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EFFECTIVENESS OF THE SOCIAL INQUIRY METHOD IN ENHANCING CRITICAL THINKING SKILLS AMONG SCHOOL STUDENTS

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ABSTRACT

This study explores the effectiveness of the Social Inquiry Method (SIM) in enhancing critical thinking skills among 8th-grade students. Employing a single-group experimental research design, the study engaged students over six sessions, were inquiry-based method was used in contemporary social issues such as cyberbullying, social media and mental health, environmental concerns, artificial intelligence, gender equality, and access to education. Observational data indicated significant improvements in students' engagement, analytical reasoning, empathy, and collaborative learning. The SIM's structured phases—orientation, hypothesis formulation, definition, exploration, and generalisation enabled students to actively construct knowledge, evaluate multiple perspectives, and propose creative solutions to complex issues. Findings suggest that the Social Inquiry Method not only strengthens students' critical thinking but also fosters meaningful, student-centred learning aligned with real-world challenges. The study recommends the broader integration of SIM into middle school curricula to promote intellectual autonomy, reflective thinking, and social consciousness among learners.

Keywords: Social Inquiry Method, Critical Thinking, Student Engagement, Social Issues

1. INTRODUCTION

1.1. SOCIAL INQUIRY METHOD (SIM)

The Social Inquiry Method (SIM) is a pedagogical and research approach that emphasizes the role of empirical evidence, critical reflection, and contextual understanding in examining social issues. Rooted in constructivist and experiential learning theories, it acknowledges the complexity of human behaviour and the interdependence of societal systems. By engaging learners with diverse

perspectives and encouraging rigorous inquiry, the method fosters analytical thinking and deepens understanding of real-world challenges.

In educational settings, the SIM is particularly valuable for promoting student engagement, fostering critical thinking, and enhancing problem-solving abilities. It enables learners to explore and critically analyse social phenomena through structured phases that typically include orientation, hypothesis generation, data collection, exploration, and generalization. It facilitates a deeper understanding of educational theories, practices, and their broader social contexts, preparing students to become informed, reflective, and responsible citizens.

Figure 1

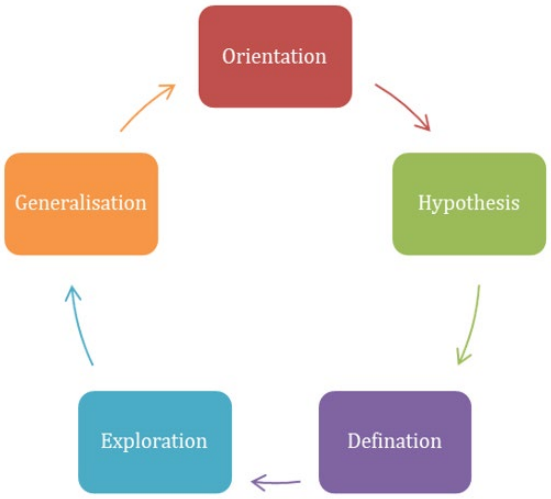

Figure 1 Structure of Social Inquiry Method

1.2. PHASES OF THE SIM

The five key phases of the method are as follows:

1) Orientation

In the initial phase, students are introduced to the concept and purpose of social inquiry, with a focus on its relevance to education. This stage emphasizes the importance of understanding the social, cultural, and historical contexts that influence teaching and learning. Through interactive discussions, readings, and exploratory activities, students begin to appreciate the value of inquiry-based approaches in both educational research and classroom practice.

2) Hypotheses Formation

Students identify specific educational topics or issues of interest and formulate research questions or hypotheses. This phase involves a critical review of relevant literature, theoretical frameworks, and empirical studies to shape their inquiry focus.

3) Definition of Inquiry Scope

In this phase, students clearly define the objectives and boundaries of their inquiry project. They refine their research question, identify key concepts and variables, and determine the appropriate methodological approach. By outlining a structured plan of action, students prepare for systematic data collection and analysis aligned with the goals of their inquiry.

