A STUDY OF EFFECTIVENESS OF COLLABORATIVE AND CULTURALLY RESPONSIVE PEDAGOGY IN SOCIAL STUDIES AMONG SECONDARY SCHOOLS STUDENTS OF MARATHWADA REGION OF MAHARASTRA STATE

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FOREWORD

The National Council of Educational Research and Training (NCERT) have been continuously promoting research studies that contribute to the improvement of school education and teacher education in the country. In alignment with this objective, the present study entitled “A Study of Effectiveness of Collaborative and Culturally Responsive Pedagogy in Social Studies among Secondary School Students of Marathwada Region of Maharashtra State” has been undertaken as part of the PAC Research Programme for the session 2025–26.

The study focuses on examining the effectiveness of collaborative and culturally responsive pedagogical practices in social studies classrooms at the secondary level. Such pedagogical approaches are highly relevant in the present educational context, particularly in view of the recommendations of the National Education Policy (NEP) 2020, which emphasizes learner-centered, inclusive, and experiential learning practices.

The Principal Investigator has made a sincere effort to adopt appropriate research methodology and tools for data collection and analysis. The findings of the study are expected to provide useful insights for teachers, teacher educators, curriculum planners, and educational administrators for improving teaching-learning processes in social studies. The suggestions and recommendations emerging from the study may also serve as a guiding framework for implementing collaborative and culturally responsive pedagogy in secondary schools.

I appreciate the efforts made by the Principal Investigator in completing this research work and hope that the outcomes of the study will contribute meaningfully to the field of educational research and practice.

Prof. Shiv Kumar Gupta
Principal, Regional Institute of Education, Bhopal

PREFACE

The present research project titled ‘A Study of Effectiveness of Collaborative and Culturally Responsive Pedagogy in Social Studies among Secondary School Students of Marathwada Region of Maharashtra State” has been undertaken under the guidance and coordination of Dr. Jayant S. Borgaonkar, Project Coordinator, Regional Institute of Education (RIE), Bhopal. This study has been initiated for the academic session 2025-26 by the Department of Education, RIE Bhopal, with Project Code: 23.17. The project aims to explore the pedagogical effectiveness of collaborative learning strategies and culturally responsive teaching practices in enhancing the teaching learning process of Social Studies at the secondary level. The Marathwada region of Maharashtra, its districts i.e Nanded, Latur,Parbhani,Chatrapati Sambhajinagar, Hingoli,with its rich cultural and historical diversity, provides an important context for this study. The research intends to identify how culturally responsive pedagogy, when integrated with collaborative approaches, can improve students’ engagement, critical thinking, inclusiveness, and overall learning outcomes. It also seeks to highlight the pedagogical implications for teachers in adapting innovative, learner-centered, and context-sensitive teaching practices. The Department of Education, RIE Bhopal, acknowledges the academic contributions and support extended by faculty members, resource persons, and participating schools in the Marathwada region. It is hoped that the findings of this project will contribute significantly to the qualitative improvement of Social Science education, thereby strengthening the implementation of the National Education Policy (NEP) 2020 in secondary schools.

We look forward to this study serving as a useful reference for educators, researchers, and policymakers engaged in the field of curriculum development, teacher education, Collaborative and culturally responsive pedagogy.

(Prof. Shiv Kumar Gupta)
Principal, Regional Institute of Education Bhopal

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I express my sincere gratitude to the National Council of Educational Research and Training (NCERT) for providing me with the opportunity to undertake the present research study titled “A Study of Effectiveness of Collaborative and Culturally Responsive Pedagogy in Social Studies among Secondary School Students of Marathwada Region of Maharashtra State” under the PAC Research Programme (2025–26).

I am deeply indebted to Prof. Shiv Kumar Gupta, Principal, Regional Institute of Education, Bhopal, for his invaluable guidance, encouragement, and academic support throughout the course of this study. His insightful suggestions and constant motivation greatly contributed to the successful completion of this research work.

I also extend my sincere thanks to the faculty members, staff of resource librarary, internal and external experts and officials of the Regional Institute of Education, Bhopal, for their cooperation and support during the research process.

I am grateful to the principals, teachers, and students of the selected secondary schools of the Marathwada region for their cooperation and active participation, without which the collection of data would not have been possible.

My heartfelt thanks are due to my colleagues, friends, and well-wishers for their encouragement, constructive suggestions, and moral support throughout the study.

Finally, I express my deepest gratitude to my family members for their constant support, patience, and encouragement, which enabled me to complete this research successfully.

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CHAPTER - I

INTRODUCTION

1.1 Background of the Study

Maharashtra, one of India's most historically significant and culturally vibrant states, stands as evidence to centuries of political evolution, artistic excellence, and social transformation. Strategically located on the western coast of India and enriched by the river systems of the Godavari and Krishna, Maharashtra has been a framework of civilization since ancient times. From prehistoric settlements and ancient empires like the Satavahanas and Rashtrakutas, to the rise of the Maratha Empire under Chhatrapati Shivaji Maharaj, the region has played essential role in shaping the subcontinent's socio-political and cultural landscape. Over the centuries, Maharashtra has witnessed the convergence of diverse Influences-Hindu, Buddhist, Islamic, and colonial- that have enriched its architecture, literature, languages, and traditions. The colonial era, marked by British dominance, also saw the emergence of powerful social reform movements and freedom fighters who laid the foundation for modern India. Following independence and the state's formation in 1960, Maharashtra quickly evolved into a powerhouse of industry, finance, and education, with cities like Mumbai, Pune, and Nagpur gaining national and global recognition.

The National Education Policy (NEP) 2020 recognizes the arts as an important means of transmitting culture and supporting holistic development. Along with the arts, Social Science plays an important role in helping learners understand society, develop cultural awareness, and grow as responsible citizens. When Indian art forms are integrated with Social Science, students gain a stronger sense of cultural identity, historical understanding, and social sensitivity. This integrated approach also supports the development of thinking skills, creativity, emotional well-being, and overall happiness. Teaching arts and Social Science through *collaborative and culturally responsive methods encourages discussion, cooperation, inquiry, and meaningful connections with students' local culture, traditions, and everyday experiences*. Therefore, including Indian arts and Social Science at all stages of education, starting from Early Childhood Care and Education, is essential for nurturing culturally grounded, socially responsible, and well-balanced individuals, in line with the vision of NEP 2020.

This report explores the rich historical journey of Maharashtra, divided into key phases ancient, medieval, colonial, and modern-highlighting the events, personalities, and movements that have contributed to the state's enduring legacy. Through this exploration, the report aims to provide a comprehensive understanding of how Maharashtra's past continues to influence its present and shape its future.

1.1.1 Educational Policies in India:

The national policy of India on education has notably shaped India's education system over the years. Education policies mainly focused on ensuring access and fairness in education. The unfinished goals of the National Policy on Education from 1986, updated in 1992, are addressed in this new Policy. Since the 1986/92 policy, a significant change has been the Right of Children to Free and Compulsory Education Act of 2009, which established a legal foundation for providing free elementary education to all children. Vibrant educational policies include:

- **National Policy on Education (1986)**: Based on the Chattopadhyaya Committee, it aimed at universal primary education and equity, with a focus on science and technology.
- **Programme of Action (1992)**: Revised the 1986 policy, emphasizing quality education, decentralization, and adaptation to socio-economic changes.
- **National Curriculum Framework (2005)**: Provided guidelines for a learner-centered curriculum and integration of co-curricular activities.
- **National Curriculum Framework on Teacher Education (2009, 2014)**: Provided guidelines for a learner-centered curriculum and integration of co-curricular activities and teacher education.
- **National Education Policy (NEP) 2020**: Refitted the system with a focus on foundational literacy, a new curricular structure, vocational education from Grade 6, multidisciplinary higher education, and increased public investment. Each commission addressed contemporary educational needs, shaping the current educational landscape.

The National Education Policy (NEP) 2020 seeks to transform Indian education by focusing on inclusivity, flexibility, and modern needs. It emphasizes foundational literacy and numeracy by Grade 3, universal early childhood education by 2030, and a 5+3+3+4 curricular structure

integrating science, arts, and humanities. Vocational education begins in Grade 6, with a four-year integrated B.Ed. as the minimum teacher qualification by 2030. Higher education reforms include multidisciplinary institutions, flexible curricula, and an Academic Bank of Credits. The policy addresses equity through the Gender Inclusion Fund and special education zones, integrates technology through the National Educational Technology Forum, and promotes continuous professional development for teachers. Assessment reforms include holistic evaluations and the new PARAKH assessment centre. Governance will be streamlined under the Higher Education Commission of India (HECI). The policy aims to increase education spending to 6% of GDP, promote multilingualism, and emphasize value-based education and Indian cultural traditions.

1.2 Concept of collaborative and culturally responsive pedagogy:

1.2.1 Collaborative Pedagogy: Collaborative pedagogy is a method where teachers and students work together to achieve learning goals. It focuses on group activities, shared responsibilities, and teamwork. Instead of the teacher only giving lectures, students participate in discussions, solve problems in groups, and help each other learn. This approach helps students develop communication, cooperation, and problem-solving skills. It also creates a supportive classroom environment where everyone feels involved and respected.

Important features of collaborative pedagogy/teaching:

- Group discussions and activities
- Peer learning and support
- Sharing of ideas and responsibilities
- Focus on teamwork and communication

Collaborative pedagogy is grounded in constructivist theories of learning, particularly those of Vygotsky and Piaget, who emphasized the social nature of knowledge construction. It involves structured group activities, peer teaching, cooperative learning, and dialogic interactions that promote deeper understanding and shared responsibility for learning outcomes. CRP, articulated by scholars like Geneva Gay and Gloria Ladson-Billings, emphasizes the inclusion of students' cultural references in all aspects of learning. It involves using cultural knowledge, prior

experiences, and performance styles of diverse students to make learning more appropriate and effective.

In the late 1900s, experts like Johnson & Johnson developed clear methods to encourage teamwork and cooperation in schools. Today, digital tools such as Google Classroom, Zoom, and Padlet help students and teachers work together even when they are far apart. The COVID-19 pandemic sped up the use of online and blended learning. Collaborative teaching helps students develop leadership, respect diversity, and build important skills like critical thinking, communication, and working well with others. By learning together and sharing knowledge, students gain better understanding and useful life skills.

Collaborative pedagogy/teaching is about learning together through sharing ideas, working in groups, and including everyone. This way of teaching is very old- it started with methods like Socratic questioning in ancient Greece and India's Gurukul system, where students learned closely with their teachers. Later, educators like John Dewey promoted learning by doing and democracy in classrooms. Lev Vygotsky explained that we learn best when we interact with others who help us, called the Zone of Proximal Development (ZPD).

In today's increasingly diverse and politically sensitive society, educators face the challenge of addressing current events, cultural diversity, and issues of equity within their classrooms. Yet, many teachers report feeling underprepared for such discussions, as their teacher education programs often lack meaningful instruction on diversity, equity, and inclusion (Darling-Hammond, 2010; Gay, 2010; Ladson-Billings, 2000). Research shows that both new and experienced teachers frequently possess limited knowledge about different cultures and may unknowingly adopt deficit-based thinking blaming students or their families for academic struggles rather than addressing deeper systemic inequities (Davis, 2008; McKenzie, 2001; Ladson-Billings, 2000). This disconnect between teachers and the cultural backgrounds of their students can hinder effective teaching and contribute to widening achievement and opportunity gaps (McKoy et al., 2017).

1.2.2 Culturally responsive pedagogy: Culturally responsive pedagogy is a teaching method that respects and includes students' cultural backgrounds, languages, values, and experiences in

the classroom. In India, where students come from diverse regions, communities, and traditions, this method helps make learning more meaningful and inclusive. Teachers use examples, stories, and activities that reflect the students' lives and cultures. This makes students feel valued and helps them connect better with the subject.

Important features of culturally responsive pedagogy:

- Understanding and respecting students' cultural backgrounds
- Using local examples, stories, and traditions in teaching
- Creating an inclusive and respectful learning environment
- Encouraging students to share their cultural knowledge

To really understand culturally responsive pedagogy and how it affects students' learning, we need to look at the history of multicultural education in our country. In 2012, Deborah Harmon, a researcher at the University of Michigan, wrote an article about this history. She explained that multicultural education began in the 1960s, during the Civil Rights Movement. Before this movement, many people thought that minority students did not do well in school because their families were "dysfunctional" or their culture was "lacking. (Harmon, 2012, p. 16-17).

Culturally Responsive Pedagogy (CRP) is a way of teaching that respects students' backgrounds and helps them grow not just academically but also as kind and open-minded individuals. It moves away from old-fashioned methods and makes learning more meaningful for everyone. According to *Cal State Monterey Bay*, I have had a few professors who used this kind of teaching style. They created classrooms where students felt safe to speak and share their thoughts. These discussions helped students understand different ideas and made learning more interesting and useful. As I finish my studies and think about my own future as a teacher, I want to explore how current teachers can build their own teaching style using CRP.

When CRT is applied, classroom relationships improve, leading to higher self-esteem, confidence, and a sense of safety for students. It creates a learning environment where students feel free to speak, take risks, and expresses them authentically removing the emotional "masks" they often wear (Kafele, 2013). This allows them to imagine new possibilities related to learning, access, and opportunities. Culturally responsive pedagogy also builds strong bridges between students,

teachers, schools, and the community. Beyond emotional and social benefits, CRT also helps students develop a broader mindset and open-mindedness through dialogue and collaborative, hands-on learning. Participants mentioned that culturally responsive teachers act more as facilitators than as traditional "lecturers." This gives students more responsibility in their learning process, encouraging them to learn by doing, which increases engagement and academic success. Additionally, CRP supports conversations about diversity, identity, and social justice. Students are encouraged to speak up and discuss current events and real-world social issues topics often avoided in traditional classrooms. This helps them understand systemic inequality, become more aware of multiple perspectives, and grow more socially conscious.

Students are not only allowed to express their own views but are also encouraged to consider different perspectives. While some teachers may avoid such discussions out of discomfort, participants agreed that culturally responsive educators see great value in these conversations for both student development and the learning experience. in addition, Culturally responsive pedagogy/teaching benefits teachers too. Teachers become learners themselves by gaining insights from their students, understanding the communities they serve, and becoming more aware of diverse social, political, and economic backgrounds.

Culturally Responsive Pedagogy (CRP) is an important way of teaching that respects and includes students' cultures and backgrounds. Though the term became popular in the 1990s through researchers like Gloria Ladson-Billings and Geneva Gay, its roots go back much further to the civil rights movements of the 1960s and 70s in the United States. During this time, many groups fought for fair education that recognized their cultures instead of ignoring or erasing them.

Paulo Freire, a famous educator, believed that education should free people, not oppress them. He encouraged teaching that involves dialogue, where students help create knowledge based on their own experiences. His ideas influenced many educators to think about teaching as a way to promote fairness and social change. Multicultural education also grew during this time. Scholars like James Banks pushed for schools to include many cultural perspectives in the curriculum, not just those of the majority. This idea helped shape CRP, which sees students' cultural identities as key to their learning success.

In the 1990s, Gloria Ladson-Billings outlined how teachers could help students succeed academically without forcing them to give up their cultural identities. She said good teachers do three things: help students succeed academically, support their cultural strengths, and encourage them to think critically about social inequalities. Geneva Gay added that teaching should not ignore culture but actively include students' cultural knowledge and ways of learning. She gave teachers practical ideas on how to make classrooms welcoming and effective for diverse students.

Though CRP started mainly in the U.S., it has spread worldwide. Countries like New Zealand and Canada use CRP to support indigenous and minority students. But many teachers still find it hard to use CRP well because of a lack of training. Sometimes, culture is only added as decoration instead of being a real part of teaching, which reduces its impact. To fix this, teacher training programs now include CRP ideas, helping future teachers understand their own culture and students' cultures better. Schools also offer workshops and redesign curriculums to support CRP. This moves education away from "one-size-fits-all" to more personalized, respectful teaching.

Amy J. Samuels' (2018) work provides valuable insights into this field by underscoring the need for systemic support in implementing CRP. While many teachers are eager to embrace culturally responsive pedagogy, they often face challenges due to lack of training, limited curricular flexibility, and insufficient institutional support. Samuels calls for comprehensive reforms in teacher preparation and school policies to empower educators in meeting the diverse and evolving needs of their students.

Today, CRP is seen as a key way to reduce gaps in achievement, promote fairness, and make learning more inclusive. When students see their culture reflected in what they learn, they feel more motivated and confident. CRP also helps students develop empathy, teamwork, and critical thinking skills needed for today's diverse world.

Framework for the culturally responsive pedagogy:

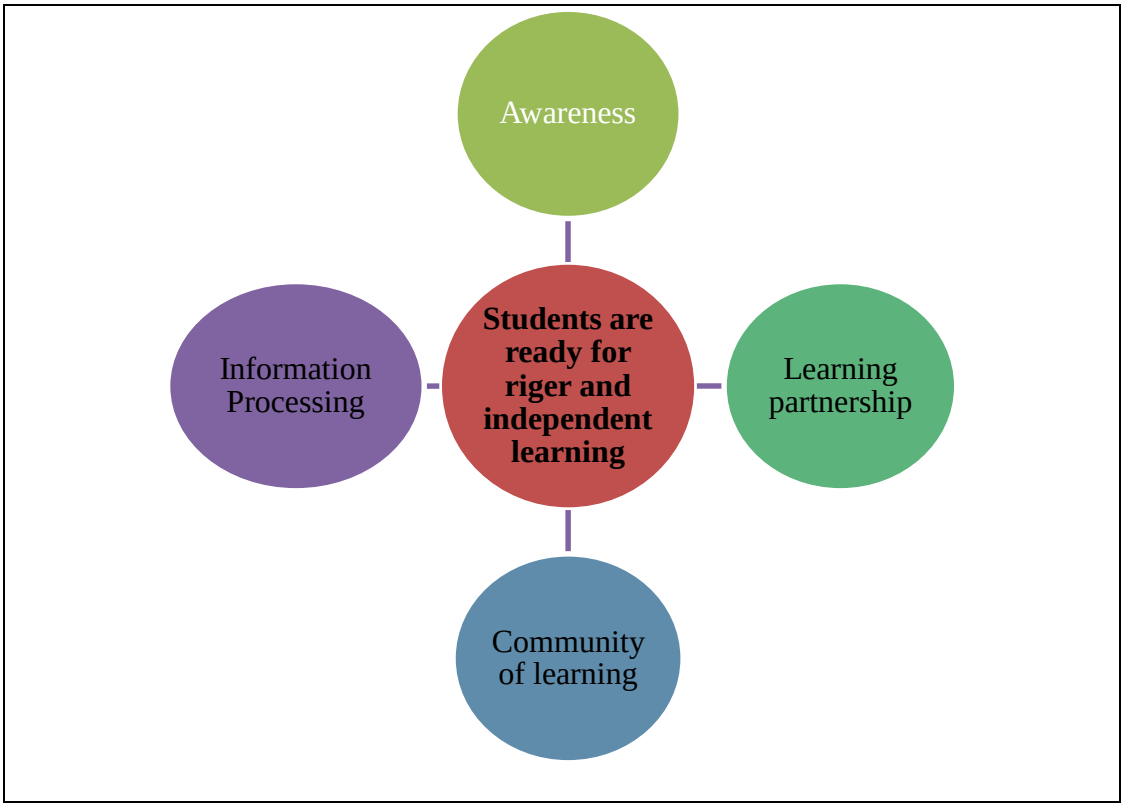


Fig1.1 Framework for the culturally responsive pedagogy

1.2.3 Culturally Responsive and Collaborative Pedagogy (CRCP) is more than just a teaching method it is a meaningful approach that acknowledges and values the unique backgrounds, experiences, and perspectives of every teacher and student. In today's diverse classrooms, students come from various cultural, linguistic, and social contexts. CRCP encourages teachers and students to engage in mutual learning through cooperation, dialogue, and shared responsibility. By promoting group-based activities, open discussions, and family and community involvement, this approach creates a learning environment where all students feel respected, included, and empowered. It helps teachers reflect on their own beliefs and practices, ensuring that their teaching is inclusive, fair, and effective. Moreover, it motivates students to work in teams, think critically, express their voices, and take part in positive social change. Ultimately, CRCP prepares learners not just for exams, but for life as responsible, thoughtful, and collaborative members of society.

This study explores how teachers understand and implement collaborative and Culturally Responsive Pedagogy (CRP) in secondary school settings. CRP is a student centered approach that integrates students' cultural references and lived experiences into all aspects of learning (Ladson-Billings, 1995; Gay, 2010). It emphasizes academic achievement, cultural identity, and critical consciousness to challenge societal inequities (Villegas & Lucas, 2007). Teachers who practice CRP demonstrate cultural competence, maintain high expectations, and view themselves as both facilitators and lifelong learners.

Combining these approaches in the social studies classroom can create an environment where students not only learn about society but also experience democratic values, inclusivity, and collaborative problem-solving direct. This collaboration is particularly essential in a diverse region like Marathwada, where students' varied cultural narratives can enrich classroom discourse and build mutual respect and understanding.

1.2.4 The National Education Policy (NEP) 2020 and integration of collaborative and culturally responsive pedagogy in Social Studies

The National Education Policy (NEP) 2020 highlights a holistic, learner-centered, and inclusive approach to education, making it highly conducive to the integration of collaborative and culturally responsive pedagogy in Social Studies. This integration adopts critical thinking, understanding, and inclusivity by encouraging students to learn from one another's diverse experiences and cultural backgrounds. Collaborative pedagogy, through group discussions, projects, and peer learning, aligns with NEP's focus on experiential and participatory learning. At the same time, culturally responsive pedagogy honors students' linguistic and cultural identities, promoting equity and a sense of belonging. In Social Studies, where understanding social realities, diversity, and civic responsibility is crucial, this integrated approach enables students to connect curriculum content with real-world contexts, thereby enriching their learning experience and developing socially aware citizens.(NEP 2020, Page 4, Section 2.2)

1.2.5 Benefits of Collaborative and Culturally Responsive Pedagogy for In-Service Teachers

- **Builds Stronger Connections:** Helps teachers connect better with students by respecting their cultures and experiences.

- **Improves Student Engagement:** When students see their culture in lessons, they are more interested and involved in learning.
- **Supports Academic Success:** Encourages students to do well without giving up their cultural identity.
- **Promotes Critical Thinking:** Helps students understand social issues and think about fairness and justice.
- **Creates Inclusive Classrooms:** Makes the classroom a welcoming place where all students feel valued and respected.
- **Enhances Teacher Awareness:** Helps teachers become more aware of their own biases and improve their teaching methods.
- **Prepares Students for the World:** Equips students with skills to live and work in a diverse society.(Megan E. Roberts, 2023)

1.2.6 Teachers' Perspectives on Culturally Responsive Pedagogy (CRP)

- Teachers play an important role in dealing with cultural diversity in schools. Their actions, attitudes, and teaching methods can either support or limit a culturally inclusive classroom. However, teachers also work within education systems that often continue existing social inequalities rather than challenge them (Biesta, 2015; Ladson-Billings, 1992).
- Many teachers tend to follow the values and norms of the dominant culture they belong to (Gillborn & Ladson-Billings, 2010). This can include continuing power imbalances, especially in countries with a colonial history. AsBray boy and Castagno (2009) point out, teachers are always involved in shaping and passing on culture, whether they realize it or not.
- Therefore, teaching is not just an educational activity it is also a political act (Bissonnette, 2016; Howard & Rodriguez-Minkoff, 2017). Culturally responsive pedagogy is part of the effort to bring more fairness and justice into the classroom (Sleeter, 2011). It means that teachers understand how their work is connected to larger social issues and how classrooms can be used to promote equity, justice, and equal opportunities for all students (Durden, Escalante &Blitch, 2015). As a future teacher, I have noticed that teaching today is not just about following strict rules or teaching from textbooks. There is a lot of change happening, and students now need more than just basic lessons. Education should also help them learn

about the real world and the people around them. I have seen that many of my classmates are not fully aware of different cultures or the benefits of learning in classrooms where everyone feels included and respected.

