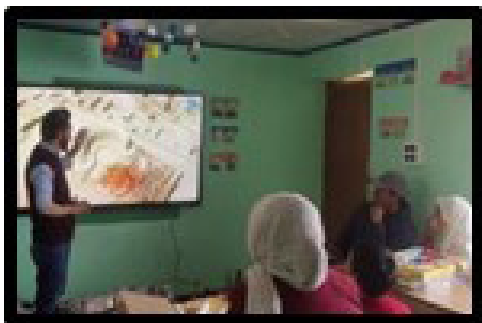

Figure 15

Figure 16

Figure 17

Figure 18

Figure 15, 16, 17 and 18: Different digital platforms were used for teaching various complex concepts

8. **Map puzzle**: To ensure a clear understanding of map usage, self-made and standard readymade map puzzles were introduced in the selected classes. During the allocated time periods, the students of Class 6 to 8 were given to solve map puzzle problems. This approach aimed to enable the students identify and memorise various geographical landforms; states/union territories and their capitals; state borders; river systems; etc. About 90 per cent of the sampled students found it easy to memorise and solve map puzzles.

Figure 19 and 20: Students solving map puzzles

9. You-first approach: In this teaching–learning technique, the students were instructed to read and translate the planned topics in the first attempt. They were also asked to interpret illustrations, maps, pictures and exercises given in the books independently. The subject teacher acted as the facilitator, guiding the students in understanding the given situations or solving problems. The objective was to instill self-confidence and self-reliance, and foster creativity and critical thinking abilities in students.

It was observed that out of 20 students, the comprehension and reading ability of eight students was above satisfactory, four were found satisfactory, another four were average and the remaining four were marked below average.

The Outcomes

The results of the nine distinct interventions have been effectively executed with students in Class 6 to 8 in the academic years 2021–22 to 2023–24. Before the experiment, the students displayed lack of enthusiasm, particularly towards social science subjects. Upon investigating the challenges they faced, it became apparent that difficulties existed in comprehending abstract concepts, such as nationalism, national movement, globalisation, urbanisation, revolution, civilisation, fundamental rights, BCE, CE, decades, centuries, etc. The innovative interventions tailored to address these learning gaps have substantially mitigated these problems. During this research and amidst the experiment phase, the students exhibited consistent motivation to attend social science classes. This is substantiated by the fact that students from different classes actively participated in discussions and debates outside their own class.

For instance, during a lecture or discussion on a Class 7 topic, students from Class 6 and 8 joined the session. In another instance, some students from Class 6 and 7 approached the researchers with a bag filled with stones of various designs, colours and textures. Their curiosity led them to seek details about the factual aspects of different stone textures and colours, as well as the reasons behind their physical differences. There was a persistent demand from the students to engage in field observations and explore the wonders of nature and material remnants of the past.

Moreover, an interest in research was noticed in students at this stage of schooling, bringing a sense of pride to teachers. Sparked by a discussion on the topic 'Books and Burials', a chapter in Class 6 history textbook published by National Council of Educational Research and Training (NCERT), New Delhi in March 2021, students of Class 6 and 7 discovered the ruins of an old burial site in a locality and shared their observations. This shows the profound impact that these teaching interventions or approaches have on students at the school level.

Active engagement in the learning process has led to meaningful moments and shared enjoyment with peers, facilitating effective learning. So, the integration of art and toy-based pedagogy has gained much popularity among students.

During 2021–22 to 2023–24, 20 students with varied abilities were selected as the sample. Three were highly satisfied and explained the given topics to their peers with examples in writing, as well as through lectures. Nine students were highly satisfied but could explain the topics with examples to their peers through lecture only, while three were satisfied and could explain the topics slightly. Four students wanted the teacher to continue with the same teaching approaches and could not explain anything. Only one student, a differently abled child, could not understand the topics at all.

Meanwhile, the Chief Education officer of Kargil in 2021–22, District Education Planning Officer of Kargil in 2022, Zonal Education Officer of Shargole (from time to time) and inspection team from the District Institute of Education and Training (DIET), Kargil, in 2024, expressed satisfaction with the approaches that were undertaken.

Conclusion

Hence, it may be concluded that innovations tend to emerge in response to the existing challenges. Pedagogical gaps in instruction across all three disciplines viz., history, geography, and social and political life were identified. Collaboratively with the students, effort was made to create alternative teaching materials to address these challenges, resulting in a noticeable improvement in student engagement and participation. As a result, these students exhibit heightened interest in activities related to specific topics of social science. Besides, attendance rate for target classes (6 to 8) have consistently surpassed 90 per cent during the academic years of 2021–22 to 2023–24. Moreover, 95 per cent of the sampled students were highly satisfied with the teaching approaches over the period of three academic years. Significant changes in the students' body language and understanding of a democratic learning approach were observed. Moreover, teachers engaged in delivering these topics expressed a heightened comfort level with these innovative approaches. We remain committed to achieving excellence in the field through continuous innovation and creativity.

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