4) Exploration

Students actively engage in data collection and critical analysis to investigate their research questions. Depending on the nature of the topic, this may include conducting surveys, interviews, classroom observations, or analysing existing datasets. This phase is central to applying critical thinking skills, interpreting evidence, recognizing patterns, and constructing meaning from complex information.

5) Generalisation and Reflection

The final phase involves synthesizing findings and drawing general conclusions that can be applied to broader educational contexts. Students reflect on the implications of their inquiry for teaching, learning, and policy.

1.3. CONCEPT OF CRITICAL THINKING

Critical thinking is the process of actively and skillfully analysing, evaluating, and synthesising information to make reasoned judgments or decisions. It involves being open-minded, questioning assumptions, examining evidence, considering alternative perspectives, and drawing logical conclusions.

1.4. CRITICAL THINKING INVOLVES THE FOLLOWING KEY FACTORS

1) **Reasoning:** The ability to think logically and systematically, drawing conclusions based on evidence and sound arguments.
2) **Evaluating:** Assessing the validity, relevance, and credibility of information or arguments, considering different perspectives and sources.
3) **Problem Solving:** Identifying, analysing, and addressing complex issues or challenges using creative and logical approaches.
4) **Decision Making:** Making informed and rational choices based on careful consideration of available options, consequences, and goals.
5) **Analysing:** Breaking down complex information or situations into smaller components to understand their underlying patterns, relationships, or implications.

1.5. ROLE OF TEACHERS IN SIM

In the SIM, teachers play a crucial role in facilitating the learning process as follows:

1) **Facilitator:** Teachers guide students through the inquiry process, providing support and resources as needed, while allowing students to take ownership of their learning.
2) **Resource Provider:** They offer access to various resources such as books, articles, multimedia materials, and experts to help students explore different perspectives and gather information for their inquiries.
3) **Questioning:** Teachers ask thought-provoking questions to stimulate critical thinking, encourage deeper exploration of topics, and guide students in formulating their own questions.

4) **Modeling:** Teachers demonstrate effective inquiry skills and attitudes, such as curiosity, open-mindedness, and perseverance, serving as role models for students to emulate.
5) **Feedback and Assessment:** They provide constructive feedback on students' inquiries, helping them refine their thinking, communication, and research skills. They also assess students' understanding and progress in the inquiry process.
6) **Promoting Collaboration:** Teachers foster collaborative learning environments where students can share ideas, collaborate on projects, and learn from each other's perspectives, promoting social skills and teamwork.
7) **Cultivating Reflection:** Teachers encourage students to reflect on their learning experiences, including successes, challenges, and areas for improvement, fostering metacognitive awareness and continuous growth.

2. LITERATURE REVIEW

The inquiry-based approach to education has long been recognized as a powerful pedagogical tool for fostering critical thinking, cultural understanding, and student engagement. In their seminal work, Massialas and Cox (1966) proposed that the educational environment serves as a catalyst for the internalization of values in children, thereby contributing to the creative reconstruction of culture. Through experimental teaching in Junior High U.S. History and High School World History, they demonstrated the efficacy of inquiry-based methods in addressing social issues and enhancing students' cultural awareness and analytical abilities.

Building upon this foundation, Sumiati (2009) emphasized the importance of educational practices that support active knowledge construction, aligning with the principles of constructivist learning theory. She highlighted the inquiry-based learning (IBL) model embedded in the 2013 curriculum as a means of promoting interactive, student-centered learning environments. Sumiati argued that such active learning strategies are essential not only for overcoming instructional challenges but also for fostering deep conceptual understanding through student-driven inquiry and experiential learning.

Similarly, studies by Barlow (1985), Kardi (2003), and Ibrahim (2007) reinforced the role of IBL in encouraging student-centered knowledge construction and critical thinking. Ibrahim (2007) provided a comprehensive framework that includes cognitive and practical activities such as observation, questioning, literature review, investigative planning, and reflection on prior knowledge, underscoring the multifaceted nature of inquiry-based education.