1.2.7 Pedagogical Implication – Collaborative and culturally responsive pedagogy:

More interactive teaching learning, promotes active students participation through group learning, it integrates students cultural backgrounds into teaching, making learning more meaningful and inclusive. This approach increase academic achievement social skills more experiential learning and classroom equity.

Pedagogy for Active Participation

Active Participation focuses on making student-centered, learning engaging, , and competency-based. It promotes student-centered, arts-integrated, sports-integrated, and storytelling methods to enhance understanding and creativity. Students are encouraged to take part in project-based clubs such as Science, Math, Debate, Music, and Eco Clubs, along with competitions and Olympiads. The approach also values indigenous knowledge, cultural exchange programs, and inspirational documentaries to develop holistic growth, critical thinking, and active involvement in the learning process.

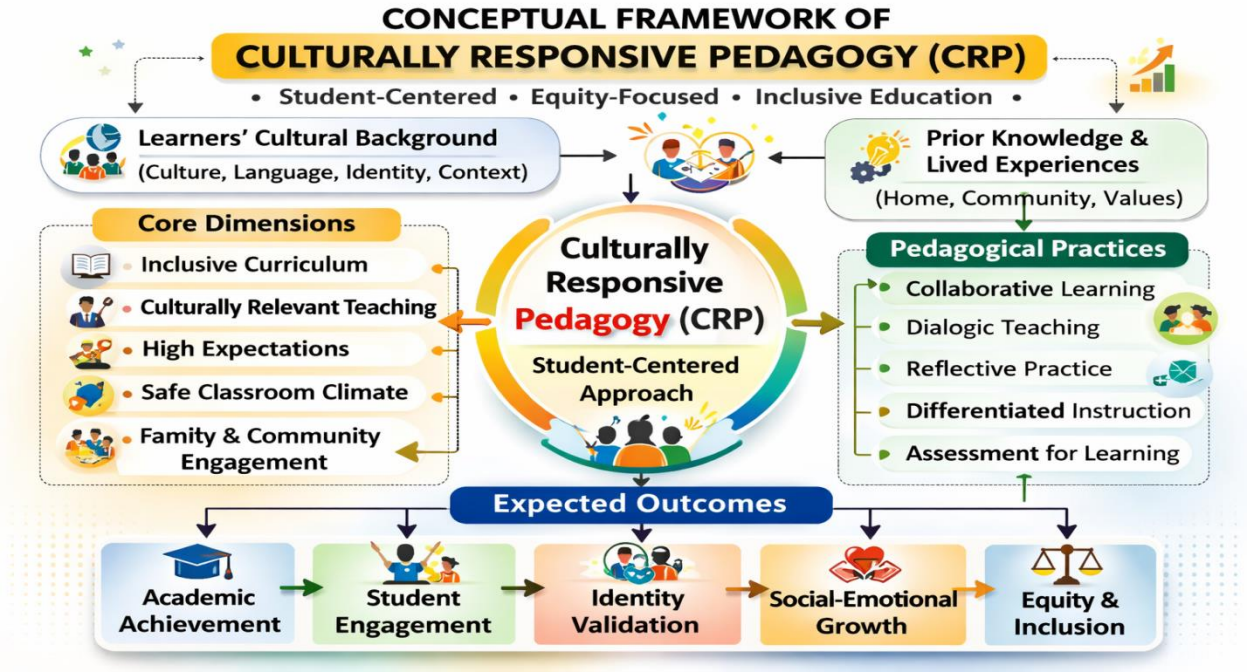


Fig.1.2 Conceptual framework of culturally responsive pedagogy.

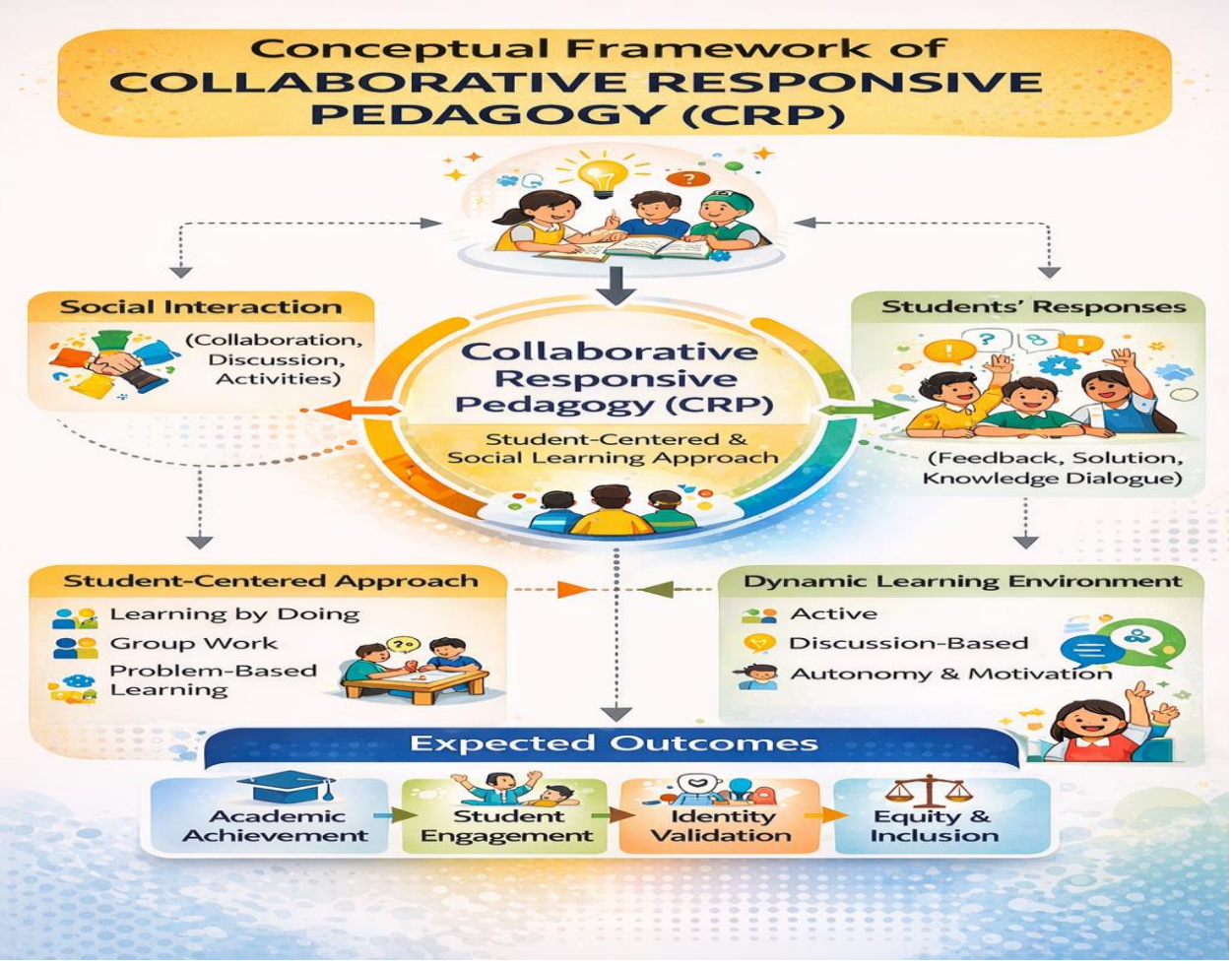


Fig.1.3 Conceptual framework of Collaborative Responsive Pedagogy.

Culturally responsive educators reflect on their own backgrounds and recognize how societal biases may affect their interactions. They work to develop cultural competence by understanding and appreciating diverse cultures. Although becoming self-aware can be challenging, practices like guided reflection and group discussions help educators address and overcome these biases. (Muniz, J. 2019.p 12)

1.2.8 Importance Collaborative and Culturally Responsive Pedagogy in Effective Learning

Pedagogy means the method and practice of teaching. It is not just about giving information to students but also about how teachers help students learn in a better and meaningful way. Good

pedagogy helps students understand the subject, stay interested in learning, and use their knowledge in real life. In Social Studies, the right method of teaching helps students think deeply, work with others, and understand social values.

i. **Helps Students Understand Concepts Better:** When teachers use methods like asking questions, doing activities, and small projects, students can understand topics more clearly. This is better than just memorizing facts. For example, if students learn about democracy by doing a mock election, they remember it better. This type of learning is supported by the National Curriculum Framework (NCF) 2005 and NCF 2023, which promote "learning by doing."

ii. **Increases Student Participation:** Good pedagogy makes students more active in class. When teachers use group activities, role plays, or group teaching, students feel more involved and enjoy learning. In Social Studies, this helps students link what they learn in school to what happens in society.

iii. **Supports Students from Different Backgrounds:** In Indian classrooms, students come from many different languages, cultures, and social backgrounds. Culturally responsive pedagogy respects these differences. Teachers include students' life experiences in lessons, which makes students feel included and motivated to learn, especially those from weaker or minority communities.

iv. **Builds Important Life Skills:** Modern teaching methods help students learn important skills like teamwork, communication, thinking skills, and using digital tools. These skills are important not only for school but also for future jobs and being a responsible citizen. Social Studies especially teach students about society, rights, duties, and working with others.

v. **Improves Learning Results:** Research and education policies say that good teaching methods help students do better in exams and understand the subject deeply. The National Education Policy (NEP) 2020 talks about the use of competency-based teaching, where students learn by understanding and doing, not just memorizing.

vi. **Makes Good Use of Teaching Materials (TLMs):** Pedagogy also means using the right teaching materials like books, charts, maps, videos, or local resources. When used properly, these materials help make learning interesting and easier to understand. In areas like Marathwada, where schools may not have many resources, teachers can use locally available things to explain concepts effectively. In short, good pedagogy helps every student learn better, become confident, and succeed in school and life.

1.2.9 Relevance of the Study in the Context of Marathwada's Cultural and Educational Background

The Marathwada region of Maharashtra is marked by a rich tapestry of cultural diversity, historical significance, and socio-economic challenges. It comprises districts such as Aurangabad (now Sambhaji Nagar), Latur, Nanded, Hingoli, Parbhani, Jalna, Beed, and Osmanabad. The region is home to a variety of communities, languages, traditions, and social groups, including a large proportion of Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC). This multicultural landscape necessitates an inclusive and context-sensitive approach to education, particularly in subjects like Social Studies that deal with history, society, governance, and culture. Educationally, the region still faces challenges such as limited access to quality infrastructure, shortage of trained teachers, and gaps in student learning outcomes. Government schools in rural and semi-urban areas often struggle with low student engagement, lack of contextual teaching practices, and minimal use of learner-centered pedagogy. In this backdrop, the use of collaborative and culturally responsive pedagogy becomes highly relevant.

Collaborative pedagogy can actively engage students in group-based learning, encourage peer interactions, and develop democratic values and communication skills. At the same time, culturally responsive pedagogy allows teachers to connect classroom content with the lived experiences of students, respecting their languages, traditions, and community histories. This approach fosters greater student interest, self-confidence, and academic success, especially among students from marginalized communities. Hence, in the context of Marathwada's socio-cultural diversity and educational needs, this study holds significant relevance. It aims to evaluate how culturally responsive and collaborative pedagogical strategies in Social Studies can improve student participation, understanding, and performance in secondary schools, making education more equitable and meaningful across the region.

1.3 Brief Overview of Social Studies Education in India and Maharashtra

Social Studies education in India plays an important role in nurturing informed, responsible, and participative citizens. It encompasses a range of disciplines such as history, geography, political science, economics, and civics, which together help students understand the structure and functioning of society, governance, culture, and the environment. The National Curriculum Framework (NCF) 2005 and the newly revised NCF 2023 emphasize an integrated, inquiry-based, and constructivist approach to Social Studies. These frameworks aim to move beyond rote learning, encouraging critical thinking, reflection, and real-life relevance in classroom learning. (NCF2023, P 298)

Social Studies are introduced at the primary level and become more structured and subject-specific by the time students reach the secondary stage (Classes 9 and 10). At this level, the curriculum focuses on developing students' awareness of India's rich socio-political landscape, democratic values, constitutional principles, and cultural diversity. However, in practice, many classrooms still rely on traditional teaching methods that emphasize textbook knowledge and memorization, limiting student engagement and deeper understanding.

In Maharashtra, the State Council of Educational Research and Training (SCERT) is responsible for developing and contextualizing the Social Studies curriculum in line with national standards. The curriculum is adapted to reflect local realities, incorporating regional history, geographical features, and notable social and political movements. Institutions like Balbharati play an important role in producing textbooks in multiple languages, fostering linguistic and cultural inclusion. At the school level, both government and private institutions follow curricula aligned with the National Council of Educational Research and Training (NCERT) and are governed by the Maharashtra State Board of Secondary and Higher Secondary Education (MSBSHSE)**,** which conducts major public examinations. The state promotes digital learning and inclusive education for marginalized communities, including rural, tribal, and economically disadvantaged groups.

Maharashtra has a strong education system that integrates academic learning with vocational and sports education. The state also supports higher education through institutions like the University of Mumbai**,** Savitri bai Phule, Pune University**,** and Dr. Baba Saheb Ambedkar Marathwada

University**.** Industrial Training Institutes (ITIs) offer skill-based training in trades like carpentry, welding, electrical work, and computer applications, aligning education with employability.

Despite these efforts, regions such as Marathwada face significant challenges in the effective implementation of Social Studies education. Factors such as socio-economic disparities, limited infrastructure, linguistic diversity, and inadequate teacher preparedness continue to impact learning outcomes. In such a context, there is a growing need to adopt collaborative and culturally responsive pedagogy to make Social Studies more relatable, engaging, and inclusive. These approaches ensure that teaching reflects students' cultural backgrounds, promotes cooperative learning, and builds meaningful connections between curriculum content and real-life experiences.

Pedagogy is very important in schools because it makes teaching and learning more effective and meaningful. A good pedagogy helps teachers move beyond rote learning and makes the classroom more students centered, where children learn by doing, thinking, and asking questions. It ensures that students from different backgrounds and with different abilities are included and supported in the learning process. With the right teaching strategies, students not only perform better in academics but also develop important life skills like communication, teamwork, creativity, and problem solving. Pedagogy also helps teachers keep students engaged, motivated, and interested in their studies. Moreover, it focuses on the overall growth of children their knowledge, values, emotions, and social skills preparing them to face the challenges of life with confidence. In this way, pedagogy is the heart of education that connects teachers, students, and learning in a meaningful way.

1.3.1 Maharashtra represents a dynamic blend of history, spirituality, literature, art, and Tradition

Maharashtra, a culturally rich state in western India, is shaped by its diverse geography from the Konkan coast and Sahyadri mountains to the Deccan Plateau and Vidarbha plains each fostering distinct traditions, cuisines, and identities. The state’s cultural vibrancy is reflected in its folk arts like Lavani, Tamasha, and Koli dance, as well as in its classical music legacy of Pt. Bhimsen Joshi and Kishori Amonkar. Maharashtra is home to historic marvels such as the Ajanta and Ellora caves, forts like Raigad and Shivneri, and artistic traditions like Paithani sarees and intricate carvings. Its spiritual heritage thrives through pilgrimage centers like Pandharpur, Shirdi, and the revered Shaktipeeths, alongside the Bhakti poetry of SantTukaram and Sant Dnyaneshwar.

Marathi literature, from medieval saint-poets to modern writers like P. L. Deshpande and Bhalchandra Nemade, has deeply shaped social reform and creative expression. Festivals such as Ganesh Chaturthi, GudiPadwa, and MakarSankrant, along with a rich culinary palette from Malvani fish curry to vadapav capture the state's lively spirit. Altogether,

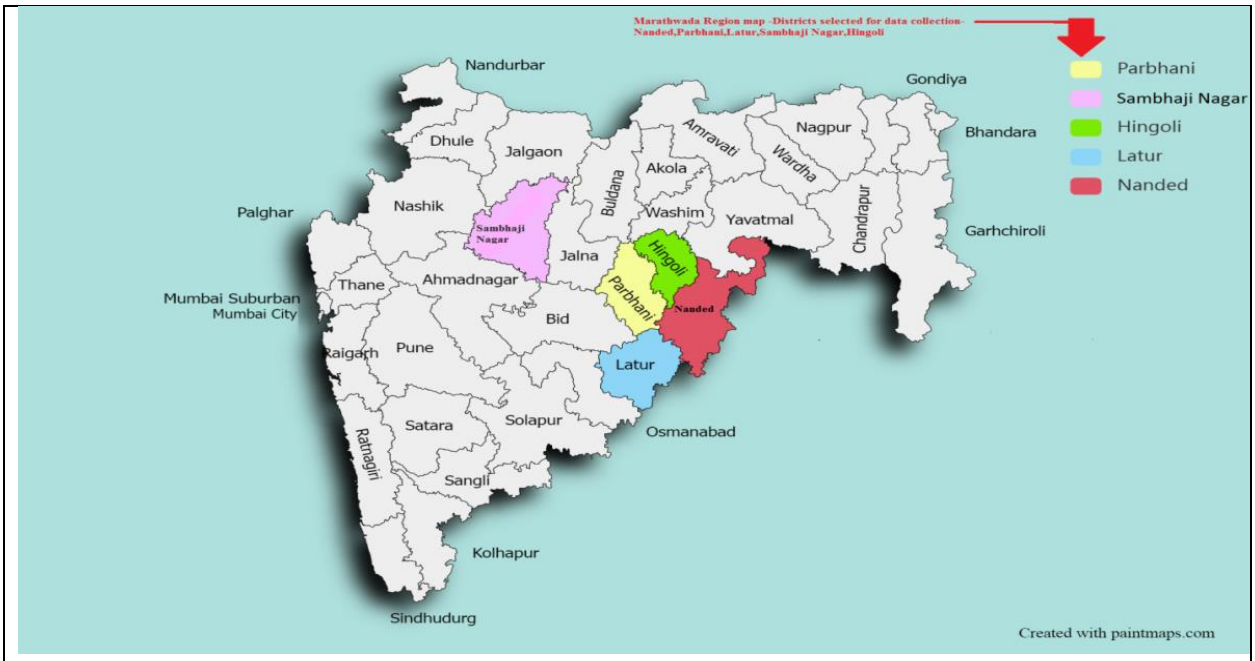
1.3.2 Architectural and Cultural Heritage of Maharashtra

Maharashtra is home to a remarkable legacy of rock-cut cave temples, monastic dwellings, forts, and monuments that span from the 2nd century B.C. to the medieval period. The Bhaja, Karle, Kondana, Bedsa, Kanheri, Ajanta, and Elephanta caves showcase Buddhist, Jain, and Hindu traditions, with sculptures and paintings influenced by Sunga, Gandhara, and Kushana art. Ajanta is especially renowned for its exquisite murals depicting Jataka tales, while Elephanta's massive Shiva sculptures highlight Shaivite traditions. Structural architecture flourished with stone temples at Ramtek and brick temples at Ter, reflecting a blend of northern and southern styles. The medieval forts of Sinhagad, Raigad, Purander, Sindhudurg, and Daulatabad reveal Maratha military strategy, while coastal forts like Janjira and Arnala guard the Konkan shores. Among tombs, the Bibi Ka Maqbara at Aurangabad (Chatrapatisambaji Nagar), often called the "Taj of the Deccan," stands as a striking Mughal monument. Altogether, these sites illustrate Maharashtra's rich architectural and cultural heritage.

1.3.3 Marathwada: A Cultural and Historical Overview

Marathwada, situated in the central region of Maharashtra, is a land of rich cultural heritage and deep historical significance. Comprising eight districts,Aurangabad (now Sambhajinagar), Jalna, Beed, Latur, Parbhani, Nanded, Hingoli, and Osmanabad this region was formerly a part of the Hyderabad princely state ruled by the Nizams. It was integrated into the state of Maharashtra in 1960 following the reorganization of Indian states.

1.3.4 Marathwada Region for data Collection sites:



(Maharashtra Map: Marathwada Region, Data Collection sites)

Fig 1.4 Map of Study area

1.3.5 Cultural Richness of Region

Marathwada's historical legacy spans across various powerful empires and dynasties, including the Satavahanas, Rashtrakutas, Bahmani Sultanate, the Mughals, and the Nizams. These rulers have left enduring influences on the region's architecture, language, art, and culture. The city of Aurangabad, named after Mughal emperor Aurangzeb, is a prime example of this legacy. It is home to the famed Ajanta and Ellora Caves, UNESCO World Heritage Sites known globally for their intricate rock-cut architecture and breathtaking frescoes representing Buddhist, Hindu, and Jain religious traditions.

1.3.6 Cultural Vibrancy and Artistic Expression

The cultural life of Marathwada prospers through its festivals, music, dance, and folk traditions, which serve as a strong thread of social cohesion and identity. A notable example is the Ellora-Ajanta Festival**,** organized annually by the Maharashtra Tourism Department and local administration at Soneri Mahal in Aurangabad. This festival celebrates classical Indian dance

forms like Kathak and Odissi against the majestic backdrop of the ancient caves, bridging historical artistry with contemporary performances and community involvement.



(Source-Online website)

1.3.7 Folk Traditions and Linguistic Diversity

Marathwada's cultural spirit is vividly alive in its day-to-day life. The Marathi spoken in this region carries the distinctive influence of Dakhani Urdu, a reflection of its historical connection with the Hyderabad State, adding linguistic diversity and richness.

Folk art forms such as Lavani and Tamasha are deeply rooted in the cultural fabric of Marathwada. These vibrant performances use music, dance, and storytelling to convey themes of love, humor, social issues, and community values. Similarly, Bharud**,** DhangariGaja, and Gondhal performances depict rural and spiritual life, often highlighting agrarian themes, devotion, and moral lessons through powerful oral traditions.

1.3.8 Spiritual and Philosophical Legacy

The region also boasts a rich spiritual heritage. Saints such as Sant Eknath of Paithan and Guru Gobind Singh of Nanded have profoundly shaped the moral and cultural outlook of the people. Their teachings, carried forward through bhajans, kirtans, and spiritual discourses, continue to inspire harmony, ethical values, and communal unity.

1.3.9 Socio-Cultural and Educational Landscape of Key Districts in Marathwada:

Regional Profile of Marathwada Region:

1. Latur District: Latur, a prominent district in Maharashtra's Marathwada region, is known for its dynamic blend of historical legacy, cultural vibrancy, and educational progress. Created in 1982 from Osmanabad, Latur city has since grown into the 16th largest urban center in Maharashtra and a vital hub for education in the region. Although traditionally rooted in agriculture, the district now hosts a wide range of educational institutions that draw students from across the state, contributing to its rising literacy rate of 72%.

   Tourist attractions like Udgir Fort and Kharosa Caves add to its regional importance. Geographically located on the Balaghat Plateau, Latur covers 7,157 square kilometers, with elevations ranging between 540 and 638 meters. The district shares borders with five other districts and the state of Karnataka to the east. Latur experiences hot summers, mild winters, and receives 600–800 mm of monsoon rainfall annually, supporting its largely agrarian economy.

   Administratively, Latur consists of five subdivisions and ten talukas. It benefits from rivers like the Manjra, Terna, and Tawarja, crucial for both irrigation and drinking water. The population displays a balanced gender ratio, with 25.47% living in urban areas. Culturally, Latur is home to a rich mosaic of communities, including Marathi, Dakhni Urdu, Kannada, and Telugu speakers. Major religious communities include Hindus, Muslims, Buddhists, and Lingayats, who celebrate festivals with social harmony.

   Folk arts like Lavani**,** Tamasha**,** and Gondhal thrive, especially in rural areas, while classical dance forms flourish in urban centers. While still classified as a D+ (industrially backward) district, Latur supports small- and medium-scale industries, including sugar factories, dal mills, and solvent extraction units. A strong banking network, serving about 9,400 people per branch, supports its socio-economic structure.

2. Nanded District: Nanded, located in southeastern Marathwada along the banks of the Godavari River, spans approximately 10,528 square kilometers and borders the state of

Telangana. The district holds deep religious and historical importance, especially for the Sikh community. The Hazur Sahib Gurudwara, where Guru Gobind Singh Ji spent his final days, makes Nanded a major Sikh pilgrimage destination. The region has a culturally diverse population that includes Marathi, Dakhni Urdu, and Telugu speakers. Cultural traditions blend Hindu, Muslim, and Sikh practices, fostering communal harmony. Folk performances such as Tamasha**,** Gondhal**,** and Lavani are widely celebrated. Festivals like Ursand Jatras bring together people across communities, emphasizing unity through music and celebration.