Further elaborating on the inquiry process, Sagala (2006) and Sajaya (2006) presented structured models that guide learners through sequential steps: defining the problem, proposing preliminary hypotheses, collecting relevant data, drawing conclusions, and applying these conclusions to new contexts. Sajaya's model, in particular, begins with orienting students to the learning context, enhancing their preparedness and motivation to engage in inquiry. Both models emphasize guided discovery, logical reasoning, and the cultivation of independent learners who are capable of making informed decisions and applying critical thinking across varied situations.

A more recent contribution by Avsec and Kocijancic (University of Ljubljana) provides empirical support for the benefits of IBL in middle school settings. Their study, focused on hydraulic turbine optimization, demonstrated that inquiry-based tasks significantly improved students' problem-solving abilities and critical thinking

skills. Notably, the research found no gender disparity in learning outcomes, suggesting that IBL is an inclusive and equitable pedagogical approach effective across diverse learner populations.

2.1. NEED OF THE STUDY

The existing body of research on the effectiveness of social inquiry methods in enhancing critical thinking skills is largely dominated by international case studies. However, there remains a significant gap in the Indian context, where distinct student demographics, classroom dynamics, and curricular frameworks necessitate focused investigation. This study seeks to address this gap by examining the application of social inquiry methods within the Indian educational setting.

2.2. OPERATIONAL DEFINITIONS

1) Social Inquiry Method

For the present study, the Social Inquiry Method is an integrated approach designed to examine social issues, ideas, and themes critically. This method follows a structured process that includes several key stages: orientation, hypothesis formulation, definition, exploration, and generalization. By engaging with real-world social issues, students develop the ability to analyse, question, and reflect deeply, fostering higher-order thinking and informed decision-making.

2) Critical thinking

In the present study, critical thinking emphasizes the following key aspects:

- Examining concepts or situations from multiple perspectives, including diverse cultural viewpoints
- Questioning evidence and underlying assumptions to arrive at novel and well-reasoned conclusions
- Devising imaginative and innovative strategies to solve problems, particularly those that are unfamiliar or complex

2.3. OBJECTIVES OF THE STUDY

1) To assess the influence of the SIM on students' engagement and awareness levels during lessons.
2) To know whether the SIM enhances the critical thinking skills of the learners
3) To find out the effect of the SIM on students' effective collaboration and teamwork.
4) To find out the effect of the SIM on students' Comprehensive Understanding of Complex Concepts.

2.4. SIGNIFICANCE OF THE STUDY

Understanding the impact of the SIM can inform and refine teaching strategies, fostering a more intellectually stimulating and enriching educational environment. Moreover, strengthening students' critical thinking skills equips them to navigate an increasingly complex and dynamic world, where creative and analytical thinking is essential for lifelong learning and professional success. Ultimately, investigating the efficacy of the SIM not only contributes to the continuous enhancement of

educational practices but also empowers students to become lifelong learners and informed, responsible citizens.

3. METHODOLOGY

For the present study, a single-group experimental research design was employed to evaluate the effectiveness of the Social Inquiry Method in enhancing students' critical thinking skills. This design was selected because it allows for a focused investigation of the intervention's impact within a specific group, minimizing variability caused by differences between groups.

3.1. SAMPLE AND SAMPLING TECHNIQUE

For the present study, the sample consisted of 33 eighth-grade students from Billabong High International School. A non-probability sampling approach was employed, combining convenient and purposive sampling techniques. Convenient sampling was used to select participants who were readily accessible and available during the study period, while purposive sampling ensured that the selected students met specific criteria relevant to the research objectives, such as being enrolled in the target grade and willing to participate in the Social Inquiry Method intervention.

3.2. TOOLS FOR DATA COLLECTION

To examine the effectiveness of the Social Inquiry Method (SIM) in enhancing critical thinking skills among eighth-grade students, the researcher developed and implemented a series of structured lesson plans. Over the course of six sessions conducted across different classes, the researcher facilitated inquiry-based learning activities aligned with the SIM framework comprising orientation, hypothesis formation, definition, exploration, and generalization. During each session, detailed observations were recorded to assess how students engaged with the content, formulated questions, analysed information, and applied reasoning to solve problems. This hands-on approach enabled a systematic evaluation of the method's impact on students' critical thinking abilities in an authentic classroom context. The sample lesson plan used for these sessions are presented below, illustrating how the SIM was integrated into the instructional design and classroom delivery.

- Lesson Plan: Social Inquiry Method
- Session 1: Cyberbullying
- Grade Level: 8th C
- Duration: 45–60 minutes
- Resources Needed: Internet-enabled smartboard
- Subject Integration: Social Studies, ICT, Life Skills
- Lesson Objectives:
    1) To utilize the Social Inquiry Method to deepen students' understanding of cyberbullying.
    2) To foster critical thinking skills by analysing cyberbullying through real-life scenarios.
    3) To examine the complexities of cyberbullying using interactive discussions and case studies.

3.3. INSTRUCTIONAL PROCEDURE (USING THE SOCIAL INQUIRY MODEL)

1) Orientation

The teacher presents the article:

The Ugly Reality of Cyberbullying – Legal Service India

- Students read key excerpts (either as a handout or projected on screen).
- Open discussion prompts:

"What do you already know about cyberbullying?"

"Have you seen or heard of someone being cyberbullied?"

Purpose: To activate prior knowledge and generate interest in the topic.

2) Hypothesis

- The teacher introduces the central inquiry question:

"Cyberbullying aggravates social and emotional challenges among adolescents. Do you agree? Why or why not?"

- Students respond individually small groups, forming preliminary hypotheses.

Purpose: To encourage initial analysis and critical questioning.

3) Definition

- The teacher defines cyberbullying, distinguishing it from traditional bullying.
- Types discussed: Harassment, exclusion, impersonation, and cyberstalking.
- Students are asked to identify which forms they may have seen or heard about.

Purpose: To build a common understanding and refine the scope of inquiry.

4) Exploration

- Class discusses the emotional, psychological, and social impact of cyberbullying using teacher-led questions.
- Real-life examples or news reports are shared for analysis.

Purpose: To delve deeper into patterns, contexts, and perceptions.

5) Evidencing

- Teacher presents brief case studies or hypothetical scenarios involving cyberbullying. Students work in small groups to:
  1) Identify the type of cyberbullying.
  2) Discuss possible motivations of the bully.
  3) Predict short- and long-term effects on both the victim and the bully.
  4) Suggest possible interventions or responses.

Purpose: To analyse data, build evidence-based conclusions, and encourage perspective-taking.

6) Generalisation

- Whole-class discussion led by teacher:

1) What common factors were seen across the case studies?

2) What lessons can be applied to everyday digital behavior?

- Students brainstorm strategies to combat cyberbullying in their school and online environments.

Purpose: To apply insights to broader societal and personal contexts.

7) Conclusion & Reflection

- Teacher summarizes key concepts:
  1) What is cyberbullying?
  2) Why does it happen?
  3) What can be done?
- Students complete a short note on:

"What is one thing you learned today that you didn't know before?" "What will you do differently online after today's lesson?"

Purpose: To consolidate learning and inspire personal responsibility.

8) Assessment (Formative)

- Participation in discussions
- Analysis during group activities
- Quality of reflection
- Ability to articulate consequences and propose solutions

Similarly lesson plans were made for the following topics:

Social Media and Mental Health

Access to Education

Environmental Issues - Global Warming

Gender Equality in Education & Employment

Artificial Intelligence and Its Impact on Society

4. ANALYSIS AND INTERPRETATION OF THE DATA

The data was analysed qualitatively based on researcher's classroom observations across six Social Inquiry Method (SIM) sessions. Each session focused on a distinct, socially relevant topic, allowing the researcher to gauge the students' engagement, analytical abilities, empathy, and collaboration.