In terms of education, Nanded has shown consistent growth with several well-known institutions and universities, such as Swami Ramanand Teerth Marathwada University. These institutions have played a crucial role in improving the district's literacy rate and supporting its socio-economic development.

3. Parbhani District: Parbhani, centrally located in the Marathwada region, covers an area of around 6,214 square kilometers. It is one of the oldest cities in the region, with historical references found in ancient Indian texts. The district is predominantly Marathi-speaking but also includes significant populations of Muslims and Dalits. Parbhani is known for its deep Sufi heritage, particularly the Turabul Haq Dargah**,** which attracts visitors from different faiths. The district's rich cultural fabric includes Kirtan**,** Bhajan**,** Tamasha, and Qawwali. Women play a key role in preserving oral traditions through Ovi and songs performed during marriages and festivals.Parbhani has made notable advancements in the education sector. Numerous schools and colleges contribute to skill development and literacy. The presence of Marathwada Agricultural University further strengthens the district's commitment to agricultural research and education.

4. Sambhaji Nagar District: Sambhaji Nagar, located in the northwestern part of Marathwada, is among the most developed districts in the region. It is internationally recognized for the UNESCO World Heritage Sites of Ajanta and Ellora Caves**,** which reflect a confluence of Buddhist, Hindu, and Jain art and culture. The district's diverse heritage includes influences from the Mughal, Maratha, and Buddhist eras. Major languages spoken here include Marathi, Urdu, and Hindi. Sambhaji Nagar has developed as a center for tourism,

education, and traditional industries. Rich musical traditions like Dindi**,** Bhajan**,** and Qawwali are kept alive through local performances.

The district is also known for its artisanal crafts, especially Himroo and Paithani textiles**,** showcasing its legacy of fine craftsmanship. On the educational front, Sambhaji Nagar hosts several universities, research centers, and professional colleges, making it a key educational hub in Marathwada and significantly contributing to workforce development.

5. Hingoli District: Hingoli, a relatively new district established in 1999, is situated in the Marathwada region and spans an area of about 4,526 square kilometers. It shares its borders with Nanded, Parbhani, Yavatmal, and Washim districts. Hingoli is primarily rural, and its economy is strongly based on agriculture.The district's key crops include cotton, soybean, jowar**,** and pulses, supported by irrigation systems such as the Siddheshwar Dam. Hingoli is also rich in religious and historical heritage, with sites like the Aundha Nagnath Temple drawing thousands of pilgrims each year.

   Culturally diverse, Hingoli is home to multiple linguistic and religious communities, with Marathi being the most commonly spoken language. Folk traditions and festivals are deeply woven into the social fabric. The district has been gradually developing its educational infrastructure with a growing number of schools and colleges focused on improving literacy and providing vocational training. Its strategic location, combined with its agricultural and cultural richness, makes Hingoli a main contributor to Marathwada's overall development.

6. Jalna: The Jalna district is well-known for its industrial and agricultural pursuits. It is particularly well-known for the steel and seed industries. The primary crops grown in this district are soybeans, cotton, and pulses. Agriculture is the foundation of the local economy. Trade and marketing of agricultural products are aided by good road connectivity.

7. Beed: With a number of temples and historical sites, the Beed district is significant both historically and culturally. The district's economy is primarily focused on agriculture. Pearl

millet, sorghum, and cotton are the main crops farmed here. In rural areas, women actively participate in household-based economic activities and agricultural labor, whereas males are primarily involved in farming.

8. Osmanabad (Dharashiv) district is renowned for its religious and historical significance. It is well-known for the Tulja Bhavani Temple, a significant Maharashtra pilgrimage site. The majority of inhabitants in this district work in agriculture and animal husbandry. Pulses, pearl millet, and sorghum are the main crops farmed here.

1.4 Problem Explanation:

Despite various educational reforms and policy initiatives aimed at improving classroom instruction, teaching practices in many secondary schools particularly in the Marathwada region of Maharashtra remain largely traditional and teacher-centered. These outdated methods emphasize lecture-based instruction, rote memorization, and textbook-centric learning, especially in subjects like Social Studies. As a result, students often struggle to develop critical thinking, civic values, and real-world understanding, which are fundamental goals of Social Studies education.

An important gap in current practices is the limited use of collaborative and culturally responsive pedagogies. Teachers rarely incorporate students' cultural backgrounds, community knowledge, or lived experiences into classroom instruction. This is especially concerning in a culturally diverse region like Marathwada, which includes students from rural, tribal, and socially disadvantaged communities. The lack of culturally relevant content and context reduces student engagement, weakens their connection to the subject matter, and leads to a sense of exclusion. Additionally, opportunities for student collaboration such as group activities, discussions, and peer learning are minimal. Without these, classrooms become passive learning spaces, and students miss the chance to develop essential 21st-century skills like teamwork, empathy, and communication.

This situation highlights the urgent need to explore the effectiveness of teaching approaches that are both collaborative and culturally responsive. Such pedagogies have the potential to make learning more inclusive, engaging, and meaningful by valuing students' diverse identities and encouraging active participation. However, there is a noticeable lack of research and structured

evaluation of how these approaches impact student learning, motivation, and classroom dynamics in the context of Marathwada Region of Maharashtra State. Therefore, this report seeks to investigate the effectiveness of collaborative and culturally responsive pedagogies in Social Studies education at the secondary school level. It aims to assess their impact on students' Communication & Expression, Team Participation & Cooperation, Leadership & Responsibility, Reasoning & Decision Making and Social Awareness & Real-Life Connection, Cultural Sensitivity & Inclusiveness**.**

1.5 Statement of Problem: The statement of problem is worded as.

A study of Effectiveness of collaborative and culturally responsive pedagogy among secondary school students of Marathwada Region of Maharashtra State.

1.6 Need for the Study

Social studies education is central to nurturing informed, responsible, and active citizens. However, traditional pedagogies often fail to engage learners, especially those from marginalized or culturally diverse backgrounds. Collaborative pedagogy encourages students to work in groups, engage in discussions, and co-construct knowledge. It adopts skills such as critical thinking, problem-solving, teamwork, and empathy. On the other hand, culturally responsive pedagogy (CRP) seeks to bridge the gap between students' cultural experiences and classroom learning, making education more relevant and inclusive. In Marathwada, where classrooms are microcosms of India's vast cultural diversity, implementing collaborative and culturally responsive pedagogies can potentially transform the teaching-learning process. However, despite their theoretical promise, the effectiveness of these approaches in real classroom settings remains under-researched. There is limited empirical evidence on how these pedagogies impact student engagement, academic performance, inclusivity, and skill development in the context of social studies. Moreover, teachers' perceptions, preparedness, and challenges in adopting these methods also certification survey.

1.7 Significance of the Study

This study is significant for multiple stakeholders in the education ecosystem. For policymakers and curriculum developers, the findings can offer insights into the practical benefits and limitations

of integrating collaborative and culturally responsive pedagogies in social studies. For teachers, it provides a framework and evidence to adapt their instructional strategies to better suit the needs of various learners. For students, such pedagogies promise a more engaging, relevant, and empowering learning experience. Ultimately, the study aims to contribute to the larger goal of making education more democratic, inclusive, and aligned with 21st-century competencies.

1.8 Research Questions

1. What is the level of perceived effectiveness of collaborative pedagogy in social sciences among secondary schools students?
2. What is the level of perceived effectiveness of culturally responsive pedagogy in social sciences among secondary schools students?
3. What are the benefits of the collaborative culturally responsive pedagogy in addressing the needs of culturally diverse students?
4. What challenges do teachers encounter while implementing collaborative and Culturally responsive pedagogies?
5. What strategies can enhance the successful adoption of these teaching approaches in Secondary schools?

1.9 Objectives of the study:

1. To study the perceived effectiveness of collaborative pedagogy among secondary students ‘in social studies with reference to Communication & Expression, Team Participation & Cooperation, Leadership & Responsibility, and Reasoning & Decision Making.
2. To study the perceived effectiveness of culturally responsive pedagogy among secondary students in social studies with reference to Social Awareness & Real-life Connection, Cultural Sensitivity & Inclusiveness.
3. To identify the challenges faced by teachers in implementing collaborative and culturally responsive pedagogy
4. To study the perceptions of teachers and headmasters regarding the relevance of collaborative and culturally responsive pedagogy in TLP.
5. To recommend guidelines for integrating these approaches into Secondary school curricula in the Marathwada region of Maharashtra.

1.10 Operational Definition:

- Collaborative pedagogy: Learning in small groups to complete common tasks.
- Communication and Expression: Communication is the two-way process of exchanging information, ideas and emotions to ensure mutual understanding between a sender and receiver
- Team Participation and Cooperation: Involve willingly working with others towards shared goals by combining individual skills, sharing responsibilities and maintaining positive open communication
- Leadership and Responsibility: Leadership is the ability to influence inspires and guide individual toward shared by goals by setting direction and fostering motivation responsibility is the duty accountability and obligation to manage tasks.
- Reasoning and Decision Making: Reasoning is the cognitive process of using logic, evidence and existing knowledge to draw conclusion or solve problems.
- Culturally Responsive Pedagogy: Teaching that reflects students' culture and community knowledge
- Social Awareness and Real-Life Connection: Social awareness is the ability to empathize with understand and take the perspective of others including those from diverse backgrounds.
- Cultural Sensitivity and Inclusiveness: Cultural sensitivity is the awareness understanding and respect for diverse cultural values, beliefs and practices without assuming one's own culture is superior. Inclusiveness goes further actively incorporating these varied perspectives to ensure everyone feels valued and participated meaningfully.
- Secondary School Students: Students studying in classes IX-X.
- Marathwada Region: Nanded, Hingoli, Latur, Parbhani, Chhatrapati Sambhaji Nagar
- NEP2020 –National Education Policy 2020
- Teachers-The teachers those who are working in Secondary School.
- Head Teachers- The teachers those who are working as a head master in Secondary School.

1.11 Limitations of the Study

- The study was conducted only in five districts out of the eight districts of the Marathwada region of Maharashtra. Hence, the results may not represent the entire region.
- The study included a limited number of participants such as secondary school teachers, headmasters, and students, so the findings may not reflect the views of all stakeholders.
- The research was carried out in only 25 secondary schools, which limits the generalization of the results to other schools.
- The study was conducted within a short period of time, so it could not examine the long-term effects of collaborative and culturally responsive pedagogy.
- Most of the data were collected through questionnaires, surveys, and interviews, which relied on self-reported information and may include personal bias or inaccuracies.
- Teachers involved in the study had different levels of training and experience, which may have influenced how effectively the teaching methods were implemented.
- The research focused only on Social Studies, so the findings may not be applicable to other subjects.
- Some external factors such as students' home environment, socio-economic background, and school facilities were not controlled, which might have influenced the outcomes of the study.

1.12 Delimitations of the Study

- The study was limited to selected secondary schools in the Marathwada region of Maharashtra.
- Only 25 secondary schools from five districts (Nanded, Latur, Parbhani, Hingoli, and Chhatrapati Sambhaji Nagar) were included in the study.
- The research was confined to students of classes IX and X, their Social Studies teachers, and headmasters.
- The study focused specifically on collaborative and culturally responsive pedagogy in Social Studies teaching.
- Data for the study were collected mainly through questionnaires, interviews, and observation methods.

- The research was conducted within a specific time period, and it did not aim to study the long-term impact of the teaching methods.
- The study focused only on Social Studies subject, and other subjects were not included in the investigation.

1.13 Scope and Limitations

Scope of the Study

The present study focuses on examining the effectiveness of selected teaching strategies in enhancing students' learning outcomes in Social Studies at the secondary school level. The study covers 25 schools located in a specific region of Maharashtra's Marathwada region and involves both teachers and students as participants. It explores key dimensions such as students' academic performance, critical thinking skills, inclusivity in classroom practices, and teachers' awareness and use of pedagogical strategies. The findings of the study are expected to contribute to improving classroom practices and supporting teacher professional development in Social Studies education.

CHAPTER - II

REVIEW OF RELATED LITRATURE

2.1 Introduction:

The Review of Literature includes an analysis of various research reports, journal articles, policy documents, and previous theses related to collaborative learning and culturally responsive pedagogy. For the present study, the researcher has reviewed national and international research published in reputed educational journals such as Teaching and Teacher Education, Journal of Social Studies Research, and Indian Educational Review. Doctoral theses and dissertations related to Social Studies teaching at the secondary level were also examined.

Important policy reports like the National Education Policy 2020, NCERT position papers, and research publications from National Council of Educational Research and Training were studied to understand the Indian educational perspective. Theoretical foundations were based on the works of Lev Vygotsky and Gloria Ladson-Billings.

Thus, the review covers conceptual, theoretical, and empirical studies to identify research gaps and provide a strong foundation for the present investigation.

2.2. Study related to Collaborative Pedagogy (Indian and Western)

i. Study related to Culturally Responsive Pedagogy (Indian and Western)

ii. Study related to Collaborative and Culturally Responsive Pedagogy

I. Study related to Collaborative Pedagogy (Indian and Western)

1. Kerich, M., & Chepkoskei Kimwarey, M. (2026) in the twenty-first century, learners need to be able to collaborate and communicate effectively, especially in junior secondary school where fundamental skills are reinforced. In junior secondary schools in Uasin Gishu County, Kenya, this study examined the pedagogical strategies used by educators to foster these competences. The study's goals were to identify the teaching strategies teachers employed to help students develop their communication and collaboration skills, identify

the types of instructional resources teachers used to help students develop these skills, identify the assessment strategies teachers employed to help students develop these skills, and identify the difficulties teachers encountered in doing so. Based on social interactions and constructivist theories of learning

2. Katy leong Cheng Ho Weatherly (2026) This study looks at how nine in-service music educators' professional identities are shaped by collaborative pedagogy in a graduate-level music production course. Participants (N = 9) participated in democratic cooperation, reflective inquiry, and a collaborative composition project using Participatory Action Research based on the Zone of Generativity and Mandorla Model frameworks. Results show that identity creation is a non-linear, recursive process marked by co-construction, risk-taking, and conflict. The study emphasizes teacher learning as a dynamic, dialogic activity wherein persistent involvement with the interconnected processes of becoming, unbecoming, and mastering the "messiness" of learning leads to real change.
3. Aprullah, M. P., Sayuthi, M., Julnadi, S., Gunawan, W. B., Indrayani, I., Fuadi, R. Adria, A. (2026) This best practice research uses KOTAK (Artificial Intelligence-Based Brain Collaboration), a collaborative learning paradigm based on artificial intelligence, to help students at MAN 1 Banda Aceh develop 21st-century soft skills. 39 students participated in the study, which employed a qualitative case study design. Learning observations, interviews, and analysis of student activities and learning outcomes in the Integrated Economic Exploration material were used to gather data. In order to facilitate interactive, collaborative, and problem-solving-based learning, the KOTAK model was created by using a number of readily available AI tools, including Google Lens, ChatGPT, and Question Well. The findings demonstrated that applying the KOTAK approach greatly enhanced students' 4C (critical thinking, communication, collaboration, and creative) abilities.
4. Davronova Ma’rifatkhon Inomjonqizi. (2025). examines how collaborative learning might be used as a transformational educational strategy to improve future English teachers' critical thinking skills. Teacher education programs must equip pre-service teachers to participate in sophisticated reasoning, assess evidence, defend instructional judgments, and foster students' cognitive development since worldwide educational reforms place a strong emphasis on inquiry, autonomy, and problem-solving. Teacher candidates can interact,

negotiate meaning, examine pedagogical instances, co-construct knowledge, and critically reflect on their learning processes in dynamic environments created by collaborative learning, which is based on social constructivist philosophy. In addition to outlining useful tactics for teachers and highlighting implications for curriculum designers and researchers, the essay suggests an integrated strategy for integrating collaborative learning into English teacher preparation.

5. Zhou (2025) explores the practical application and significance of culturally responsive teaching (CRT) through the experiences of frontline instructors in higher education. The study emphasizes leveraging students' cultural knowledge, experiences, and perspectives to enhance learning outcomes, foster inclusion, and challenge inequities in the classroom. Zhou shares her personal journey, highlighting how standardized curricula often overlook local contexts, and emphasizes the importance of integrating students lived experiences into teaching practices.
6. Educational Effectiveness of Using Interactive Methods in Music Pedagogy (2025) This article investigates the educational efficacy of employing interactive techniques in music teaching, looking at how they affect students' critical thinking, creativity, engagement, and teamwork. In music education, interactive methods which offer a more dynamic and participatory learning experience have grown in popularity. These methods include digital tools, group projects, and hands-on learning techniques. The benefits of interactive pedagogy are covered in the article, including how it can encourage active learning, accommodate different learning preferences, and stimulate creativity. It also draws attention to the difficulties in incorporating new approaches into conventional music instruction, including the requirement for technology accessibility and teacher preparation. Despite these difficulties
7. *Karabacak, N. Üstündağ Kocakuşak, N. Vural, R. A., & Poyrazli, Ş. (2025)* This study sought to ascertain whether in-service training pertaining to the education of refugee children was offered, whether the curriculum in state primary schools was modified to meet the educational needs of Syrian refugee children, and what the educational needs of refugee students were. 372 Syrian refugee pupils in Turkey and 294 primary school instructors made up the sample. The Statistical Package for Social Sciences (SPSS) 24 was used to analyze the data and create frequency and percentage tables. The findings showed that the

refugee children's educational demands could not be met by the central curriculum or the teacher competencies. Additionally, it was determined that refugee pupils generally had low educational and socioeconomic backgrounds.

8. Acharya, B., Sigdel, S., &Poudel, O. (2024) Explore improve students' educational experiences and learning outcomes, this study examines the efficacy of collaborative teaching and learning techniques. By encouraging active engagement through group projects, discussions, and group problem-solving, collaborative education transforms the conventional teacher-centered paradigm into a more participative, student-centered one. In order to assess the effects of collaborative techniques on student achievement, motivation, and the development of fundamental skills like critical thinking, communication, and cooperation, this study looks at case studies, empirical data, and current literature. According to the study, developing better social skills, improving understanding, and improving information retention all depend on collaborative teaching and learning methods. In order to create a dynamic classroom environment, the advantages of peer learning, active engagement, and instructor facilitation are emphasized.
9. Dr. Sarita Chaudhary and Dr. Pranita Gopal (2024) in their article “Guiding Culturally Responsive Pedagogy in the Classroom with Textbooks” (Library Progress International, Vol. 44, No. 3, pp.3) explore how Culturally Responsive Pedagogy (CRP) aligns with the goals of NEP 2020. They emphasize integrating students’ cultural backgrounds, local knowledge, and languages into classroom teaching through textbooks. The study highlights that CRP supports inclusivity, equity, and holistic development, helping students value their cultural roots while fostering global awareness. The paper provides practical insights for teachers and curriculum developers to make learning more meaningful and culturally grounded.
10. (Legrain et al., 2023) explore Pre-service teachers' communication, reflective practice, and professional identity building are all improved by collaborative learning, which is based on constructivist and social learning theories. Research indicates that pre-service instructors usually cherish cooperative learning activities that incorporate discussion, problem-solving, and peer evaluation since these experiences enhance pedagogical abilities and get students ready for actual classroom challenges

11. Caingcoy (2023) provides a systematic overview of culturally responsive pedagogy (CRP), underscoring its significance in fostering inclusive and equitable learning environments. The article explains that integrating students' cultural and linguistic backgrounds into instruction enhances motivation, engagement, and academic success. CRP encourages teachers to use diverse strategies that connect curriculum content to students lived experiences and cultural perspectives, making learning more authentic and relevant.
12. Del-Moral-Pérez et al., 2019, Sung et al., (2022) particularly for seasoned educators, the incorporation of digital pedagogies and collaborative learning settings has drastically changed educational methods. Collaborative learning settings promote deeper involvement and critical thinking abilities by emphasizing teamwork and shared accountability among students.

    Digital pedagogies, on the other hand, use technology to improve instructional strategies,
13. Omodan, B. (2021) since kids seem to benefit from collaborative pedagogy, many schools have adopted it to make sure that students actively participate in the process of producing knowledge. However, there are obstacles that both students and their teachers must overcome in order for students to actively participate in the collaborative process of producing knowledge. Similarly, the study also looks at potential strategies for overcoming the obstacles. In order to investigate the paths taken by collaborative classrooms in educational institutions, the argument is situated within social constructivism and conceptual analysis of collaborative pedagogy. The study suggested remedies to the problems, such as encouraging students to be united in their diversity, introducing cultural differences into the classroom, and encouraging students to be more open to social interaction.
14. Miri Shonfeld , Megan Cotnam-Kappel (2021) This article explores theoretical frameworks, practical applications, and challenges associated with implementing cross-cultural digital pedagogy in global academic settings. By synthesizing recent scholarship and examining contemporary practices, this discussion highlights the transformative potential of culturally responsive digital learning environments in promoting equitable, inclusive, and enduring international academic partnerships that contribute to global knowledge creation and educational innovation.

15. Iyer, S. (2021) emphasizes that function of culturally responsive teaching (CRT) in multilingual Indian classrooms is investigated in this study. The study used a mixed-methods approach with 600 pupils and 250 teachers from various school environments. Less than half of teachers consistently implement culturally and linguistically responsive tactics in their classes, despite the fact that the majority are aware of CRT concepts and acknowledge its motivational benefits. Large class sizes, a lack of multilingual resources, time constraints, and inadequate institutional support are some of the main obstacles. When their cultural and linguistic origins were represented in classroom instruction, students reported increased comprehension, engagement, and confidence. To successfully apply CRT in India's multilingual education system, the study suggests policy changes, teacher preparation, culturally appropriate instructional materials, and increased leadership support.
16. Kate Ferguson-Patrick,&Wendy Jolliffe. (2018) According to this study, teachers may become confused since cooperative learning and collaborative learning are frequently employed interchangeably in educational contexts. Collaborative learning, according to researchers, is a process in which students actively participate in problem-solving and knowledge-building as a group. Collaborative learning entails group members' mutual engagement, according to Pierre Dillenbourg et al. (1996). In a similar vein, William Damon and Anne Phelps (1989) highlighted participant equality as a crucial component of teamwork. According to some academics like Barbara Leigh Smith and Jean T. MacGregor (1992), collaborative learning is students working together to improve understanding. In general, cooperation promotes student engagement, common interests, and active participation, all of which enhance inclusive learning in the twenty-first century.
17. Jessica W. Pardee, Alice Fothergill, & Lori Peek. (2017) The collective method, a cooperative research strategy employed by a team of twelve academics examining the impact of Hurricane Katrina on displaced communities, is described in this article. Researchers working on similar but separate projects routinely discuss their theories and research techniques as part of the collective method. Each study's quality, accountability, and transparency are all enhanced by this partnership. Additionally, the method pushes researchers to consider significant concerns including their own role in the study process, power dynamics, and ethical obligations. The approach, which is based on feminist theory

and concepts like intersectionality, strengthens the ethical and methodological components of research while assisting researchers in gaining a deeper understanding of social justice concerns.

18. Social Studies Research and Practice (2016) This case study investigated how a collaborative, interdisciplinary partnership supported pre-service teachers' approach to integrating content and pedagogy in coursework and field-based experiences at a large, public university. The collaboration involved articulating shared goals and objectives, planning and teaching co-requisite courses, and sharing a vision of shaping future social studies teachers. The research questions that framed this study were: What elements contributed to a successful collaborative, interdisciplinary partnership? How did faculty involved in the collaboration conceptualize supporting pre-service teachers' development of pedagogical content knowledge (PCK)? The voices of the faculty members involved in this collaboration are highlighted to illustrate how they conceptualized meeting the needs of pre-service social studies teachers.