1) Social Media and Mental Health

The session on social media's impact on mental health revealed a high level of student engagement. Learners were encouraged to reflect on their own experiences, which deepened their understanding of the issue. Active participation was noted, with students openly sharing concerns and suggesting practical strategies to mitigate the adverse effects of social media. These responses demonstrated emerging critical thinking and self-awareness.

2) Cyberbullying

During the session on cyberbullying, students exhibited empathy and emotional intelligence, particularly towards victims of online harassment. The class effectively engaged in brainstorming strategies to combat cyberbullying, highlighting collaborative thinking and group problem-solving. Their serious approach to the topic and ability to suggest preventive measures reflected a mature grasp of digital ethics and responsibilities.

3) Environmental Issues

Students analysed root causes of environmental problems and proposed innovative solutions, showcasing strong critical thinking skills. Their participation in group activities reflected high engagement and an ability to comprehend complex environmental concepts. The level of insight displayed suggested that students could connect theoretical knowledge with practical, real-world issues.

4) Artificial Intelligence and Its Impact

This session encouraged learners to explore diverse perspectives on AI. A structured debate allowed students to engage with opposing viewpoints, fostering critical analysis and deeper understanding. Collaborative group discussions highlighted teamwork and an ability to evaluate both the benefits and risks of AI. Students demonstrated comprehensive understanding and thoughtful engagement with technological advancements.

5) Gender Equality

The discussion on gender equality prompted students to critically examine societal stereotypes and cultural norms. Open dialogues facilitated in the classroom nurtured a safe space for expressing diverse opinions. Students showed analytical thinking and empathy, reflecting their ability to connect personal values with broader social justice issues.

6) Access to Education

Students actively explored the barriers faced in accessing quality education, showcasing awareness of systemic inequalities. Group activities encouraged collective problem-solving, and the proposed solutions reflected critical engagement with the topic. The session revealed students' ability to think beyond their immediate environment and consider inclusive approaches to global education challenges.

5. MAJOR FINDINGS AND DISCUSSION

1) Increased Engagement and Awareness

The study revealed a significant increase in students' engagement and awareness when exploring topics such as the impact of social media on mental health and the issue of cyberbullying. Students participated actively in discussions, asked insightful questions, and demonstrated a genuine curiosity to understand these real-world issues in greater depth. This heightened level of engagement indicates that the content was relevant and meaningful to their lived experiences, thereby enhancing their motivation to learn. The findings suggest that the Social Inquiry Method effectively bridges academic content with students' everyday realities, fostering a proactive approach to learning. By addressing contemporary societal issues, the method not only cultivated critical thinking but also encouraged students to become more socially aware and responsible individuals.

2) Development of Critical Thinking Skills

Observations throughout the sessions consistently highlighted the development of critical thinking skills among students. They demonstrated the ability to analyse complex topics, evaluate multiple perspectives, and construct well-reasoned arguments. This was evident in their capacity to dissect intricate issues, identify underlying patterns, and propose innovative, contextually appropriate solutions.

Students engaged meaningfully with challenging subject matter, moving beyond surface-level understanding to deeper analytical reflection. Their

discussions reflected not only logical reasoning but also an openness to diverse viewpoints, which are essential attributes of critical thinkers. These emerging skills are vital for navigating academic challenges and addressing real-world problems, ultimately contributing to students' preparedness for future academic and professional endeavours.

3) Effective Collaboration and Teamwork

The integration of collaborative learning strategies—such as group discussions, debates, and team-based inquiry tasks—proved effective in fostering students' ability to work cohesively in teams. Observational data revealed that students actively listened to one another, valued differing perspectives, and collaborated effectively to brainstorm and evaluate solutions to both hypothetical and real-world problems.

This collaborative environment nurtured mutual respect and interpersonal skills, reinforcing the importance of teamwork in the learning process. The Social Inquiry Method, by its nature, encouraged shared responsibility and collective problem-solving, thereby cultivating essential skills for cooperative learning and future professional settings where collaboration is key.

4) Comprehensive Understanding of Complex Concepts

Students exhibited a deep and nuanced understanding of multifaceted topics such as environmental sustainability, advancements in artificial intelligence, gender equality, and access to education. Their ability to contextualize these issues within broader societal and global frameworks reflected an advanced level of critical thinking and empathy. Through classroom discussions and inquiry-based tasks, students not only grasped factual knowledge but also engaged in reflective analysis of social norms, ethical considerations, and long-term implications.

This holistic approach to learning, facilitated by the SIM, equipped students with a well-rounded perspective essential for informed citizenship in a rapidly evolving world. The findings underscore the positive impact of interactive and participatory teaching methods in cultivating critical consciousness. By encouraging students to actively engage with real-world challenges, educators can foster a dynamic classroom environment that nurtures critical thinking, empathy, and collaboration—skills that are indispensable for lifelong learning and meaningful societal contribution.

The findings from this study collectively demonstrate the effectiveness of the SIM in enhancing critical thinking skills among eighth-grade students. Through increased engagement with relevant and relatable topics, students exhibited greater awareness of societal issues. Their ability to analyse information critically, collaborate effectively, and comprehend complex concepts reflects the holistic development fostered by this pedagogical approach. The integration of inquiry-based, interactive, and student-centered learning activities not only deepened their understanding but also cultivated essential 21st-century competencies such as empathy, teamwork, and problem-solving. These outcomes highlight the transformative potential of the SIM in creating intellectually stimulating learning environments that prepare students to become thoughtful, informed, and responsible global citizens. By prioritising experiential learning, educators can create an immersive learning environment that encourages active student engagement, and nurture essential life skills.

6. IMPLICATIONS OF THE STUDY

The findings of this study carry important implications for educators, curriculum developers, and school leaders. First, the integration of inquiry-based pedagogies like SIM into mainstream teaching practices can transform passive learning environments into dynamic, student-centered spaces. Second, fostering critical thinking from the middle school level lays a strong foundation for lifelong learning, adaptability, and civic responsibility. Third, the use of real-world, socially relevant topics not only enhances academic understanding but also cultivates students' emotional intelligence and global awareness—qualities essential for 21st-century learners.

7. RECOMMENDATIONS OF THE STUDY

Based on the outcomes of this study, the following recommendations are proposed:

1) **Curriculum Integration:** Schools should consider embedding the SIM into regular curricular frameworks across subjects, especially in Social Sciences, to encourage active learning and critical inquiry.
2) **Teacher Training:** Professional development programs should be designed to equip educators with the skills and tools necessary to effectively implement SIM and facilitate inquiry-based learning.
3) **Topic Relevance:** Selecting inquiry topics that resonate with students lived experiences such as digital citizenship, environmental issues, and social justice can significantly enhance engagement and learning outcomes.
4) **Assessment Strategies:** Evaluative methods should extend beyond traditional tests to include reflective journals, concept maps, group presentations, and other formative tools that capture the depth of students' thinking.

8. CONCLUSION

The present study underscores the significant role of the SIM in enhancing critical thinking skills among eighth-grade students. By engaging learners in a structured process of inquiry comprising orientation, hypothesis formulation, definition, exploration, and generalization the method enabled students to think critically, collaborate meaningfully, and explore complex social issues with depth and empathy. The positive shifts observed in student engagement, analytical reasoning, teamwork, and conceptual understanding validate the effectiveness of this approach in fostering deeper learning experiences.

CONFLICT OF INTERESTS

None.

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