II. Study related to Culturally Responsive Pedagogy (Indian and Western)

1. Kamryn S. Morris, Addison M. Duane, Valerie B. Shapiro (2026) explore how culturally relevant and sustaining pedagogies (CRSPs) affect teachers, they are essential for changing students' learning environments. Despite the fact that most educators understand the need of CRSPs, instructors are vulnerable to burnout due to a lack of resources and conflicting demands. We looked into the impact of demographic moderators and CRSPs as a predictor of burnout among in-service instructors in California. The results showed that while taking into account the impact of racism increased burnout, teachers' utilization of students' cultural backgrounds predicted decreased burnout, with grade level of instruction showing substantial moderating effects. There includes discussion of the implications for policy makers, school administrators, and teacher educators.
2. Erna Mena Niman (2026) highlight the culturally responsive and relevant education, it is becoming more and more crucial to incorporate local culture into basic social studies training. This qualitative case study looks into how teachers incorporate local cultural values into their teaching methods in order to create a more meaningful and contextually relevant learning environment. In-depth interviews, classroom observations, and a review of lesson plans and instructional materials were used to gather data from ten elementary

school teachers who were specifically chosen to take part in the study. Thematic analysis was used to identify themes and patterns in the data. The findings demonstrate how educators creatively integrate local culture through field research, folktales, and cooperative studies with local leaders.

3. Emily Adah Miller, Emily V. Reigh, Clausell Mathis (2025) A teaching strategy known as culturally responsive pedagogy (CRP) aims to undermine the unfair systems that cause minority students to accrue educational debt. Fewer studies on CRP in science education have concentrated on actual teaching practices, such as the use of curriculum resources, than on the ideologies and dispositions of instructors. According to CRP, educators must actively reconstruct curriculum to put their students' cultures at the core of them. In this study, we examine how one teacher implemented a large-scale science curriculum in a Spanish-English dual-language immersion class serving Latino kids using ethnographic methodologies influenced by Ladson-Billings' original work. We demonstrate how the instructor embodies the principles of CRP.
4. Anjali Mehra Rosen (2025) explore traditional one-size-fits-all teaching strategies are failing to satisfy the educational needs of culturally diverse classrooms in an increasingly globalized and diverse world. A crucial tactic for guaranteeing inclusivity, engagement, and academic performance for students from various cultural backgrounds is Culturally Responsive Pedagogy (CRP). The theoretical foundations, real-world applications, and educational results of CRP in multicultural learning settings are examined in this paper. The study examines how CRP affects classroom interactions, curriculum design, and teacher-student relationships. CRP dramatically increases student motivation, closes academic gaps, and promotes deeper learning, according to data from American and international schools.
5. Viano and Darling-Aduana (2025) systematically review 42 studies on integrating Culturally Relevant Pedagogy (CRP) in K 12 online learning. The review emphasizes the incorporation of CRP tenets academic excellence, cultural competence, and critical consciousness across asynchronous, synchronous, and blended modalities. Key findings highlight strategies for validating students’ cultural backgrounds and experiences, with innovative examples from pre and post COVID-19 studies. The authors underscore the

need for further research on fostering critical consciousness online, including engaging students in social justice and power sharing activities.

6. Xiaoqian Bi USA (2025) According to the author international students frequently face difficulties that affect their academic performance and acculturation when they attend American universities, according to the author. In order to investigate these students' experiences and talk about remedies in the form of culturally responsive pedagogy (CRP), this study used community-based research. According to the study's findings, students can improve their academic performance, foster a positive sense of community, and become more involved in the classroom when instructors are tolerant and attentive to cultural differences. In order to create more compassionate and welcoming learning environments for international students, this study aimed to motivate more instructors to successfully apply CRP.
7. Caingcoy, M. E. (2023) results show that teaching that is culturally sensitive improves students' academic performance, engagement, and general wellbeing. The necessity of developing solid teacher-student connections and modifying instructional tactics to accommodate a range of learning requirements is also emphasized in the study. It also talks about how critical consciousness can help students confront societal injustices and stereotypes. In order for instructors to successfully apply culturally responsive approaches, the study emphasizes the necessity of ongoing professional development. The author concludes that in order to support students from varied cultural backgrounds, educational institutions should implement inclusive techniques.
8. Guberina, T. (2023) explain component of the educational strategy known as culturally responsive pedagogy (CRP) involves recognizing the cultural backgrounds, experiences, and viewpoints of pupils. Its primary goal is to foster an inclusive learning environment that supports each student's success. CRP's efficacy depends on a wide range of individual circumstances, but cultural acknowledgment and appreciation are crucial. This means making room in the curriculum and teaching strategies for students varied cultural identities and backgrounds. Another essential component of CRP is the use of culturally appropriate teaching resources and techniques, which serve to both inspire and engage students from diverse backgrounds.

9. Moses Ackah Anlimachie (2023). The researcher gathered information for an ethnographic case study in a rural basic school in Ghana using focus groups, teacher reflective writings, interviews, field observations, and student assignments. Based on CRP theory and Pierre Bourdieu's socio-cultural theory, the study discovered that students' goals and academic achievement are heavily impacted by their surroundings, cultural capital, and significant social actors like teachers and families. The study emphasizes the importance of teachers' cultural capital in enhancing the educational outcomes of rural kids, including their ability to comprehend the socio-cultural backgrounds of their pupils, develop local cultural competences, and foster collaboration between the home and school.
10. Pendi Kurniawan (2023) used Culturally Responsive Pedagogy (CRP) to study how Ulos culture is incorporated into Christian religious education in Indonesia. The study emphasizes how religious education frequently ignores regional cultural variety, including the customs of the Batak people, in favor of concentrating primarily on religious beliefs. According to the research, Christian education can be enhanced and given greater significance for pupils by incorporating the spiritual and social ideals of Ulos culture. The study, which employs a qualitative literature review methodology, proposes that incorporating regional culture into religious education can foster a more diverse and inclusive learning environment. The results suggest a multifaceted approach to Christian education that empowers students, advances equality, and fortifies social bonds in multicultural communities.
11. Wen-Chia Chang and Kara Mitchell Viesca (2022), Culturally Responsive Pedagogy (CRP) has been considered an important strategy for improving the educational experiences of historically marginalized groups. Over the past two decades, CRP has influenced teacher education programs and encouraged research on preparing teachers to work effectively in diverse classrooms. However, the authors point out that some studies have not fully achieved the transformative goals of CRP, especially in addressing racism and the influence of white-supremacist structures in education systems. Therefore, the study emphasizes the need for future research and teacher education programs to expand existing knowledge and develop innovative practices to better implement culturally responsive teaching.

12. Pamela Konkol, Catherine J. Whitaker, &Shelley R. Mitchell. (2020). Author investigates marginalized circumstances of rural and Native American populations, which have led to unequal recruitment and retention in teacher education in remote places, are examined in this essay. We found strong opposition from local educators to the idea that "culture" influences student achievement while leading a series of workshops on Culturally Responsive Pedagogy with schools in a nearby rural county with a large Native population and a very low student academic achievement rate. We hope to develop teachers who will return to their communities dedicated to enhancing schools and promoting equity and social-emotional and academic success for their future students by giving students in remote areas more access to higher education and teacher licensing, as well as by integrating equity, diversity, inclusion, and culturally relevant curriculum into all Satellite coursework.

13. Conra Gist, Iesha Jackson, Bianca Nightengale-Lee, &Keisha Allen. (2019) The significance of Culturally Responsive Pedagogy (CRP) in instructing various student populations in the US is explained in this paper. The method emphasizes incorporating students' cultural customs, experiences, and viewpoints into the educational process. The authors emphasize how CRP contributes to the development of meaningful and transformative learning experiences, particularly for students from different racial, ethnic, and linguistic backgrounds. For students of color, who have frequently experienced marginalization in schools, it is especially crucial. According to the report, teacher education programs are crucial in helping aspiring educators comprehend diversity and use culturally sensitive teaching methods in the classroom.

14. According to Ayana Allen, Stephen D. Hancock, and Chance W. Lewis (2017), teacher education programs are essential for training future educators. Nonetheless, a lot of programs struggle to give teacher candidates the right teaching techniques for diverse classrooms. The study highlights the importance of Culturally Relevant Pedagogy (CRP), which strives to improve students' academic performance while also fostering cultural awareness and critical thinking. According to the authors, integrating CRP into teacher education programs might help future teachers better understand the many cultural backgrounds of their students and create more hospitable and effective learning environments.

15. United Nations. (2015). The study explores pacific developing countries, offering a culturally responsive pedagogy is seen as a crucial component of providing a high-quality education that is continuous and able to be sustained over time. A high-quality, sustainable education is thought to promote curriculum practices, policies, and cultural inclusivity in schools. Education can be a potent tool for broader sustainable economic growth in the Pacific area by guaranteeing inclusive and high-quality education. In order to achieve this, signatories to the United Nations Pacific expressed support for the educational aim, promoting a quality education that is inclusive, equal, and encourages learning that is pertinent to everyone.
16. Linda J. Graham and Sue A. O'Neill (2017). Through interviews with Indigenous parents and students, the study investigated the features of Culturally Responsive Pedagogy (CRP). The researchers created a survey tool to gauge teachers' culturally sensitive teaching methods based on these findings. 141 elementary and secondary school instructors participated in the survey's testing. The study verified that the Rasch Model is a useful tool for measuring culturally responsive pedagogy and for identifying variations in elementary and secondary teachers' methods of instruction.
17. Helen J. Boon. (2015) This study looked at how Australian Indigenous students' learning results are affected by Culturally Responsive Pedagogy (CRP). In order to comprehend the crucial elements of culturally responsive teaching, the researchers first gathered data through interviews with Indigenous parents and children. A survey instrument was created to gauge teachers' culturally sensitive teaching methods based on these elements. 141 elementary and secondary school instructors from various schools participated in the survey's testing. The results demonstrated that the instrument successfully assesses culturally responsive instruction using Item Response Theory and the Rasch Model. Additionally, the study demonstrated that the tool can detect changes in teaching practices between elementary and secondary instructors and validated seven important subscales.
18. Sharma, R. (2015) this article, a lot of schools still use uniform teaching methods and frequently overlook the cultural diversity of their pupils. School systems continue to prioritize sameness over diversity, despite teachers' awareness that students come from a variety of backgrounds. The study emphasizes the value of Culturally Relevant Pedagogy (CRP), which links classroom instruction to students' experiences at home and in the

community. The authors advise educators to modify curricula, instructional strategies, and evaluation procedures in accordance with students' cultural norms and beliefs. Schools may establish a welcoming, safe, and respectful learning environment for all children by doing this.

19. Aspasia Mylonaki. (2016) The significance of heritage languages in the contemporary globalized world is covered in this article. In addition to being associated with minority populations, heritage languages play a significant role in multilingual communication and cultural heritage. Developing plurilingualism and intercultural competence is crucial for active engagement in social and democratic life since people frequently interact in diverse linguistic and cultural contexts in today's global society. The study emphasizes how Culturally Responsive Pedagogy, which values students' language and cultural origins, supports inclusive learning. It highlights the need for educators to cultivate intercultural awareness and modify their pedagogical approaches to accommodate students' varied backgrounds. In addition to encouraging egalitarian education, collaborative learning, and reflective teaching methods, this strategy supports the preservation and purposeful use of heritage languages in the classroom.

20. G. Sudha, S. Thilaga, J. Deepa (2026) address the urgent need to develop flexible, moral, and innovative future leaders who can successfully navigate quickly changing global corporate environments, this chapter examines the transformative pedagogy paradigm in the context of management education. In order to promote critical thinking, decision-making, communication, leadership, and real-world problem-solving all essential skills in today's professional settings it emphasizes the combination of active learning, educational technology, and collaborative activities.

III. Study related to Collaborative and Culturally Responsive Pedagogy

1. Al-Jarf, R. (2026) according to the author, three themes emerged from the studies: the types of collaboration (local, national, and international), the skills and courses engaged, and the technologies utilized, including learning management systems, social media platforms, and video-conferencing applications. The results demonstrated that collaborative learning supported instructors' professional development while also typically improving students' language proficiency, cultural awareness, engagement, and interaction. Student-centered

assignments, easily available technology, and proactive teacher supervision were essential for productive teamwork. Peer evaluation, idea exchange, and improved motivation and communication skills all helped students. However, a few examples failed because of participant unfamiliarity, cultural limitations, and a lack of digital readiness. Overall, the analysis shows that collaborative learning has a lot of potential for language development, but that its effectiveness depends on appropriate instructional design, technical support, and contextual and cultural sensitivity.

2. Rhoades, R. (2025). The study emphasizes how these kinds of cooperative, arts-based learning environments can support the development of critical awareness, multicultural understanding, and socially responsible teaching methods in aspiring educators. Additionally, it demonstrates how interacting with people of the community enables teacher candidates to question power structures and respect the opinions of underrepresented groups.

3. Asri, Badruddin, Muhmmad Idris (2025) emphasis on cognitive, metacognitive, and relational group activities, this study investigates the relationship between interaction quality in collaborative learning and student outcomes and satisfaction in Indonesian high schools. A newly created and validated questionnaire designed to capture the subtleties of collaborative learning and the incorporation of Pancasila values was used in the study, which involved 117 students in 23 groups in Takalar, Indonesia. The findings show that increased learning outcomes and satisfaction are strongly correlated with high-quality contact, particularly a supportive communication style, active engagement, and a happy group environment. Additionally, while views about learning did not significantly correlate with interaction quality, individual perspective-taking abilities did. Strong community ties were linked to improved teamwork and increased happiness at the group level.

4. Maghfiroh, A., Prayitno, H. J., Yusof, N., Simpol, W., Suhendar, U., Asiyah, S., & Yulianti, D. (2025) This study looks at how co-teaching, or collaborative teaching, can help aspiring English teachers become more professional during an internship program in Thai schools. Two English mentors and two Indonesian aspiring teachers were observed and interviewed by the researchers using a descriptive qualitative method. As mentors and trainee teachers collaborate on course planning, classroom implementation, and evaluation,

the results demonstrate the important role co-teaching plays in teacher professional development. The prospective teachers' English language proficiency, social skills, and pedagogical ability all improved as a result of this cooperative approach. According to the study, collaborative teaching is a successful method for enhancing teachers' professionalism and sense of self in EFL classes.

5. Sablić, M., Mirosavljević, A., & Bogatić, K. (2025) Advance inclusive and fair education, this study investigates the incorporation of Montessori concepts into multigrade classroom architecture. The results show that integrating Montessori techniques with multigrade instruction can produce adaptable and cooperative learning environments for kids with a range of skills and experiences when inclusion is prioritized. The study also highlights the importance of critically addressing issues that affect educational practices, including power dynamics, cultural domination, and systemic inequalities. All things considered, the study advances knowledge of inclusive and culturally sustaining pedagogies and offers a theoretical foundation for upcoming empirical studies on the implementation of Montessori principles in various multigrade contexts.

6. Nganga and Kambutu (2024) draw attention to the difficulties Native American students encounter when curricula are created by teachers from the dominant culture who do not have a thorough understanding of Indigenous cultural contexts. The researchers investigated Indigenous perspectives on successful teaching methods using a cooperative autoethnography and professional development program. Their results highlight the significance of community-based collaborative learning and culturally appropriate curricula in fostering genuine culturally responsive teaching. In order to effectively serve different learners, the report also suggests that teacher education programs improve cooperation between educators and Indigenous communities.

7. Shehzad, M. U., Zhang, J., Alam, S., Cao, Z., Boamah, F. A., & Ahmad, M. (2023) This study looks at the connections between frugal innovation (FI), knowledge management (KM) procedures, and collaborative culture (CC). The results demonstrate that collaborative culture supports features of frugal innovation, especially frugal functionality and frugal cost, and has a good impact on knowledge management procedures. The relationship between collaborative culture and these two elements is somewhat mediated

by KM procedures, but not by the frugal ecology. Furthermore, the influence of collaborative culture on KM procedures and frugal functionality is strengthened by perceived organizational support, whereas the impact on frugal cost and the frugal ecosystem is weakened. Overall, the study emphasizes how crucial teamwork and knowledge management are to fostering successful innovation.

8. Sujatha, S., & Vinayakan, K. (2022). The role of collaborative learning in mathematics education: A review of research and practice. *Indo American Journal of Multidisciplinary Research and Review (IAJMRR), 6*(2), 200–206.

9. Pratt-Johnson Yvonne (2021) In order to support English Language Learners (ELLs), this study looks at a program that encouraged cooperation between content teachers and English as a Second Language (ESL) teachers. Teachers from New York City took part in an educational trip to West Bengal, India, as part of the program, where they learned about the legacy language and culture of many ELL children. The results demonstrate that this kind of cooperation enhanced instructors' comprehension of culturally appropriate pedagogy and enhanced their capacity to assist a varied student body. Additionally, the study discovered that while ESL teachers had a greater sense of professional equality through teamwork, content teachers gained more self-assurance and accountability when instructing ELLs.

10. Kulkarni, S. S., Stacy, J., and Kertyzia, H. (2019) describe how three teacher educators at a Hispanic-serving institution in Southern California understood, practiced, and promoted democratic education during the politically charged years of 2015–2016. The study emphasizes how their views on democratic education were put to the test by the emergence of neoliberal ideology during the 2016 election. The results demonstrate that teacher educators responded by thinking back on their methods and highlighting inclusive pedagogy, critical discourse, and democratic principles in the classroom. The study emphasizes how crucial it is to support democratic education and culturally sensitive instruction, especially in unpredictable social and political circumstances.

11. Garland and Bryan (2017) stress the significance of collaboration between schools, families, and communities. The study emphasizes how teachers may foster a more

welcoming and encouraging learning environment for pupils by actively including families and community members in the educational process. Such collaboration helps educators better understand students' cultural backgrounds and incorporate them into classroom practices. Strong collaborations between educators, families, and communities, according to the authors, foster meaningful learning experiences, increase student involvement, and foster cultural respect.

12. Cole, M. W., David, S. S., & Jiménez, R. T. (2016) This study uses Bonny Norton's concept of investment to examine how middle school emergent bilingual students negotiated their language identities while participating in a culturally responsive intervention. The intervention incorporated students' translanguaging practices to support the development of English reading comprehension. The findings show that students actively exercised agency by negotiating how they were positioned by peers, the research team, and the school environment. The dynamic nature of their language identities demonstrates both the opportunities and challenges of recognizing and supporting student agency in the classroom.
13. According to Colbert (2010), culture has a significant impact on how kids engage and learn in the classroom. According to the report, a lot of traditional colleges were not built with culturally diverse student populations in mind, which can make teaching and learning difficult. The author advises educators to first consider their own cultural upbringings and recognize how their prejudices and beliefs could affect their instruction. Additionally, a collaborative workshop program for faculty that emphasized intercultural learning and culturally responsive teaching is described in the report. Teachers were able to better comprehend students' cultural backgrounds and make connections between classroom material and students' real-life experiences through discussion and collaboration, which contributes to the development of a more dynamic and inclusive learning environment.
14. Denise Stuart, Dinah Volk (2000) This study looks at cooperation in a community center's summer literacy tutoring program for kids between the ages of 6 and 8, the majority of whom were multilingual Puerto Ricans who spoke Spanish and English. Through interesting literacy exercises and children's books that are culturally appropriate, the program sought to boost pupils' motivation to read. From a socio-cultural standpoint, the activities focused on group learning and linked to children's literacy experiences at home.

The study demonstrates how tutors, who were enrolled in a teacher education program at the university, collaborated with kids to promote literacy development. Additionally, it addresses the advantages and difficulties of cooperation and recommends that collaborative practices be specifically included in teacher preparation programs as a crucial part of literacy pedagogy for learners from linguistically and culturally diverse backgrounds.

15. Li, C., Jiang, Y., Ng, P. H. F., Dai, Y., Cheung, F., & Chan, H. C. B. (2024), examines function of metaverse-based platforms in facilitating computer-supported collaborative learning in remote learning is investigated in this work. Twenty undergraduate students participated in the study and used AltSpace, Gather, and Zoom to discuss course-related subjects. The results demonstrate that, in comparison to conventional video conferencing technologies, metaverse platforms like AltSpace and Gather, which offer avatar-based interaction, enhanced student engagement, collaboration, and a sense of community. The study emphasizes how metaverse technology might improve online learning collaboration experiences.

2.3 Research Gap: Social Studies Collaborative and Culturally Responsive Pedagogy

although culturally responsive pedagogy (CRP) and collaborative learning are well acknowledged, their combined application in social studies, particularly in diverse, multicultural classrooms, is still understudied. Research frequently examines CRP and cooperation independently, demonstrating advantages including more diversity and involvement. Few research, especially outside of Western cultures, examine how their integration affects students' learning in social studies. Practical models, teacher preparation, and thorough data from places like Africa or India are lacking. Long-term effects on civic identity and cultural understanding are understudied, and student voices, instructor attitudes, and structural support are rarely examined collectively.

School Leaders and Culturally Responsive Practices

Building inclusive settings is a major responsibility of school administrators. Effective leaders hire teachers who are sensitive to cultural differences, encourage inclusive practices, and guarantee correct execution through training, as Vogel (2011) points out. According to Gruenter and Whitaker (2016), leaders must maintain high standards and not put up with detrimental behavior since they set the tone for school culture. Instead of encouraging competitive, individual success, the culturally sensitive teachers promoted a community of learners. Individual accomplishment did not suffer as a result of the class as a whole being held to a higher standard of academic performance. (Page 480 of Ladson Billings, 1995)

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains in detail how the present research study was carried out. It describes the nature of the study, the area selected for investigation, the population and sampling techniques, the research tools used, the process of data collection, and the methods applied for data analysis. The main purpose of this chapter is to clearly show that the research was conducted in a systematic, scientific, and ethical way. A clearly planned methodology forms the foundation of any research study, as it ensures that each step of the research process is logically organized and methodologically appropriate.

Research methodology provides a clear and structured framework for studying the research problem in a transparent and reliable manner. Since the present study deals with complex social, educational, and economic aspects within the school environment, it requires a careful and well-planned methodological approach. A clearly described methodology helps to improve the credibility, reliability, and validity of the research findings. This, in turn, allows the study to make meaningful contributions to academic knowledge as well as to educational planning and policy development. By clearly explaining the research design, sampling procedures, and data collection tools, this chapter lays a strong foundation for the entire research process, guiding the study from its initial planning to the final interpretation of results. Moreover, such transparency enables other researchers to replicate or extend the study in the future, thereby strengthening research in this area.

The use of a survey method approach is appropriate because the research objectives are diverse and complex. Quantitative methods help in collecting numerical data that can be statistically analyzed and generalized, while qualitative methods provide deeper understanding of the experiences, views, and real-life situations of the participants. Combining both approaches allows the researcher to examine the research problem from different angles and to cross-check the findings through data triangulation. This integration increases the depth, accuracy, and practical value of the study. The selection of research methods has also been guided by factors such as the nature of the participants, practical feasibility, ethical considerations, and the real classroom setting

in which the study was conducted. Overall, the chosen methodology shows a close alignment between the research questions and the most suitable methods used to answer them effectively.

3.2 Research Questions

1. What is the level of perceived effectiveness of collaborative pedagogy in social sciences among secondary schools' students?
2. What is the level of perceived effectiveness of culturally responsive pedagogy in social sciences among secondary schools' students?
3. What are the benefits of the collaborative culturally responsive pedagogy in addressing the needs of culturally diverse students?
4. What challenges do teachers encounter while implementing collaborative and Culturally responsive pedagogies?
5. What strategies can enhance the successful adoption of these teaching approaches in Secondary schools?

3.3 Objectives of the study:

1. To study the perceived effectiveness of collaborative pedagogy among secondary students 'in social studies with reference to Communication & Expression, Team Participation & Cooperation, Leadership & Responsibility, and Reasoning & Decision Making.
2. To study the perceived effectiveness of culturally responsive pedagogy among secondary students in social studies with reference to Social Awareness & Real Life Connection, Cultural Sensitivity & Inclusiveness.
3. To identify the challenges faced by teachers in implementing collaborative and culturally responsive pedagogy
4. To study the perceptions of teachers and headmasters regarding the relevance of collaborative and culturally responsive pedagogy in TLP.
5. To develop guidelines for integrating these approaches into Secondary school curricula in the Marathwada region of Maharashtra.

3.4 Hypothesis of the study

Objective 1: Collaborative Pedagogy (Students)

H01: There is no significant difference in students' perception of Communication & Expression under collaborative pedagogy with respect to gender (Male/Female/Transgender) , locale (rural/urban), type of school (government/private), medium of instruction, and class level.

H02: There is no significant difference in students' perception of Team Participation & Cooperation under collaborative pedagogy with respect to gender, locale (rural/urban), type of school (government/private), medium of instruction, and class level.

H03: There is no significant difference in students' perception of Leadership & Responsibility under collaborative pedagogy with respect to gender, locale (rural/urban), type of school (government/private), medium of instruction, and class level.

H04: There is no significant difference in students' perception of Reasoning & Decision Making under collaborative pedagogy with respect to gender, locale (rural/urban), type of school (government/private), medium of instruction, and class level.

H05: There is no significant difference in the overall perceived effectiveness of collaborative pedagogy among secondary students with respect to gender, locale (rural/urban), type of school (government/private), medium of instruction, and class level.

Objective 2: Culturally Responsive Pedagogy (Students)

H06: There is no significant difference in students' perception of Social Awareness &Real Life Connection under culturally responsive pedagogy with respect to gender, locale (rural/urban), type of school (government/private), medium of instruction, and class level.

H07: There is no significant difference in students' perception of Cultural Sensitivity & Inclusiveness under culturally responsive pedagogy with respect to gender, locale (rural/urban), type of school (government/private), medium of instruction, and class level.

H08: There is no significant difference in the overall perceived effectiveness of culturally responsive pedagogy among secondary students with respect to gender, locale (rural/urban), type of school (government/private), medium of instruction, and class level. Hypotheses for

Objective 4: Perceptions of Students and Teachers Regarding the Relevance of Collaborative and Culturally Responsive Pedagogy

H09: There is no significant difference in students' perception regarding the relevance of collaborative and culturally responsive pedagogy across social categories (ST, SC, OBC, and General).

H010: There is no significant difference in teachers' perception regarding collaborative and culturally responsive pedagogy with respect to gender.

H011: There is no significant difference in teachers' perception regarding collaborative and culturally responsive pedagogy with respect to locality (rural and urban).

H012: There is no significant difference in teachers' perception regarding collaborative and culturally responsive pedagogy across subjects taught.

H013: There is no significant difference in teachers' perception regarding collaborative and culturally responsive pedagogy across class taught (Class IX, Class X, and both IX & X).

H014: There is no significant difference in teachers' perception regarding collaborative and culturally responsive pedagogy across years of teaching experience.

H015: There is no significant difference in teachers' perceptions across the five dimensions of collaborative and culturally responsive pedagogy with respect to subject taught.

H016: There is no significant difference in teachers' perceptions across the five dimensions of collaborative and culturally responsive pedagogy with respect to class taught.

H017: There is no significant difference in teachers' perceptions across the five dimensions of collaborative and culturally responsive pedagogy with respect to job experience. make two section null and alternative hypothesis

3.5 Variable of the study

3.5.1 In Dependent Variable (Primary Study Variable)

Since this is a perceived effectiveness study, the main variable being measured is:

Perceived Effectiveness of Collaborative and Culturally Responsive Pedagogy

This includes the following dimensions:

A. Perceived Effectiveness of Collaborative Pedagogy in terms of

- Communication & Expression

- Team Participation & Cooperation
- Leadership & Responsibility
- Reasoning & Decision Making

B. Perceived Effectiveness of Culturally Responsive Pedagogy in terms of

- Social Awareness & Real-life Connection
- Cultural Sensitivity & Inclusiveness

C. Perceived Relevance (Students & Teachers)

- Awareness & Understanding
- Perceived Relevance & Importance
- Classroom Implementation
- Student Response & Impact
- Institutional Support & Professional Need

These are the **outcome (dependent) variables**, because they are being measured and compared across groups.

3.5.2 Dependent Variables

In a perception study like yours, the independent variables are the **background or demographic characteristics** used to compare differences in perception.

Student Independent Variables

- Gender
- Locale (Rural / Urban)
- Type of School (Government / Private)
- Medium of Instruction
- Class Level (IX / X)
- Social Category (ST / SC / OBC / General)

Teacher Independent Variables

- Gender
- Locality (Rural / Urban)
- Subject Taught
- Class Taught
- Years of Teaching Experience

3.5.3 Nature of Variables

- The study is a non-experimental and comparative in nature.
- No manipulation of pedagogy was done.
- Perceptions were measured and compared across demographic groups.
- Therefore, pedagogy itself is not manipulated but evaluated in terms of perceived effectiveness.

3.6 Research Design

This study employed a mixed method approach integrating both quantitative and qualitative approaches (QUAN-qual) to study the effectiveness of collaborative and culturally responsive pedagogy in secondary schools of Marathwada Region of Maharashtra State.

The rationale behind this design is to combine the strengths of numerical data with the depth of contextual understanding, thereby providing a holistic analysis of pedagogical practices and outcomes.

Population:

The study population included three major stakeholder groups in the teaching-learning process of social studies at the secondary level (IX and X Class)

Sample:1048students, 95teachers, and 25 school headmasters. These groups were drawn from selected districts in the Marathwada region of Maharashtra to ensure a comprehensive understanding of the research focus.

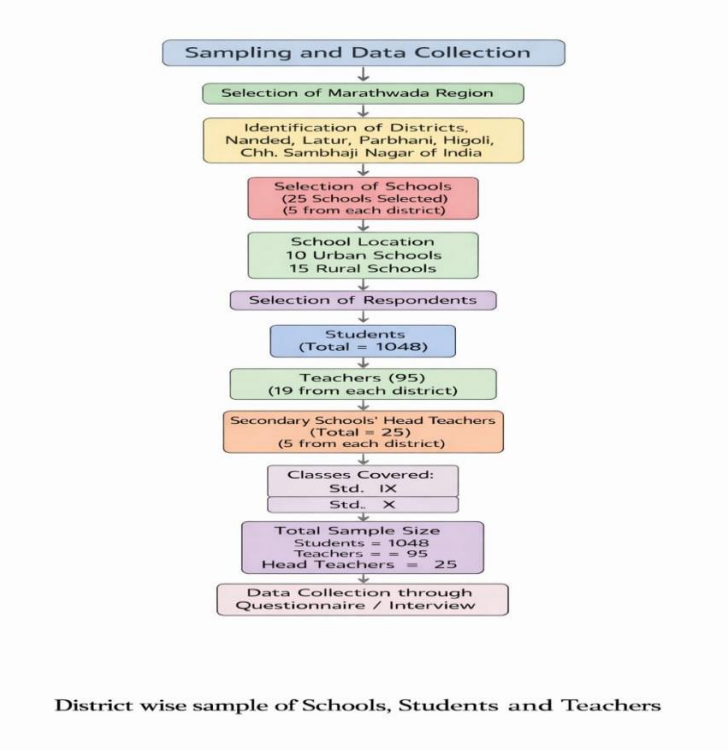
Geographic Coverage: The research was conducted in **five districts of the Marathwada region**- Nanded, Parbhani, Hingoli, Latur, and Chharapati Sambhaji Nagar. The selection ensured a balance between urban and rural schools and included institutions from both government and private sectors, offering a representative view of the region's educational landscape.

3.7 Sample/Sampling techniques:

Sampling Technique

The present study adopted the purposive sampling technique for the selection of districts, schools, and participants. In purposive sampling, the researcher deliberately selects units that are considered most relevant and suitable for achieving the objectives of the study. In the present study, five districts—Nanded, Hingoli, Latur, Parbhani, and Chhatrapati Sambhaji Nagar—were purposively selected considering their accessibility and relevance to the study. From these districts, twenty-five secondary schools were chosen for data collection, including fifteen rural schools and ten urban schools. The participants of the study consisted of secondary school students, teachers, and headmasters from the selected schools. A total of 1048 students from Classes IX and X studying in schools affiliated with the Maharashtra State Board of Secondary and Higher Secondary Education were included in the study. Additionally, 95 teachers (one Social Science teacher and three language teachers from each school) and 25 headmasters were purposively selected to provide information related to classroom practices, pedagogical implementation, and administrative perspectives.

Thus, purposive sampling enabled the researcher to select participants who were directly involved in the teaching–learning process and were capable of providing meaningful data relevant to the objectives of the study.



(Graph 1.5 Flow Chart of Data Sampling and collection)

District wise sample of Schools,Students and Teachers

The chart shows the overall distribution of the sample selected for the study. A total of 25 schools were included, out of which 15 schools were from rural areas and 10 schools were from urban areas. From these schools, students of Classes IX and X were selected. The student sample consisted of 1048 students.

Table 3.1

Districts and Schools for data collection

District	Rural Schools	Urban Schools
Nanded	3	2
Hingoli	3	2
Latur	3	2
Parbhani	3	2
Sambhaji Nagar	3	2
Total -5 Districts	15	10

Field Administration (Actual Application Statement): After finalizing the questionnaire, it was administered to students of grades 9-10 in selected schools of Nanded district. Analysis of the collected data led to the conclusion that the questionnaire is objective, clear, and suitable for measurement purposes in this study.

1. **Secondary School Students:** The primary participants were students from Classes 9 and 10 in secondary schools affiliated with the Maharashtra State Board. A total of **1048 students** participated in the study, selected from twenty-five schools (Nanded, Parbhani, Hingoli, Latur, and Chharapati Sambhaji Nagar). Efforts were made to ensure diverse representation across socio-economic, gender, and cultural backgrounds, including both rural and urban contexts.

2. **Social Studies Teachers:** A total of **95 teachers** were selected –4 (1 Social Science and 3 Language teachers) from each of the 25 participating schools. These secondary-level social studies teachers taught Classes 9 and 10. Their inclusion helped assess practical implementation, perceptions, and outcomes of culturally responsive and collaborative pedagogy in actual classroom settings.

3. **School Headmasters:** The third group comprised **25 headmasters** from the selected schools. Their insights helped to understand the administrative support, policy perspectives, and school-level facilitation of innovative pedagogical strategies.

3.8 Tools of research:

Four research tools were developed; the first for students, and the others included questionnaires for teacher perceptions, teacher interviews, and headmaster interviews.

3.9. Researcher Constructed Tool:

1. Introduction

The reliability and validity of research findings largely depend on the appropriateness and quality of the tools used. This study used a diverse set of instruments for both quantitative and qualitative data collection. All tools were developed based on academic standards, validated by experts.

2. Item Generation from Past Literature

Two structured questionnaires and two interview schedules were prepared. The initial phase of preparing the research tool was grounded in the literature. The past studies was reviewed to identify the measurable dimensions and indicators for items generations.

Table 3.2

Item Generation from the Past Studies for Student Perceptions Scale

Sr. No.	Authors (Year)	Key Dimension from Literature	Indicators Derived	Example Item Framing	Research Setting
1	Vygotsky (1978); Gillies (2023)	Social interaction in learning	Peer collaboration, scaffolding	"Group discussions help me learn better."	Classroom learning
2	Slavin (1995); Rashid &Asghar (2022)	Cooperative learning outcomes	Peer support, shared goals	"My classmates help me understand lessons."	School-based studies
3	Chen et al. (2024); Zhang (2023)	Collaborative engagement	Participation, shared responsibility	"I actively participate in group activities."	Blended & classroom settings
4	Kaddoura (2023)	Critical thinking through collaboration	Reasoning, discussion-based learning	"Group discussions improve my thinking."	School & higher education

5	Ladson-Billings (1995); Kushwaha& Kumar (2025)	Cultural relevance	Identity affirmation, belonging	"My teacher respects my cultural background."	Multicultural & Indian schools
6	Gay (2010); Safa (2025)	Cultural responsiveness	Contextual examples, cultural respect	"Lessons include examples from real life."	School classrooms
7	Banks (2008); Jackson-Summers et al. (2024)	Multicultural awareness	Diversity respect, inclusion	"Students from all cultures are respected."	Inclusive classrooms
8	Hammond (2015); Frontiers Education Study (2025)	Inclusive classroom climate	Emotional safety, student voice	"I feel safe sharing my ideas in class."	Equity-focused classrooms
9	Van Leeuwen& Janssen (2022)	Guided collaboration	Structured teamwork	"Teachers help us work effectively in groups."	Collaborative classrooms

Table 3.3

Item Generation from the Past Studies for Teacher Perceptions Scale

Sr. No.	Authors (Year)	Key Dimension from Literature	Indicators Derived	Example Item Framing	Research Setting
1	Johnson & Johnson (1999); Buchs et al. (2022)	Cooperative learning pedagogy	Structured group work, interdependence	"I use structured collaborative learning."	Cooperative classrooms
2	Gillies (2023)	Teacher facilitation role	Scaffolding, monitoring groups	"I guide students during group work."	School classrooms
3	Van Leeuwen& Janssen (2022)	Guided collaboration strategies	Role assignment, structured interaction	"I assign roles during group activities."	Collaborative classrooms
4	Chen et al. (2024); Zhang (2023)	Collaborative outcomes	Engagement, teamwork outcomes	"Collaboration improves student learning."	Blended learning
5	Ladson-Billings (1995); Kushwaha&Kumar (2025)	Culturally relevant teaching	Cultural integration, student identity	"I connect lessons with students' culture."	Multicultural & Indian schools

6	Gay (2010; 2018); Safa (2025)	Culturally responsive pedagogy	Contextual teaching, inclusivity	"I adapt teaching to diverse backgrounds."	Teacher education & schools
7	Banks (2008); Jackson-Summers et al. (2024)	Multicultural education	Diversity inclusion, equity	"I promote respect for diversity."	Inclusive classrooms
8	Gay & Howard (2000); Smith et al. (2022)	Equity pedagogy & barriers	Anti-bias teaching, challenges	"I face challenges in inclusive teaching."	Secondary education
9	Frontiers Education Study (2025)	Professional collaboration	Co-planning, teacher collaboration	"I collaborate with peers for planning."	Teacher professional communities

Separate scales were drafted for students and teachers based on a comprehensive review of classical and contemporary literature on collaborative learning and culturally responsive pedagogy. Foundational theories such as social constructivism and cooperative learning informed the collaborative dimensions (Vygotsky, 1978; Johnson & Johnson, 1999), while recent empirical studies highlighted engagement, structured collaboration, and critical thinking outcomes (Buchs et al., 2022; Gillies, 2023; Chen et al., 2024).

Similarly, culturally responsive pedagogy literature emphasized cultural inclusivity, belongingness, and equity in classrooms (Ladson-Billings, 1995; Gay, 2010), supported by recent studies focusing on inclusive classroom climates and culturally relevant practices in diverse and Indian contexts (Kushwaha& Kumar, 2025; Jackson-Summers et al., 2024). Based on these insights, key dimensions were operationalized into measurable indicators and converted into Likert-type items suitable for school students and teachers. The interview schedule for teacher and headmaster was also developed to gather the qualitative insights.

All the research tools were presented before experts in five days workshop which was primary organized to scrutinize the tools and finalize it for data collection.

3.9.1 Workshop (5 Day's) for Tools Development and Review

Title of the Study: A Study of Effectiveness of Collaborative and Culturally Responsive Pedagogy in Social Studies among Secondary School Students of Marathwada Region of Maharashtra State.

Duration: 29th July to 2nd August 2025

Venue: R.I.E Bhopal

Participants: 7 Internal Professors along with 1 JPF and 3 External Resource Persons

Introduction:

A five-day's workshop was organized from 29th July to 2nd August 2025 with the objective of developing and reviewing research tools for the above-mentioned study. The workshop focused on designing valid and reliable instruments, ensuring cultural relevance, and refining the translation of tools in Marathi for effective field use.

During the five-day's workshop, on two days the internal faculty reviewed the research tools and provided their comments. During these sessions, Professor RatnamalaArya Ma'am, Professor N. C. Ojha Sir, Dr.Sanjay Kumar Pandagale Sir (Associate Professor),Dr.Saurabh Kumar (Associate Professor), Dr. Pawan Kumar and Venkat SuryavanshiAssistant Professor were present.

On the first two days, they refined the Student perceptiontool, Head Teacher interview tool, Teacher perception tool component-wise and suggested improvements in the translation, as the language was difficult. The language of the research tool was simplified to make it easier to understand. On the second day, the language and translation of the research tool were reviewed again.

Participants-

The workshop included 11 internal professors and the following Internal Resource Person:

1. Dr. Ratnamala Arya (Professor)
2. Dr. N.C. Ojha (Professor)
3. Dr. Sanjay Kumar Pandagale (Associate Professor)
4. Dr. Saurabh Kumar (Associate Professor)
5. Dr. Pavan Kumar (Assistant Professor)
6. Dr. Venkat Suryawanshi (Assistant Professor)
7. Mr. Naru Gopal Dey (Assistant Professor)
8. Dr. Dharmendra Patil (JPF)

Resource Person:

1. Dr. Chandrakant Baviskar (Professor)
2. Dr. Vaibhav Jadhav (Associate Professor)
3. Dr. Rajkumar Nanaware (Assistant Professor) participated as external reviewers and provided valuable feedback.

3.9.2 Tool Development and Standardization from External Expert

Revision of scale by internal and external experts: During the five-day workshop, after incorporating suggestions and improving the language in the internal experts' questionnaire, the tool was reviewed by external experts on 1st and 2nd August 2025. The first tool reviewed was the Student Perception Tool, in which 80 questions had initially been framed.

- The experts conducted an in-depth review of the questions by examining their language clarity and relevance to the research objectives such as critical thinking skills, inclusivity, academic performance, teacher awareness, and teacher training. Based on their detailed feedback, the wording and suitability of the questions were refined and improved. After final revision, out of the initial 80 questions, only 37 questions were finalized for the Student Perception Tool.
- All the questions of the Teacher Questionnaire (Teacher Perception Tool) were carefully read and understood, because teachers are the most important resource who can bring innovation in education and conduct new experiments in teaching-learning. While developing the Teacher Perception Tool, many important points were taken into consideration. The questions were framed by keeping the research objectives and expected outcomes in mind.
- First, general information about the teacher was collected. After that, the questionnaire was divided into five sections. Section 1 was related to Collaborative Teaching and the development which was linked to Objective 1. This section included 4 questions. Section 2 focused on Culturally Responsive Teaching, Inclusion, and Engagement, and it was included under Objective 2. Section 3 covered Challenges in Teaching and contained 4 questions under Objective 3. Section 4 included 4 questions related to Objective 4. Section 5 included questions based on Objective 5, focusing on Guidelines for Curriculum Integration.
- In addition, two open-ended questions related to C&CRP (Collaborative and Culturally Responsive Pedagogy) were also included, where teachers had to write their responses. These questions were related to the challenges faced by teachers and their suggestions for improvement. Most of the questions were developed on a 5-point Likert scale.

- While developing the Head Teacher Interview Tool, which was interview-based, the research objectives were kept in mind. Similar to the Teacher Questionnaire, this tool was also divided into different sections. Section A: General Background- This section included questions related to the school's background such as whether the school is located in a rural or urban area and the total student enrolment. Initially, 10 questions were prepared, but after detailed review, only 5 questions were finalized.
- Section B: Collaborative Pedagogy (Objective 1): This section focused on collaborative pedagogy under Objective 1. A total of 10 questions were framed, and out of these, 5 questions were selected based on experts' conclusions.
- Section C: Culturally Responsive Pedagogy (Objective 2) :Under Objective 2, 10 questions were developed on culturally responsive pedagogy. From these, 5 questions were modified and finalized for the study.
- Section D: School Environment and Support:In this section, 10 questions were initially framed. After reconsideration, only 5 questions were selected for the research. These questions focused on classroom observation, motivation, inclusion, administrative support, collaboration, community participation, and parents' participation.
- Section E: Challenges in Implementation (Objective 3):This section included 10 questions related to major obstacles and challenges in implementing Collaborative and Culturally Responsive Pedagogy. Out of these, 5 questions were shortlisted, corrected, and finalized.
- Section F: Perception and Impact (Objective 4):For Objective 4, 10 questions were developed for heads and parents to understand their perceptions and the impact of the pedagogy. Finally, only 3 questions were selected for the research.
- Section G: Suggestions and Recommendations (Objective 5):This section was based on Objective 5 and focused on suggestions for improving the use of C&CRP and the required improvements in curriculum integration. Initially, 10 open-ended questions were prepared, but only 2 questions were selected and finalized.
- (A) Content Validity:The questionnaire/tool used in this research was developed in accordance with the research objectives. The questionnaire primarily included key dimensions such as Collaborative Pedagogy (CP), Culturally Responsive Pedagogy (CRP), and School Environment and Support. Initially, questions related to each dimension were formulated based on a literature review and the research objectives. Subsequently, the

questionnaire was presented to internal and external experts to assess the relevance of the questions to the objectives, clarity of language, appropriateness, simplicity, and measurement capabilities.

- Based on the suggestions provided by the experts, necessary modifications, rewording, and deletions were made to the questions. In this way, the content validity of the questionnaire was ensured.
- (B) Face Validity: The questionnaire was designed to be simple, clear, and unambiguous, suitable for students in grades 9-10. It was also ensured that the questions related to CP and CRP accurately reflected students' real-life experiences in school, such as cooperation, participation, inclusion, equal opportunities, respect, and cultural diversity, therefore, the face validity of the questionnaire was ensured.
- (C) Construct Validity: The questionnaire was structured according to the key constructs of the research. The CP-based questions measure students' group work, participation, peer learning, shared decision-making, and collaborative learning behaviors. The CRP-based questions measure respect for cultural diversity, inclusive behavior, equal opportunities, locally relevant learning, and fairness towards all students. The questions related to School Environment and Support focus on the school environment, teacher support, resource availability, and learning opportunities. The questions related to School Environment and Support focus on the school environment, teacher support, resource availability, and learning opportunities.

Table 3.4

Proceedings and Highlights of tool development and review:

Sr. No	Date	Discussed point	Remark
1	29/07/25-31/07/25	Presentation and discussion and correction, suggestion, feedback of draft research tools by internal resource person professors. Tools such as questionnaires, students, Teacher perception scales, Teacher interview and Head Teacher interview schedules were introduced and explained.	Edited and final research tools

2	01/08/25 -02/08/25	Presentation and discussion and correction, reviewed the research tools and provided valuable suggestions for improvement in terms of clarity by external Resource person. Tools such as questionnaires, students, Teacher perception scales, Teacher interview and Head Teacher interview schedules were introduced and explained.	Edited and corrected and translated final research tools



3.9.3 Translation and Back-Translation (Item wise translation)

Given the bilingual context, all instruments were made available in **both English and Marathi**. To ensure linguistic and conceptual accuracy:

1. **Initial Translation:** Conducted by a bilingual education expert.
2. **Back-Translation:** Independently carried out by a second expert uninformed of the original text.
3. **Comparative Review:** The original and back-translated English versions were compared to ensure semantic reliability.
4. **Revisions:** Minor edits were made to eliminate discrepancies without changing the intended meaning.

This process ensured that language did not hinder participant comprehension, enhancing the reliability of the collected data.

Outcomes

1. Research tools were revised and refined with expert inputs: …..
2. Culturally responsive aspects were integrated more effectively.
3. Translation into Marathi was reviewed for accuracy and clarity.
4. External reviewers ensured academic rigor and feasibility.

Conclusion

The five-day workshop (Internal/External Experts) was highly productive. While the first three days included active participation of internal resource persons, the last two days (29 Jul –2nd August 2025) relied mainly on the contributions of external experts, who gave focused and practical feedback. Their valuable inputs, along with the collective efforts of the internal professors, helped shape high-quality, culturally responsive, and field-ready research tools.

3.9.4 Item Modification/Reduction/Alteration/Scaling

Based on the detailed review and feedback from internal and external experts, the items were modified, reworded, and refined to improve clarity, relevance, and alignment with the research objectives. Redundant and unsuitable items were removed, resulting in a reduced and more focused set of questions. Most items were formatted on a 5-point Likert scale, while a few open-ended items were retained to capture qualitative insights.

3.9.5`Tools Standardization

The tool standardization process includes the reliability of student and teacher perceptions scale. The face validity as well as content validity was also checked to ensure the objectivity of the tool. There was total four teacher tool which are described below with their respective items.

1. **Student Perception Scale Questionnaire (37 items):** Focused on group learning, classroom engagement, cultural inclusivity, and student-teacher relationships.
2. **Teacher Perception Scale Questionnaire (24 items):** Addressed the frequency and types of collaborative practices, inclusion of cultural backgrounds in lessons, and perceived impact of these methods.
3. **Teacher Interview -11 Structured Questionnaire** section wise (Collaborative pedagogy, Culturally Responsive Pedagogy, Effectiveness and Impact)
4. **Head Masters Interview Schedule:31 Structured Questionnaire**
5. **Standardization of Research Tools**

Tool–1: Student Perception Scale

The Student Perception Scale was standardized through item analysis, reliability estimation, and expert validation. Item analysis showed acceptable difficulty indices, reliability was satisfactory (Cronbach's $\alpha = .806$), and face and content validity were confirmed through internal and external expert review ensuring clarity and construct coverage.

Tool–2: Teacher Perception Scale

The Teacher Perception Scale was standardized using item analysis and expert validation procedures. Items demonstrated moderate to high endorsement levels, acceptable reliability (Cronbach's $\alpha = .664$), and established face and content validity through expert assessment of relevance and representativeness.

Tool–3: Teacher Interview Schedule

The Teacher Interview Schedule was standardized through expert-based face and content validation, ensuring clarity of questions and adequate representation of collaborative and culturally responsive pedagogy dimensions.

Tool–4: Headmaster Interview Schedule

The Headmaster Interview Schedule was standardized through expert validation and content mapping procedures, confirming clarity, contextual suitability, and comprehensive institutional coverage.

Internal Consistency of Student Perception Scale

Table 3.5

Reliability of Student Perception Scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.806	.836	37

Table 3.6
Item Analysis of Student Perception Scale

Item No.	N	Mean	SD	Difficulty Index (p)	Interpretation
1	1046	1.67	0.696	0.33	Moderate (Lower side)
2	1046	2.01	0.892	0.4	Moderate
3	1046	2.34	1.079	0.47	Moderate
4	1046	1.75	0.994	0.35	Moderate (Lower side)
5	1046	1.58	0.775	0.32	Moderate (Lower side)
6	1046	2.09	1.11	0.42	Moderate
7	1046	3.52	1.327	0.7	High endorsement
8	1046	2.36	1.066	0.47	Moderate
9	1046	2.26	1.082	0.45	Moderate
10	1046	2.25	1.12	0.45	Moderate
11	1046	1.61	0.929	0.32	Moderate (Lower side)
12	1046	2.42	1.319	0.48	Moderate
13	1046	2.13	1.046	0.43	Moderate
14	1046	1.71	0.87	0.34	Moderate (Lower side)
15	1046	1.57	0.814	0.31	Moderate (Lower side)
16	1046	1.93	1.026	0.39	Moderate
17	1046	1.76	0.882	0.35	Moderate (Lower side)

18	1046	1.69	0.88	0.34	Moderate (Lower side)
19	1046	1.74	0.798	0.35	Moderate (Lower side)
20	1046	1.73	0.865	0.35	Moderate (Lower side)
21	1046	2.06	0.956	0.41	Moderate
22	1046	1.55	0.793	0.31	Moderate (Lower side)
23	1046	1.66	0.842	0.33	Moderate (Lower side)
24	1046	3.23	1.498	0.65	Moderate (Higher side)
25	1046	1.71	0.873	0.34	Moderate (Lower side)
26	1046	1.78	0.875	0.36	Moderate
27	1046	1.82	1.011	0.36	Moderate
28	1046	3.28	1.39	0.66	Moderate (Higher side)
29	1046	1.86	0.928	0.37	Moderate
30	1046	1.71	0.852	0.34	Moderate (Lower side)
31	1046	1.51	0.843	0.3	Borderline Low
32	1046	2.08	0.995	0.42	Moderate
33	1046	1.41	0.666	0.28	Low endorsement
34	1046	1.56	0.786	0.31	Moderate (Lower side)
35	1046	1.67	0.85	0.33	Moderate
36	1046	1.37	0.725	0.27	Low endorsement
37	1046	1.29	0.694	0.26	Low endorsement

Table 3.7

Face Validity of Student Perception Scale

Sr. No.	Validity Type	How Validity Was Ensured	Evidence from 5-Day Workshop
1	**Face Validity**	Items were simplified linguistically and made age-appropriate for Grade IX–X students. Focus was on clarity, readability, and real-life relevance.	Internal experts reviewed language on Day 1–2 and recommended simplification. Tools were reworded and translated into Marathi for better comprehension.
2	**Face Validity**	Questions reflected real classroom experiences like cooperation, participation, inclusion, and peer learning.	Experts checked alignment with students' lived experiences and classroom realities.

Table 3.8

Content Validity of Student Perception Scale

Sr. No.	Content Validity Parameter	Process Followed	Supporting Literature
1	Construct Identification	Constructs derived from literature on Collaborative and Culturally Responsive Pedagogy	(Gay, 2018; Vygotsky, 1978)
2	Initial Item Pool Generation	Large pool of 80 items prepared before screening	Scale development guidelines (DeVellis, 2017)
3	Objective Mapping	Items aligned with research objectives and domains	Construct representation principles (Haynes et al., 1995)
4	Internal Expert Review	Faculty evaluated relevance, clarity, and suitability	Expert validation approach (Lynn, 1986)
5	Language Simplification	Items refined for Grade IX–X cognitive level	Instrument clarity norms (DeVellis, 2017)
6	External Expert Validation	Independent review for representativeness and redundancy	Content validation framework (Lawshe, 1975)
7	Item Screening and Reduction	Removal of weak or overlapping items	Item purification method (Nunnally& Bernstein, 1994)
8	Final Construct Representation	Final 37 items retained ensuring full construct coverage	Content adequacy principle (Haynes et al., 1995)

Internal Consistency of Student Perception Scale

Table 3.9

Table Reliability of Teacher Perception Scale

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.664	.730	24

Table 3.10

Item Analysis of Teacher Perception Scale

Item No.	N	Mean	SD	Difficulty Index (p)	Interpretation
1	94	3.84	0.976	0.77	High endorsement
2	94	4.01	1.052	0.8	High endorsement
3	94	3.19	1.454	0.64	Moderate–High
4	94	2.67	1.323	0.53	Moderate–High
5	94	4.37	0.842	0.87	High endorsement
6	94	4.2	0.811	0.84	High endorsement
7	94	3.65	0.981	0.73	High endorsement
8	94	3.96	0.926	0.79	High endorsement
9	94	2.54	1.357	0.51	Moderate–High
10	94	4	1.016	0.8	High endorsement
11	94	4.21	0.788	0.84	High endorsement
12	94	2.48	1.268	0.5	Moderate
13	94	4.2	0.875	0.84	High endorsement
14	94	2.74	1.344	0.55	Moderate–High
15	94	3.9	1.117	0.78	High endorsement
16	94	2.57	1.403	0.51	Moderate–High
17	94	4.02	1.097	0.8	High endorsement
18	94	4.05	0.955	0.81	High endorsement
19	94	3.98	0.916	0.8	High endorsement
20	94	4.31	0.704	0.86	High endorsement
21	94	3.93	0.986	0.79	High endorsement
22	94	4.06	0.773	0.81	High endorsement
23	94	4.03	0.909	0.81	High endorsement
24	94	4.1	0.856	0.82	High endorsement

Table 3.11

Face Validity of Teacher Perception Scale

Sr. No.	Validity Type	How Validity Was Ensured	Evidence from 5-Day Workshop
1	**Face Validity**	Language simplified for teacher clarity and professional relevance.	Internal experts reviewed wording and structure during initial sessions.
2	**Face Validity**	Items structured around real teaching practices like implementation, challenges, and student response.	Experts ensured contextual relevance to classroom realities and pedagogy.

Table 3.12

Content Validity of Teacher Perception Scale

Sr. No.	Content Validity Parameter	Process Followed	Supporting Literature
1	Literature-Based Drafting	Items drafted from pedagogy and teacher perception literature	Teacher belief studies (Bandura, 1997; Gay, 2018)
2	Objective-Based Structuring	Items mapped to awareness, implementation, challenges, impact	Construct-domain alignment (Haynes et al., 1995)
3	Initial Draft Development	Multi-dimensional draft prepared before expert review	Scale construction steps (DeVellis, 2017)
4	Internal Expert Scrutiny	Faculty checked pedagogical relevance and coverage	Expert judgement method (Lynn, 1986)
5	External Expert Validation	External reviewers evaluated content adequacy	Content Validity Ratio method (Lawshe, 1975)
6	Item Refinement	Rewording and deletion of ambiguous items	Instrument refinement norms (Nunnally& Bernstein, 1994)
7	Dimensional Structuring	Final domains retained after expert consensus	Domain sampling principle (Haynes et al., 1995)
8	Final Validation	Validated components retained for final administration	Valid scale construction (DeVellis, 2017)

Face and Content Validity of the Teacher Interview Schedule

The Teacher Interview Schedule was designed to capture teachers lived experiences, perceptions, and classroom practices related to collaborative and culturally responsive pedagogy. Similar validation procedures were followed to ensure the quality and rigor of the instrument.

Face Validity

The initial draft of the teacher interview schedule was reviewed by a panel of five experts comprising teacher educators, researchers in pedagogy, and experienced school practitioners. They assessed the clarity, readability, and contextual suitability of the questions for practicing teachers.

Based on their recommendations, technical jargon was simplified, leading questions were neutralized, and examples were added to enhance interpretability. The sequence of questions was refined to move from general teaching experiences to specific instructional strategies and reflections. The experts unanimously agreed that the schedule was understandable and appropriate for eliciting meaningful teacher responses, thereby establishing face validity.

Content Validity

To establish content validity, the interview questions were aligned with theoretical and empirical literature on culturally responsive teaching and collaborative learning frameworks. A content mapping matrix was developed to ensure representation of the following domains:

- Understanding of collaborative pedagogy
- Classroom implementation strategies
- Cultural responsiveness in teaching practices
- Student participation and inclusivity
- Challenges and support needs
- Perceived impact on student learning outcomes

Experts evaluated the relevance and comprehensiveness of each question. Items that overlapped conceptually were merged, while additional probing questions were incorporated to capture nuanced classroom realities. The consensus among experts indicated that the schedule comprehensively represented the construct dimensions. Thus, the teacher interview schedule demonstrated adequate content validity.

Face and Content Validity of the Headmaster Interview Schedule

The Headmaster Interview Schedule was developed to explore school-level perspectives on the implementation, challenges, and effectiveness of collaborative and culturally responsive

pedagogical practices. To ensure validity, both face validity and content validity were established through a systematic expert review process.

Face Validity

Face validity refers to the extent to which an instrument appears effective in terms of its stated aims. The interview schedule was reviewed by five experts in the fields of educational leadership, pedagogy, and school governance. These experts included university professors, senior teacher educators, and experienced school administrators. They evaluated the clarity, relevance, and comprehensibility of the interview questions.

Based on their suggestions, ambiguous wording was revised, redundant questions were removed, and the sequence of questions was reorganized to ensure a logical flow from general school context to specific pedagogical practices. The experts agreed that the schedule appeared appropriate for capturing headmasters' perceptions and administrative insights, thereby establishing satisfactory face validity.

Content Validity

Content validity was ensured to verify that the interview schedule adequately covered all relevant domains of the construct under study. A content validity framework was developed based on literature on collaborative pedagogy, culturally responsive teaching, and instructional leadership. The schedule was mapped across key dimensions such as:

- Institutional support for collaborative pedagogy
- Cultural inclusivity in school practices
- Teacher professional development
- Classroom implementation challenges
- Perceived impact on student engagement and learning

Experts rated each question in terms of relevance and representativeness using a three-point scale (Essential, Useful but not essential, not necessary). Based on their feedback, minor modifications were made, including rephrasing culturally sensitive questions and adding probes for contextual depth. The high level of agreement among experts indicated adequate coverage of the content domain, confirming strong content validity.

The Final Tool for Data Collection

Tool -1 (Student Perception Scale)

The Student Perception Scale Questionnaire had 37 items and it focused on group learning, classroom engagement, cultural inclusivity, and student-teacher relationships.

Table 3.13

Dimension of Student Perception Scale and Items

Sr. No	Scale	Component	Question Numbers
1	Collaborative Pedagogy	Communication & Expression	5, 15, 18, 20, 31, 32
2	Collaborative Pedagogy	Team Participation & Cooperation	14, 16, 17, 19, 21, 25, 26, 29, 30, 34, 35
3	Collaborative Pedagogy	Leadership & Responsibility	23, 24, 27, 33
4	Collaborative Pedagogy	Reasoning & Decision-Making	4, 8, 12, 13
5	Culturally Responsive Pedagogy	Social Awareness & Real-life Connection	1, 2, 3, 6, 7, 9, 10, 28
6	Culturally Responsive Pedagogy	Cultural Sensitivity & Inclusiveness	11, 22, 36, 37

Reversely scored items-24,7,28

Tool -2 (Student Perception Scale)

The Teacher Perception Scale Questionnaire had 24 items and it addressed the frequency and types of collaborative practices, inclusion of cultural backgrounds in lessons, and perceived impact of these methods.

Table 3.14

Dimension of Teacher Perception Scale and Items

Sr. No	Scale	Component	Question Numbers
1	**Teacher Perception**	Awareness and understanding	1,2,3,4
2		Perceived relevance and importance	5,6,7,8,9
3		Classroom implementation	10,11,12,13,14
4		Students response and impact	15,16,17,18,19
5		Instructional support and professional needs	20,21,22,23,24

Reversely scored items-4, 9,14, 24

Tool -3 (Teacher Interview Schedule)

The Teacher Interview schedule comprised of 11 Questions, which was built on three sections such as Collaborative Pedagogy, Culturally Responsive Pedagogy, Effectiveness and Impact.

Tool -3 (Headmaster Interview Schedule)

Head Masters Interview Schedule:31 Questions section wise (Section A: General Background, Section, 5 Questions, Section B : Collaborative Pedagogy (Objective 1) Questions 6,Section C: Culturally Responsive Pedagogy (Objective 2),5 Questions, Section E: Challenges in Implementation (Objective 3), 5 Questions, Section F: Perception and Impact (Objective 4), 3 Questions, Section G: Suggestions and Recommendations (Objective 5),2 Questions. In the headmasters' interviews, questions were included to understand the availability of facilities for teaching social science in the schools and the qualifications of the teachers. The interviews also explored the extent to which teachers used **collaborative** and **culturally responsive pedagogy** to engage students in the learning process.

Table 3.15

Components of Headmaster Interview Schedule

Sr. No	Scale	Component	Question Numbers
1	Section A	General Background	Structured interview questions
2	Section B	Collaborative Pedagogy	
3	Section C	Culturally Responsive Pedagogy	
4	Section E	Challenges in Implementation	
5	Section F	Perception and Impact	
6	Section G	Suggestions and Recommendations	

Tools used a **5-point Likert scale** Students survey form and teacher's scale (from "Strongly Agree" to "Strongly Disagree") and were linguistically tailored to suit respondents' cognitive levels.

3.10 Main Study:

This study included only 5 districts (Nanded,Hingoli,Latur,Parbhani,ChhatrapatiSambhaji Nagar) of the Marathwada region of Maharashtra.

3.11 Data collection

Table 3.16

Data Collection School details -Nanded District

Sr. No	Name of the School	School Location	No. of Students	No. of Teachers	No. of Head Master	School Affiliation/Board
1	ZilaParishad High School ,Visnupuri	Urban	40	4	1	Govt. UDISE-27150107301
2	Dr.Narayan Bhalerao High School snehnagar	Urban	40	4	1	Private aided UDISE-27151702505
3	Vidhya Niketan Girls High School Biloli	Rural	40	4	1	Private aided UDISE-27150801508
4	Lal Bhadur Shastri High School Kasrali	Rural	40	4	1	Private aided UDSIE-27150804502

5	ZilaParishad High School Lohgaon	Rural	40	2	1	Government UDISE-27150806101
Total	School =5		Students =200	Teachers =18	Head Masters=5	02 Government, 04 Private aided

Table 3.17

Data Collection School details: District-Hingoli

Sr. No	**Name of the School**	**School Location**	**No. of Students**	**No. of Teachers**	**No. of Head Master**	**School Affiliation/ Board**
1	M.N.Qureshi Urdu High School	Rural	40	4	1	Private aided UDISE-27160305706
2	ZilaParishadPrashalaKurunda	Urban	40	4	1	Govt.aided UDISE-27160305707
3	MankeshwarVidhyalayKautha	Rural	40	4	1	Govt.aided UDISE-27160305707
4	ShantaBaiMunjaji DaradeMaddhyamik School	Urban	40	4	1	Govt.aided UDISE-27160100120
5	ZilaParishadPrashalaHingoli	Urban	40	2	1	Govt.aided UDISE-27160409604
Total	**School =5**		**Students= 200**	**Teachers =18**	**Head Masters =5**	**02 Government, 03 Private aided**

Table 3.18

Data Collection School details: District-Latur

Sr. No	Name of the School	School Location	No. of Students	No. of Teachers	No. of Head Master	School Affiliation/ Board
1	Maulana Azad Urdu High School Ahmadpur	Urban	40	4	1	Govt.Aided UDISE Code-27280900164
2	Vimla Bai Deshmukh Girls School Ahmadpur	Urban	40	4	1	Govt.Aided UDISE Code-27280900124
3	Swami Dayanand Vidhyalay Kavha	Rural	40	4	1	Govt.Aided UDISE Code-2728107204
4	Shri Chhatrapati Shivaji Vidhyalaya,Madvati	Rural	40	4	1	Govt.Aided UDISE Code-27281201010
5	Zila Parishad Prashala, Harangul	Rural	40	2	1	Govt. UDISE Code-27280101501
Total	School =5		Students =200	Teachers =19	Head Masters=5	01 Government, 04 Private aided

Table 3.19

Data Collection School details: District Parbhani

Sr. No	Name of the School	School Location	No. of Students	No. of Teachers	No. of Head Master	School Affiliation/ Board
1	Kai.Rao Saheb Jamkar Vidhyalay (NutanVidhyaMandir)	Urban	40	4	1	Govt. Aided UDISE Code 27171000165
2	Gandhi Vidhyalaya	Urban	40	4	1	Govt. Aided UDISE code-27171000125
3	Zila Parishad PashalaJaamb	Rural	40	4	1	Govt. UDISE Code 27170504002
4	City Middle School, Pedgaon	Rural	40	4	1	Govt. Aided UDISE code-27170513027
5	Zila Parishad Pashala Pedgaon Parbhani	Rural	48	4	1	Govt. UDISE Code-27170507404
Total	**School =5**		**Students= 208**	**Teachers= 20**	**Head Masters=5**	**02 Government, 03 Private aided**

Table 3.20

Data Collection School details: District-Sambhaji Nagar

Sr. No	Name of the School	School Location	No. of Students	No. of Teachers	No. of Head Master	School Affiliation/ Board
1	Gurudev Samantbhadra VidyaMandir,Ellora, Khultabad	Rural	50	4	1	Govt.Aided UDISE Code-219042545
2	P.M.ZilaParishad PrashalaSavangi Bazar, Khultabad	Urban	50	4	1	Govt.UDISE Code-27190405501
3	P.M.ZilaParishadPrashala, Ganori	Rural	40	4	1	Govt.UDISE Code-27190900702
4	ShriSraswatiBhuvanPrashala	Urban	50	4	1	Govt.Aided UDISE Code-27191101112
5	MukulMandir School	Urban	50	4	1	Govt.Aided UDISE Code-27191002503
Total	**School =5**		**Students= 240**	**Teachers =20**	**Head Masters= 5**	**02 Government , 03 Private aided**

First phase of the data collection done from District Nanded -Visit date (8-13 Sept.2025):

1. **Zila Parishad Vishnupuri:** Zila Parishad Vishnupuri, Nanded is a government institution. This school has been declared a PM SHRI School. The enrollment of students in the school is good, and the level of education is also satisfactory. However, there is a need for Social Studies teachers because the number of students is high, which has resulted in a low

teacher–student ratio. The school campus is well-maintained and has a boundary wall. CCTV cameras are installed for security. The school also has smart classrooms, and the classroom sizes are adequate. The lighting arrangement in the classrooms is proper. The head teacher of the school is a female teacher. Public representatives and local leaders frequently visit the school, which also helps maintain the quality of education and discipline among the students.

2. **Dr. Narayanrao Bhalerao School:** School is a private school, but it is a well-established and recognized institution. The school is quite old and has been functioning for many years. All the students were present in their prescribed school uniforms. The school is located in an urban area. The enrollment of students is satisfactory and the student–teacher ratio is also good. However, the classroom size is slightly small. The school needs smart classrooms to improve the teaching–learning process. The school has boundary walls for safety. Overall, the academic results of the school are good and the quality of education is satisfactory.

3. **Vidhya Niketan Girls School:** School is located in the Biloli Taluka of Nanded district. It is a private but very old and well-established institution. Only girls study in this school. Since it is located in a rural area, it is very beneficial for girls because they do not have to travel far distances to continue their education. The school has a good teaching staff and the headmaster of the school is also a female teacher. However, there is a need to improve the boundary wall arrangement. The school ground also needs better management so that students can have a proper space for playing. Currently, there is a lot of dust and soil in the playground area. The arrangements for drinking water and washrooms for boys and girls are not sufficient and require improvement. The academic results of the girls are satisfactory. Social Science teachers are also adequate according to the teacher–student ratio.

4. **Lal Bahadur Shastri School:** School is a very old institution and its building is also quite old. The enrollment of students in the school is high. However, the seating arrangements are not adequate, as there are not enough tables and chairs for the students. The school ground is not well maintained. The students were present in their proper school uniforms.

The school boundary wall was not clearly visible. There is no permanent drinking water facility in the school, and water is brought by tanker. Separate washrooms for boys and girls were not properly available and the existing washrooms were found to be in a very poor and damaged condition. The size of the classrooms is good, but there is a need to develop smart classrooms to improve the teaching–learning process.

The number of teachers in the school is sufficient. The quality of education appears satisfactory, as it was reflected in the students' knowledge and their ability to communicate. The communication skills of the students were good. The head teacher of the school is male, and his leadership and management of the school are quite effective.

5. **Zilha Parishad High School,** School Lohga on is a rural school. The academic quality of the students here is good. During the research, through cultural visits and interactions, leadership qualities were observed among both boys and girls. There is no separate Social Science teacher in the school; the headmaster himself teaches English and Social Science subjects. The school has sufficient staff, and the students were well-dressed in their proper school uniforms. There is a need toilet for students, as the existing facilities are not sufficient. The school also requires proper boundary walls for better safety and management

II Phase Data Collection from 7/11/2025 to 14/11/2055 (District Latur and Hingoli)

6. **Maulana Azad Urdu High School, Ahmadpur:** This School, is located in urban area, District Laturis a good school where students mostly belong to the Muslim community. The enrolment of boys is comparatively lower, while girls show greater interest in studies. Many students are unable to take proper interest in education due to their family circumstances. The principal has personally invested his own money to develop the school infrastructure, which is a commendable initiative. If facilities such as drinking water and toilets are provided to the students by the government, it would be a highly appreciable effort. If sports-related grounds and equipment are made available, students can progress further. There is a strong need to motivate boys to take interest in education.

7. **Vimla Bai Deshmukh Girls School, Government aided (Urban):** This school located in urban area of block Ahmadpur has a good enrolment of girl's students. The infrastructure of this school is also well developed. Teaching and learning take place effectively here, and the girls are intelligent and perform well in their studies. This is an aided school, yet it is excellent in every aspect. All necessary facilities are available in the school.

8. **Swami Dayanand Vidyalaya School**: This school is a recognized co-educational school. It is located in Kava village in the rural area of Latur district. The school is a part of one of the largest educational institutions of Latur, the Swami Vivekanand Group of Institutions. The school has good infrastructure and all necessary facilities; however, a boundary wall was not observed. All the teachers are quite experienced. During data collection, students were seen practicing yoga with the participation of all teachers. The Principal Madam was very cooperative. The students of this school have been selected for their presentations at Akashvani Parbhani. It is considered the best school in the area.

9. **Zila Parishad Prashala School:** Zila Parishad Prashala Harangul, is located about 14 kilometers from Latur. It is a Zila Parishad school with good student enrollment and is a co-educational institution. The school is situated in a rural area, and the school building is very old. The academic standard of the school is good. The Mid-Day Meal (MDM) provided to the students is also of good quality. I personally tasted the meal, and all the students enjoy it. The school has many experienced teachers. The Principal Madam maintains a friendly and cooperative relationship with all the students and actively interacts with them.

10. **High School, Malvati,** The Government aided is a good school. However, students from the rural area do not attend regularly, and after holidays many students are unwilling to return to school. It is a private aided institution, and all the teachers working here are quite experienced. Very few female teachers were seen in the school. If proper toilet facilities are provided, the school can improve further. The student enrollment in this school is low.

11. **Urdu High School, Kurunda in Vasmat Taluka of Hingoli** district has a good enrollment of girl students and is continuously working towards the promotion of girls' education. However, attracting boys towards education is proving to be a challenging task for the teachers. Most boys are not interested in studies and prefer to work for earning, so they

often go for labor instead of attending school. The school faces a shortage of playground facilities. Mr. Ejaz Sir is the Principal of the school; he is very active, highly educated, and plays an important role in the development of the institution. The girl students show strong interest in pursuing higher education and are keen to progress further in their studies. The school needs improvement in computer education facilities and proper maintenance of a playground. Due to a residential settlement adjacent to the school, the school campus is limited in area. This is an aided and government-recognized educational institution.

12. **Zila Parishad PrashalaKurunda,Block-Vasmat District Latur:** The building of Zila Parishad Kurunda is good, and the playground facilities are also satisfactory. However, the student enrollment in the school is seen to be low. Teachers reported that the overall quality of students' education is somewhat weak. There is a residential school near the village, and some students have come from there, but even they are unable to read properly. Due to the government policy of promoting all students, children do not show much interest in studies. There was a student in Class 9 who genuinely could not read. A shortage of teachers was also observed. Teachers suggested that improving high-level facilities for the Mid-Day Meal scheme could help increase student enrollment. Since the school is located in a rural area, parents prefer to send their children to private schools, resulting in lower enrollment in the Zila Parishad school. There is a clear need for improvement, as stated by the school teachers.

13. **Mankeswar, Vidhyalaya Kautha, Taluka, Vasmath, District, Hingoli:**
Mankeshwar Vidyalaya is a fairly old school that was established in 1999. The student enrolment is very good. The school is managed by a committee and is a recognized aided institution. The academic standard of the students is good, and both boys and girls perform well in their studies. The teacher–student ratio is 1:30 and teachers for all subjects are available. Some teachers were away attending training programmes. However, there is a need for better maintenance of the playground and the school building. Safe drinking water facilities were not observed. The school building is old, and classrooms require tables, benches, and smart class facilities. There is no library facility for students, which affects their learning. Improvements are required in these areas.

14. **Smt. Shanta Bai Munjhaji Darade Madhyamik Vidhyalaya (Aided) (Urban) District Hingoli:**Smt. Shanta Bai Munjaji Darade Secondary School was established in the year

1955. Due to the tireless efforts of the Headmaster, the school currently has total student strength of around 1,800 students. It is a very good government-aided, recognized school. Being an urban school, and due to efficient management and good quality of education, the school has a strong student enrollment. All students are sincere and perform well in their studies. The Headmaster is highly qualified, holding a PhD in Physics and a M.Ed. degree. Because of his academic background, students are exposed to new technologies and modern learning practices at an early stage. He is also the Chairman of a private school association, and many political leaders frequently visit the school, which helps maintain discipline and seriousness among both teachers and students toward teaching–learning activities. All teachers are well-experienced. The student–teacher ratio is 1:30, and a total of 18 teachers are currently working in the school.

15. **Zila Parishad Bahuvidh Prashala Hingoli (Urban) District Hingoli:** The school is named Bahuvidh Prashala because students from the Urdu medium also study here. The school is located near the DIET (District Institute of Education and Training). The student enrollment is low, but the number of teachers is adequate. The school building is new and in good condition, and all basic arrangements and facilities were found to be satisfactory. During the visit, NCC students were also present. They were found to be interested in serving the nation and spoke about the importance of national security and service to the country. Shri Gawande Ji Resource Person DIET Hingoli, guided and accompanied us during the school visit. Overall, the school infrastructure and management are good; however, there is a need to increase student enrollment.

Phase III District, Parbhani and Chhatrapati Sambhaji Nagar Data collection details: Visit Date 11/12.2025 to 20/12/2025

16.

Nutan,Vidhya,Mandir,(Kai.RaosahebJamkar,Jr.College,Parbhani),(Urban): NutanVidhya,Mandir,Parbhani was established in 1971 and it is managed by the Pvt. Aided. It is located in urban area. When data collection was conducted at NutanVidyalaya, Parbhani(Urban), it was observed that the number of students was very high. The school building appeared to be quite old. Teachers were seen performing their duties sincerely. However, considering the large number of students, the classrooms seemed small, and the

availability of benches was insufficient. As a result, students were not able to sit in an organized manner. The school operates in the morning shift. On that particular day, a program was scheduled to be organized by the police department, due to which students were seen moving around the school premises. Additionally, since the school was about to close at 12 noon, students appeared less settled.

Overall, the school requires well-organized and adequately sized classrooms to meet the needs of the students.

17. **Gandhi Vidhyalaya (Aided) Ekta Colony Parbhani:** GandhiVidyalaya is an institution managed by an organization that also runs three other schools. This institution caters to students from Classes 1 to 12. The school supervisor informed that around 2,200 students are enrolled in this school. Due to its location in the heart of the city, the enrolment of both boys and girls is very high. The academic quality of the school is also good. This school was selected by the Principal of DIET, Parbhani, who also deputed Sr. Lecturer Shri. Deshpande to assist in the process. However, proper arrangements for safe drinking water were not observed in the school. The playground did not appear to be well maintained. There is no shortage of teachers in the school, and the teacher–student ratio is satisfactory as per norms.

18. **Zila Parishad Prashala Jaamb (Rural), Parbhani:** Zila Parishad Prashala, Jaamb, Parbhani is a school operated by a government body. At present, the school building is new and was handed over in the year 2022–23. All the teachers were seen performing their duties sincerely. The headmaster is continuously making dedicated efforts to increase student enrollment through his hard work. The school also has a boundary wall. The school campus is very beautiful. Within the same campus, a primary school is also being operated, and a pre-primary school is being run simultaneously as well.

19. **Zila Parishad Prashala, Pedgaon, Taluka, Dist-Parbhani (Rural):**

Zila Parishad School, Pedgaon, District Parbhani has a good number of students. The school building is new and well-maintained. The school is headed by a female headmistress. The students actively participate in vocational activities such as vegetable

cultivation and gardening within the school campus along with the vocational teacher. Activity-based learning is practiced here, and overall, the school is very beautiful and well organized.

20. City Middle School Pedgaon (Rural) Parbhani:

City Secondary School, Pedgaon is a very old school. It is a private aided institution. The school building is very old, and the classrooms are also in poor condition and lack proper plastering. The student strength is good. However, adequate facilities for toilets and drinking water are not available. An office of Yashwantrao Chavan Open University is located on the school premises. The school building is in need of urgent repair and renovation.This school also has smart classrooms.

21. Gurudev Samantbhadra VidhyaMandir, Allora,(Rural) Chh. Samhaji Nagar:

This school is very good. All teachers and students have their identity cards and a prescribed uniform. The campus is fully Wi-Fi enabled and equipped with CCTV surveillance. Nearby, there is the tourist site of the Ellora Caves. An app has been developed for the students of this school, and its inauguration was done by Mr. Bajaj from Kolkata. There is also a Jain temple near the school campus .The school is government-aided and has very good management. It is a beautiful and clean school, and everyone should visit this school at least once.

22. PM.Shri Zila Parishad Prashala Savangi Bazar (Rural) Chh.Sambhaji Nagar: This school is quite old and was established in 1982. It can be considered one of the best government schools. All the teachers here work very hard to enroll students. Despite the presence of many private schools, this Zilla Parishad School has good student enrollment, an appropriate teacher–student ratio, and a well-maintained dress code. The government has also developed smart classrooms in the school. It is a well-disciplined institution, which is why it has been selected as a PM SHRI school. At present, the school building is under construction and is not yet fully completed. It is expected to be completed and ready within a few months. The principal works very diligently, and along with all the teachers, a physical education teacher was also present.

23. **PM Shri Zila Parishad School Ganori (Rural)Chh.Sambhaji Nagar**: This school provides an excellent environment for children to learn. A rabdology lab has been established through CSR funds, which is helping students receive experiential learning. The school also has a mathematics lab, where students gain hands-on understanding of mathematical concepts with the help of teachers. Since the school has been selected as a PM SHRI School, it has received substantial funding from the government. With the active involvement of the school principal, teachers, and students, a small forest has also been developed within the school campus .This forest includes medicinal plants and oxygen-rich plants, which have now grown significantly. As a result, students are getting a new and practical experience of nature within the school itself.

24. **Mukul Mandir School, (Urban) Chh. Sambhaji Nagar:** The secondary school section of Mukul Mandir, established in 1997-98 by the state government, has evolved into a distinguished co-educational institution offering Marathi-medium education for grades 8 to 10. The inaugural batch of the Secondary School Board Certificate Exam in 1998 achieved an impressive 91% result, marking the beginning of its academic excellence. Mukul Mandir's Gold Medalists in International Olympiads: The International Mathematics Olympiad (IMO) on December 14, 2023, saw an impressive participation of 63 students, with 6 students earning gold medals. Notably, two students successfully qualified for the National level of the IMO Exam, hosted at St. Loren's High School on February 11, 2024, showcasing their exceptional mathematical abilities.

25. **Saraswati BhuwanPrashala Boys (Aurangpura) Chh.Sabhaji Nagar (Urban):** This school is located at the central point of the city. The all-round development of students is ensured here, and all activities are conducted in accordance with the National Education Policy (NEP) 2020. The school has good student enrolment, and since it is managed by a large educational group, all work is carried out in a well-organized and systematic manner. While strictly following the New Education Policy, this school truly deserves high praise, and no amount of appreciation would be enough.

Three Days Data Analysis Workshop

3 Days Workshop of Data Analysis

Date: 26–28 February 2026

Venue: Regional Institute of Education (RIE), Bhopal (NCERT)

Project Title: A Study of the Effectiveness of Collaborative and Culturally Responsive Pedagogy in Social Studies among Secondary School Students of the Marathwada Region of Maharashtra State

PAC No.: 23.17 (2025–26)

Program Coordinator: Dr. Jayant Shankar Borgaonkar

Table 3.21 Three Days Data Analysis Workshop

Sr. No	Date	Name of Resource Person	Minor/Major points discussed
1	26 /02/26	The workshop commenced with registration and an inaugural session at RIE, Bhopal. The Program Coordinator, Dr. Jayant Shankar Borgaonkar, welcomed all participants and highlighted the objectives of the workshop, emphasizing the importance of systematic data analysis in educational research.	Overview of their research design, sampling procedure, tools used for data collection, and data coding methods. Special attention was given to: Finalization of sample distribution (Students, Teachers, Head Teachers) Verification of data entry and coding Discussion on reliability and validity of tools Preparation of data sheets in SPSS/Excel Experts guided the participants regarding data cleaning, checking missing values, and preparing the dataset for statistical analysis. The day concluded with hands-on practice in organizing quantitative data for analysis.
2	27 /02/26	Dr.Rajumar Nanaware	The second day focused on statistical analysis and interpretation of data. The session began with a brief recap of statistical techniques relevant to the research objectives. Key activities included: Calculation of descriptive statistics (Mean, SD, Percentage) Application of inferential statistics (t-test, ANOVA where applicable) Gender-wise and locality-wise comparison (Urban–Rural)

			Analysis of effectiveness of collaborative and culturally responsive pedagogy Participants performed statistical analysis under expert supervision. Emphasis was laid on selecting appropriate statistical tools aligned with hypotheses and objectives. The resource persons explained how to interpret statistical results and present them in tabular and graphical form. Discussion was also held on linking findings with research questions and theoretical framework.
3.	28/02/26	Dr.Vaibhav Jadhav and Prof.Chandrakant Baviskar	The third day was devoted to interpretation, report writing, and final presentation. Participants prepared draft tables, graphs, and result chapters. Major highlights: Interpretation of findings in the light of objectives. Writing of results and discussion chapter. Educational and pedagogical implications. Suggestions and recommendations Structuring the final research report Each Resource person presented their preliminary findings. Constructive feedback was provided to refine data interpretation and strengthen conclusions. The workshop concluded with a valedictory session where Resource Person (Expert) shared their learning experiences. The Program Coordinator appreciated the sincere efforts of the researchers and emphasized the practical relevance of data-driven pedagogy in Social Studies education.
Overall Outcome of the Workshop: Improved understanding of quantitative data analysis Clarity in hypothesis testing and interpretation Strengthened skills in report writing Enhanced ability to link statistical findings with pedagogical implications The workshop prove to be highly beneficial in ensuring scientific rigor and accuracy in the research project.			

3.12 Tabulation/Data Analysis:

- Quantitative Analysis: Statistical tests (e.g., paired t-tests, ANOVA, SPSS) to compare learning outcomes across different pedagogical approaches.
- Qualitative Analysis: Thematic analysis of interview data to identify key themes and patterns.

3.13 Statistical techniques employed:

Quantitative Component

Quantitative data were collected through standardized academic records and close-ended questionnaires administered to students and teachers. This allowed for objective measurement of:

- Learning outcomes
- Frequency of collaborative teaching practices
- Degree of implementation of culturally responsive strategies

Data were statistically analyzed to identify trends, correlations, and variations across schools and demographic segments.

Qualitative Component

The qualitative aspect enriched the study by capturing the perceptions, experiences, and reflections of students, teachers, and school heads. Data were gathered through:

- In-depth interviews (Teachers)
- Head Teacher (Interview)

This component uncovered contextual realities, including implementation challenges, motivations, and cultural nuances in diverse educational settings. The combination of both components facilitated **triangulation**, thereby improving the validity and reliability of findings. This design is especially suitable for addressing the layered complexity of classroom pedagogy, ensuring that both empirical data and human narratives are represented.

Qualitative Analysis of Data:

Coding: Coding of Raw data was performed using N-Vivo software and the themes were generated. The outcomes of the themes are elaborated further.

Table 3.22 Qualitative Analysis of Data:

Sl No	Name	Description	Files	References
1.	Collaborative and Culturally Responsive Pedagogy	How teacher perceived their curriculum as collaborative and Culturally Responsive Pedagogy	1	134
	Active Student Participation	Students' active involvement in discussions, activities, and collaborative learning processes.	1	9
	Cultural awareness	Understanding and respect for students' cultural identities, values, and traditions.	1	10
	Development of critical thinking	Encouraging students to analyse, question, and reflect on ideas critically.	1	4
	Equity in learning	Ensuring fair learning opportunities and support for all students.	1	6
	Group-based collaborative activities	Learning activities that involve students working together in groups.	1	19
	Importance of Culture in Education	Recognition of culture as a key component of meaningful teaching and learning.	1	8
	Importance of student feedback	Valuing students' opinions to improve teaching and learning practices.	1	2
	Improved understanding	Enhanced comprehension of concepts through collaborative and cultural approaches.	1	4
	Inclusivity in curriculum content	Representation of diverse cultures and perspectives within curriculum materials.	1	2
	Increased motivation	Higher student interest and enthusiasm toward learning activities	1	37
	Integration of students' cultural backgrounds	Using students' cultural experiences as learning resources in the classroom.	1	4
	Intercultural learning	Learning that promotes interaction and understanding among different cultures	1	9
	Positive classroom environment	A supportive, respectful, and inclusive learning atmosphere.	1	8

Sl No	Name	Description	Files	References
	Shared responsibility in collaborative learning	Collective accountability of students in achieving learning goals.	1	4
	Social harmony	Promotion of mutual respect, cooperation, and peaceful relationships among students.	1	8
	Implementation Challgenges	Lack of understanding about collaborative and culturally responsive pedagogy	1	137
	Dependence on technology	Reliance on digital tools to support or substitute teaching practices.	1	3
	Lack of conceptual clarity	Insufficient understanding of pedagogical concepts and principles	1	9
	Limited Teaching Strategies	Use of a narrow range of instructional methods	1	11
	Over-reliance on group work	Excessive use of group activities without pedagogical balance or purpose.	1	114

Table 3.23 Component Categories

Category 1	Category 2	Category 3	Category 4
Cultural Responsiveness in Teaching	Student Engagement & Learning Outcomes	Equity, Inclusion & Social Values	Collaborative Learning Practices
Cultural awareness Importance of culture in education Integration of students' cultural backgrounds Inclusivity in curriculum content	Active student participation Increased motivation Improved understanding Development of critical thinking	Equity in learning Intercultural learning Social harmony Positive classroom environment	Group-based collaborative activities Shared responsibility in collaborative learning Importance of student feedback

Theme	**Contributing Categories**	**Main of the Theme**
Theme 1: Culturally Responsive Pedagogy Enhances Student Engagement	Category 1: Cultural Responsiveness in Teaching Category 2: Student Engagement & Learning Outcomes	Integration of students' cultural backgrounds in teaching increases participation, motivation, understanding, and critical thinking among learners.

Theme 2: Collaborative Learning as a Means of Promoting Equity and Inclusion	Category 3: Equity, Inclusion & Social Values Category 4: Collaborative Learning Practices	Group-based learning and shared responsibility create inclusive classrooms, support intercultural learning, and promote social harmony.

Categories

Category 1	Category 2	Category 3	Category 4
Conceptual Challenges	Pedagogical Limitation	Resource Constraints	Reflective Gaps
Lack of conceptual clarity Inability to articulate challenges clearly	Over-reliance on group activities, limited strategies	Dependence on projector/technology	Inability to articulate challenges clearly

Theme	**Contributing Categories**	**Main Focus of the Theme**
Theme 1: Conceptual and Reflective Challenges in Understanding Pedagogy	Category 1: Conceptual Challenges Category 4: Reflective Gaps	Teachers showed limited conceptual clarity about collaborative and culturally responsive pedagogy and were often unable to clearly articulate the challenges they faced in classroom implementation.
Theme 2: Pedagogical Constraints in Classroom Practice	Category 2: Pedagogical Limitation	Teaching practices relied heavily on group activities with limited use of diverse instructional strategies, indicating restricted pedagogical flexibility.
Theme 3: Resource-Dependent Implementation Practices	Category 3: Resource Constraints	Implementation of collaborative pedagogy was highly dependent on projectors and technology, revealing constraints in adopting alternative low-resource teaching methods.

3.14 Conclusion

The research methodology of this study was planned carefully to meet the objectives of the research. A suitable research design was used, and the sample was selected properly. Data were collected using simple and reliable tools. The collected data were analyzed using appropriate methods. Overall, the methodology was effective and helped in obtaining valid and reliable results.

CHAPTER- IV

RESULT AND INTERPRETATION

This chapter dealt with the analysis and interpretation of the data collected to assess the effectiveness of collaborative pedagogy and culturally responsive pedagogy in Social Studies at the secondary level. The analysis carried out on the basis of the responses collected from the students and teachers. The data analyzed using appropriate statistical methods such as descriptive statistics and non-parametric tests, as the data variables are not normally distributed.

This chapter begins with the presentation of the descriptive statistics of the data to understand the perceptions of the students and teachers regarding collaborative pedagogy and culturally responsive pedagogy. After that the normality test was performed to check the appropriateness of the statistical analysis. Later, the demographic details of the respondents are presented to understand the characteristics of the sample. The remaining part of the chapter focuses on the research objectives and comparative analysis was performed to investigate the group-wise differences of collaborative pedagogy and culturally responsive pedagogy on the basis of selected demographic variables such as class, gender, locality, social category, and Divyangjan. This result chapter structured in the following manner.

4.1 Descriptive Analysis

4.2 Test of Normality

4.3 Demographic Profile of the Respondents

4.4 Objective One- Effectiveness of Collaborative Pedagogy among Secondary Students in Social Studies

4.5 Objective Two- Effectiveness of Culturally Responsive Pedagogy in Social Studies

4.6 Objective Three- Implementation Challenges of Collaborative and Culturally Responsive Pedagogy

4.7 Objective Four- Perceptions of Students and Teachers Regarding the Relevance of Collaborative and Culturally Responsive Pedagogy

4.5 Objective Five- A Contextualized Integrative Framework for Collaborative and Culturally Responsive Pedagogy in Secondary Schools of Marathwada

4.8 Summary of Major Findings

4.1 Descriptive Analysis:

Table 4.1 Descriptive Analysis of Student Perception Regarding Collaborative and Culturally Responsive Pedagogy -

	N	Min	Max	Mean		SD	Var.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Er.	Statistic	Statistic	Statistic	Std. Er.	Statistic	Std. Er
Student Perception	1048	37	137	71.65	.392	12.69	161.26	.820	.076	2.15	.151

Table 4.1 presents the descriptive statistics of students' perception regarding Collaborative and Culturally Responsive Pedagogy based on responses from 1048 students. The total score of student perception regarding collaborative and culturally responsive pedagogy ranges from a minimum of 37 to a maximum of 137, indicating a wide variation in students' views. The mean score is 71.65, which reflects a moderate to moderately high level of perception towards collaborative and culturally responsive pedagogy among students. This suggests that, on average, students tend to hold a reasonably positive perception of such pedagogical practices in their classrooms. The standard deviation is 12.699, with a variance of 161.266, indicating a moderate spread of scores around the mean. This implies that although the overall perception is moderately positive, there are noticeable differences in how students experience and evaluate collaborative and culturally responsive teaching practices.

The skewness value of 0.820 indicates a positively skewed distribution. This means that a greater number of students scored below the mean, with fewer students reporting very high perception scores. The kurtosis value of 2.155 suggests a leptokurtic distribution, indicating that the data are more peaked than a normal distribution and responses are relatively concentrated around the mean, with some extreme values present.

The descriptive analysis shows that students generally demonstrate a moderate level of perception regarding collaborative and culturally responsive pedagogy, with some variability in experiences across the sample.

Table 4.2 Descriptive Analysis of Teacher Perception Regarding Collaborative and Culturally Responsive Pedagogy

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Teacher Perception of Collaborative and Responsive Pedagogy	95	44	120	88.97	8.522	72.627	-.901	.247	8.957	.490

The table 4.2 presents the descriptive statistics of teachers' perception regarding Collaborative and Responsive Pedagogy based on responses from 95 teachers.

The scores range from a minimum of 44 to a maximum of 120, indicating variability in teachers' perceptions. The mean score is 88.97, suggesting that, on average; teachers demonstrate a high level of perception towards collaborative and responsive pedagogical practices. The standard deviation is 8.522, and the variance is 72.627, which indicate a relatively moderate dispersion of scores around the mean. This suggests that most teachers' responses are fairly clustered and do not vary widely from the average perception level.

The skewness value of –0.901 indicates a negatively skewed distribution. This means that a larger proportion of teachers scored toward the higher end of the scale, with fewer teachers reporting lower perception scores. In other words, most teachers tend to hold favorable views regarding collaborative and responsive pedagogy. The kurtosis value of 8.957 is substantially higher than the normal distribution value (0), indicating a highly leptokurtic distribution. This suggests that the data are sharply peaked, with many scores concentrated near the mean and the presence of some extreme values.

The descriptive findings indicate that teachers generally exhibit a strong and favorable perception of collaborative and responsive pedagogy, with relatively consistent responses across the sample.

4.2 Test of Normality:

Table 4.3 Student Perception Regarding Collaborative and Culturally Responsive Pedagogy -

Student Perception	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
	.068	1048	.000	.966	1048	.000
a. Lilliefors Significance Correction						

Table 4.3 presents the results of the Kolmogorov –Smirnov and Shapiro– Wilk tests conducted to examine whether the data on students' perception of collaborative and culturally responsive pedagogy follow a normal distribution. The Kolmogorov–Smirnov test shows a statistic value of 0.068 with df = 1048 and a significance value of p = .000 (Lilliefors corrected). Similarly, the Shapiro–Wilk test reports a statistic value of 0.966 with df = 1048 and p = .000. Since the significance values for both tests are less than 0.05 ($p < 0.05$), the null hypothesis of normality is rejected.

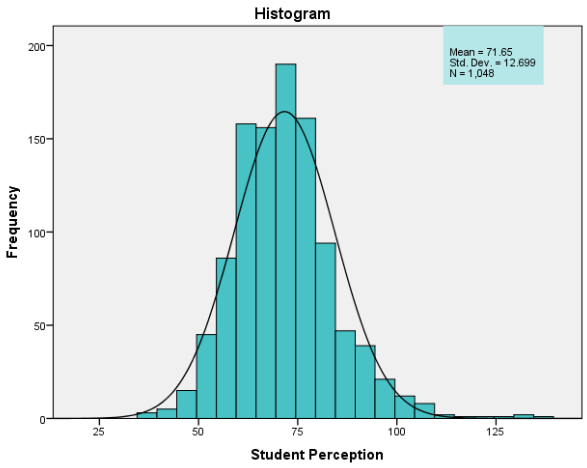


Fig. 4.1: Normality of Student Perception regarding Collaborative and Culturally Responsive Pedagogy

This indicates that the distribution of student perception scores significantly deviates from normality. Given the large sample size (N = 1048), even small deviations from normality may

become statistically significant. However, based on the test results, the data cannot be considered normally distributed. Therefore, the use of non-parametric statistical tests (such as Mann–Whitney U test or Kruskal–Wallis test) would be more appropriate for further inferential analysis.

Table 4.4Test of Normality of Teacher Perception Regarding Collaborative and Culturally Responsive Pedagogy -

Teacher Perception of Collaborative and Responsive Pedagogy	**Kolmogorov-Smirnov[a]**			**Shapiro-Wilk**		
	Statistic	df	Sig.	Statistic	df	Sig.
	.116	95	.003	.876	95	.000
a. Lilliefors Significance Correction						

Table 4.4 presents the results of the Kolmogorov–Smirnov and Shapiro–Wilk tests conducted to assess the normality of teachers' perception scores regarding collaborative and culturally responsive pedagogy. The Kolmogorov–Smirnov test (with Lilliefors Significance Correction) shows a statistic value of 0.116 with df = 95 and a significance value of p = .003. Similarly, the Shapiro–Wilk test reports a statistic value of 0.876 with df = 95 and a significance value of p = .000. Since the p-values for both tests are less than the standard level of significance ($p < 0.05$), the null hypothesis of normality is rejected. This indicates that the distribution of teacher perception scores significantly deviates from a normal distribution. Considering the sample size (N = 95) and the significant results from both normality tests, it can be concluded that the data are not normally distributed. Therefore, the application of non-parametric statistical techniques (such as Mann–Whitney U test or Kruskal–Wallis test) is more appropriate for further analysis.

Normality of Teacher Perception regarding Collaborative and Culturally Responsive Pedagogy

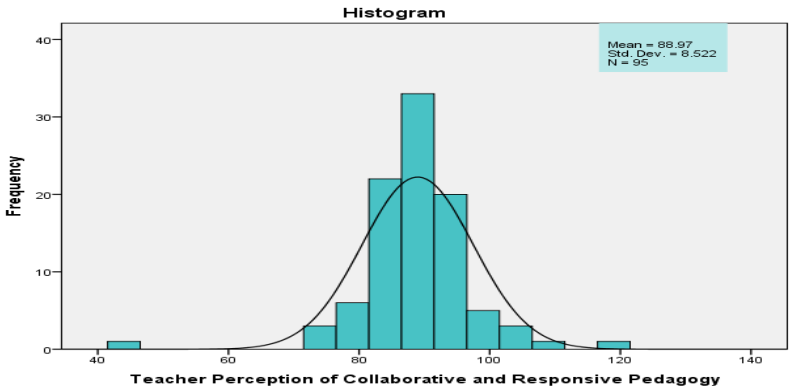


Fig. 4.2: Normality of Teacher Perception regarding Collaborative and Culturally Responsive Pedagogy

4.3 Demographic Profile of the Respondents:

Student Profile -

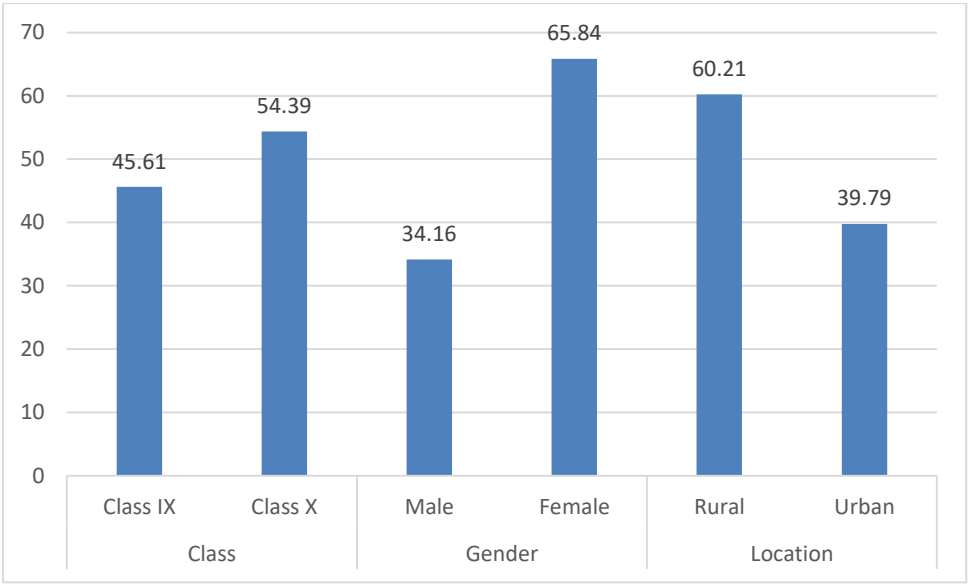


Fig. 4.3: Distribution of Students by Class, Gender, and Location

The figure shows that the group consists mainly of older students, females, and those who live in the countryside. If we look at the educational level of the group, we can say that there is a relatively equal distribution, although the majority of the group consists of Class X students at 54.39%, compared to 45.61% of the Class IX students. The most marked difference can be seen in the gender category, where females dominate the group significantly at 65.84%, which is almost twice the number of males at 34.16%. Lastly, if we look at the location of these people, we can say that

most of them come from rural areas at 60.21%, compared to just under 40% who come from urban areas.

4.4 Distribution of Divayajan Students:

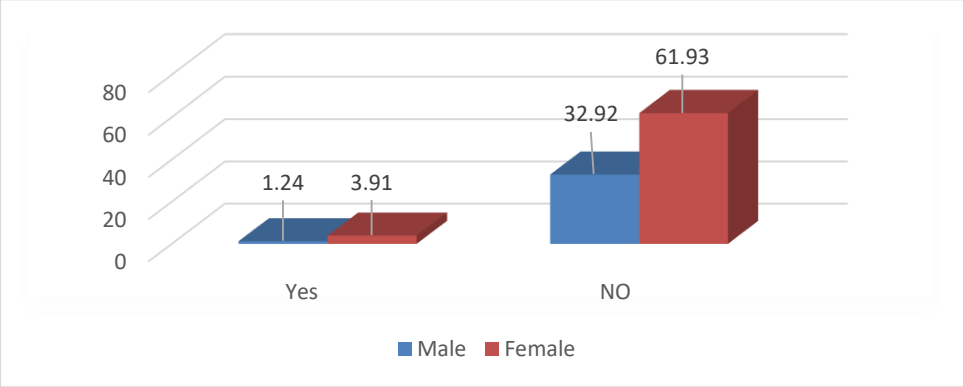


Fig. 4.4: Distribution of Divayajan Students

From the above chart, one can observe a major gap between these two groups, with a vast majority of students falling under the "No" category. Under this category, females outnumber their male counterparts by a large margin, with 61.93% of female students, compared to 32.92% of male students. This shows that, out of the total number of students, a much larger percentage of females fall under the "not identified as Divyangjan or not making use of specific services" compared to their male counterparts. On the other hand, the "Yes" category, which refers to identified Divyangjan students, shows very low numbers of students from both genders. Under this category, females again outnumber their male counterparts, with 3.91% of female students, compared to 1.24% of male students.

4.5 Distribution of Students by their Social Category

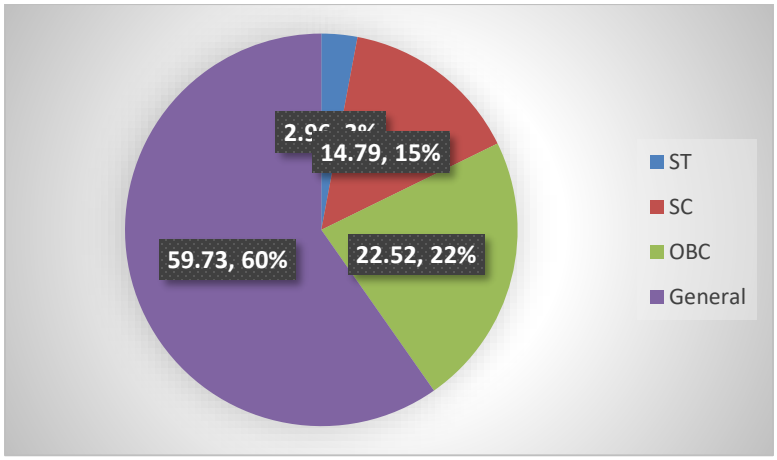
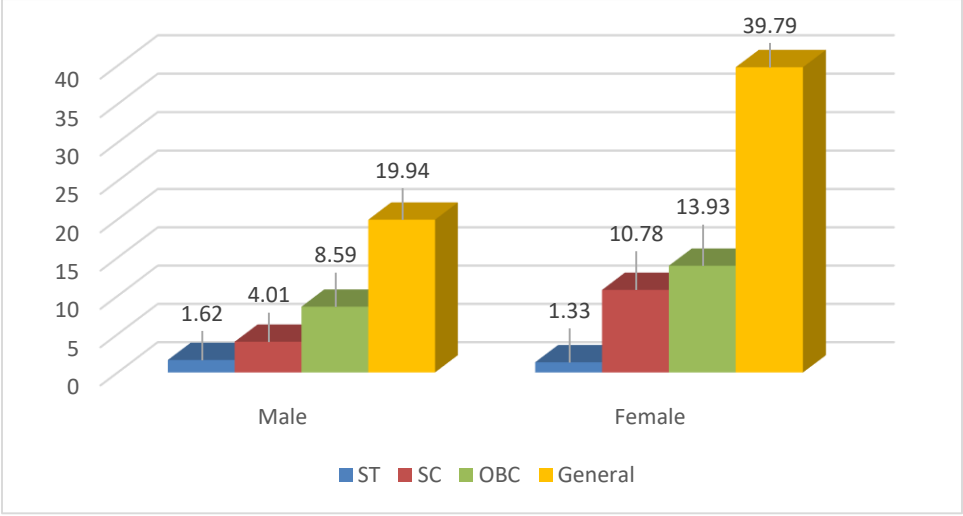


Fig. 4.5: Distribution of Students by their Social Category

This pie chart depicts the distribution of the population into different categories. The highest population is found in the General category, which comprises 60% of the total population. This is more than half the population. Then comes the population in the OBC category, which is 22%. This means one out of five people belongs to this category. The next is the SC population, which comprises 15% of the total population. The least population is found in the ST category, which comprises merely 3% of the population.

Distribution of Male and Female Students as per their Social Category



4.6 Distribution of Male and Female Students as per their Social Category

The graph shows the comparison of males and females for the categories ST, SC, OBC, and General. It is observed that the values for females are higher than those for males in all categories. In the ST category, the values for males and females are both low. However, the values for males (about 1.62) are higher than those for females (about 1.33). In the SC category, the values for females (about 10.78) are higher than those for males (about 4.01). This is similar for the OBC category, where the values for females (about 13.93) are higher than those for males (about 8.59). In the General category, the values for females (about 39.79) are much higher than those for males (about 19.94).

Teacher Profile:

Distribution of Teacher by Subject Taught-

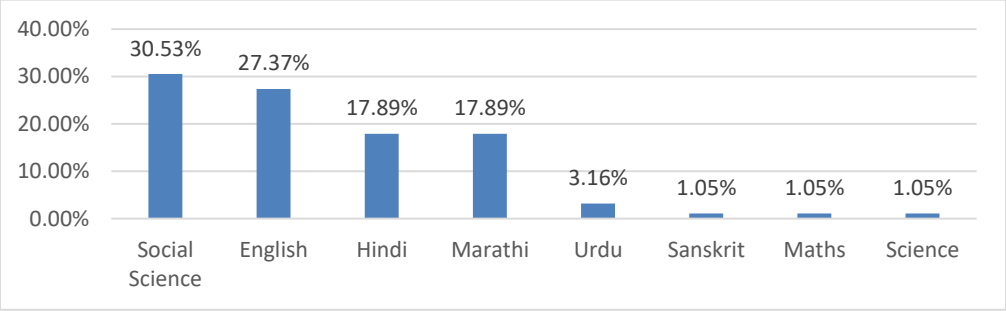


Fig. 4.7: Distribution of Teacher by Subject Taught

The above figure depicts the distribution of teachers based on the subjects they teach. The figure shows that the maximum number of teachers is in Social Science, which makes up 30.53%. The second maximum number of teachers is in English, which makes up 27.37%. The subjects of Hindi and Marathi have an equal number of teachers, which is 17.89%. This shows moderate representation of teachers in these subjects. However, in the case of Urdu, the number of teachers is significantly less, which is 3.16%. The minimum representation of teachers is in Sanskrit, Mathematics, and Science, which have 1.05% each.

Distribution of Teachers as per their Years of Job Experience:

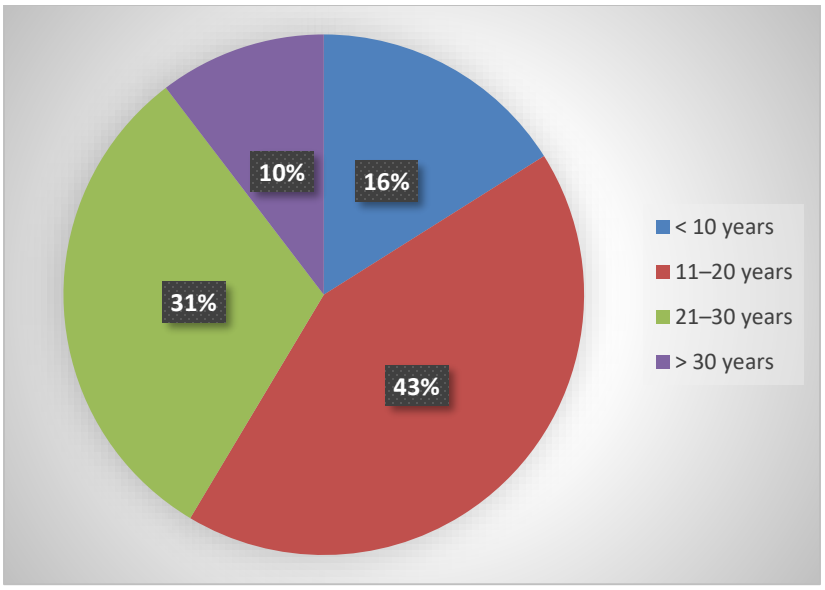


Fig. 4.8: Distribution of Teachers as per their Years of Job Experience

The figure illustrates the distribution of teachers based on the years of job experience. It is clear from the figure that the majority of the teachers, 43%, have 11-20 years of experience. This suggests that the majority of the teachers are in the mid-career stage. It is followed by 31% of the teachers who have 21-30 years of experience. This suggests that a considerable number of teachers are highly experienced. Then comes 16% of the teachers who have less than 10 years of experience. This suggests that a smaller number of teachers are new entrants into the profession. Lastly, 10% of the teachers have more than 30 years of experience. It is thus evident that the majority of the teachers in the profession are moderately experienced.

Distribution of Teachers as Class Taught-

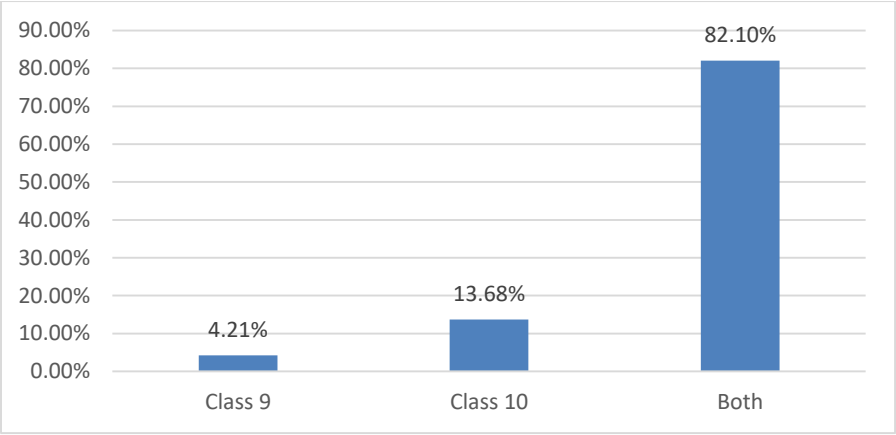


Fig. 4.9: Distribution of Teachers as Class Taught

From the chart, it can be noted that a very small percentage of students are associated with either Class 9 or Class 10 individually, while the majority are associated with both classes. From the chart, it can be noted that approximately 4.21% of the students are associated with Class 9 individually, and a slightly larger number, approximately 13.68%, are associated with Class 10 individually. However, a staggering 82.10% of the students are associated with both classes, which shows that most students are associated with both classes at the same time.

Distribution of Teacher as per Location and Gender-

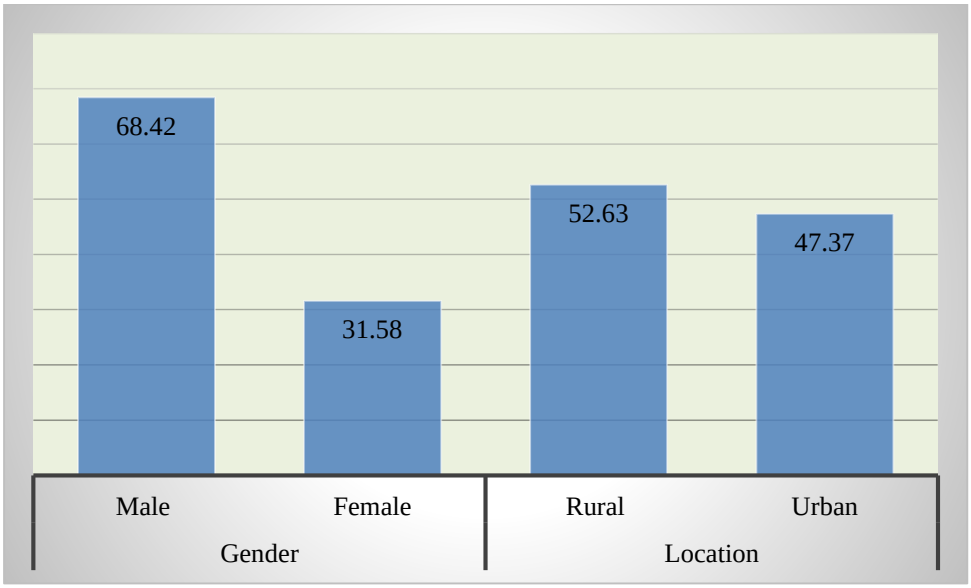


Fig. 4.10: Distribution of Teacher as per Location and Gender

The chart shows that there is a clear-cut difference in both gender distribution and location. Based on gender, the distribution shows that 68.42% of the population is male, which is significantly higher compared to the 31.58% of females. Based on location, it is evident that 52.63% of the population comes from rural locations, which is slightly higher compared to 47.37% of the population from urban locations. Therefore, the chart shows that the male population is more prominently represented compared to the female population. The chart also shows that both rural and urban locations have relatively equal representation.

Headmaster Profile:

Gender Wise Distribution of Headmaster-

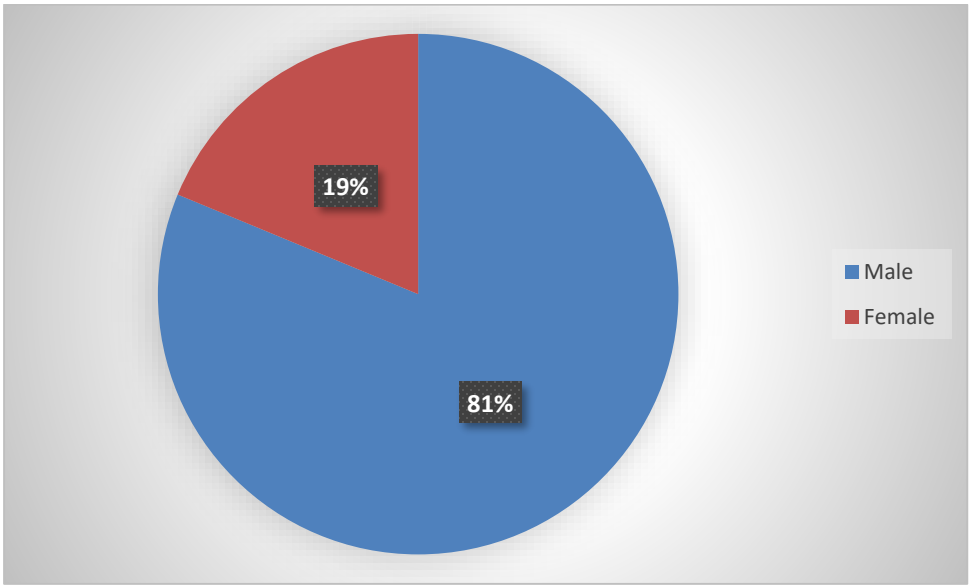


Fig. 4.11: Gender Wise Distribution of Headmaster

The above figure depicts the gender distribution of headmasters. From the above figure, it is evident that male headmasters dominate the female headmasters. The total percentage of male headmasters is 81%, whereas female headmasters comprise only 19%. This shows a huge gender difference between male headmasters and female headmasters. The above chart indicates that male headmasters dominate the female headmasters in the headmaster position.

Distribution of Headmaster as per Districts, Maharashtra -

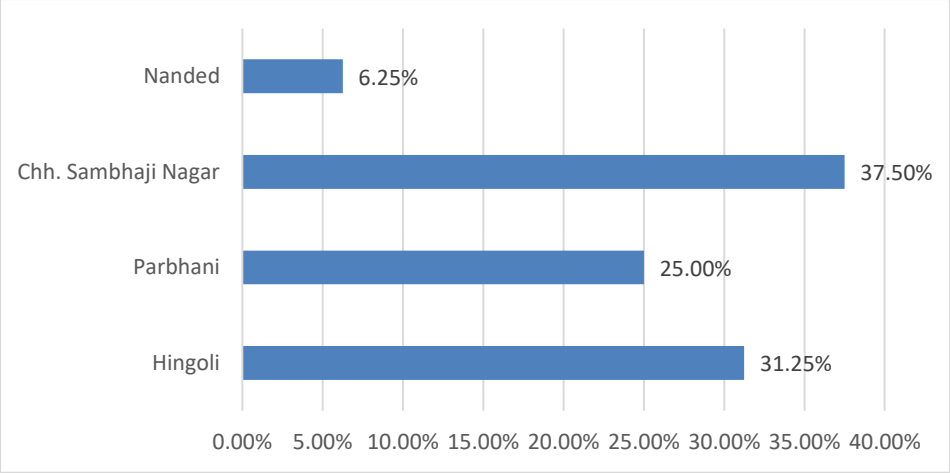


Fig 4.12: Distribution of Headmaster as per Districts, Maharashtra

The figure presents the district-wise distribution of headmasters in Maharashtra, showing noticeable differences across districts. Chh. Sambhaji Nagar accounts for the largest share at 37.50%, indicating the highest concentration of headmasters. This is followed by Hingoli with 31.25% and Parbhani at 25.00%, both reflecting moderate representation. In contrast, Nanded shows the lowest proportion at 6.25%, contributing only a small share. Overall, the distribution is uneven, with a strong concentration in Chh. Sambhaji Nagar and comparatively minimal representation from Nanded.

Distribution of Headmaster as per Location Wise

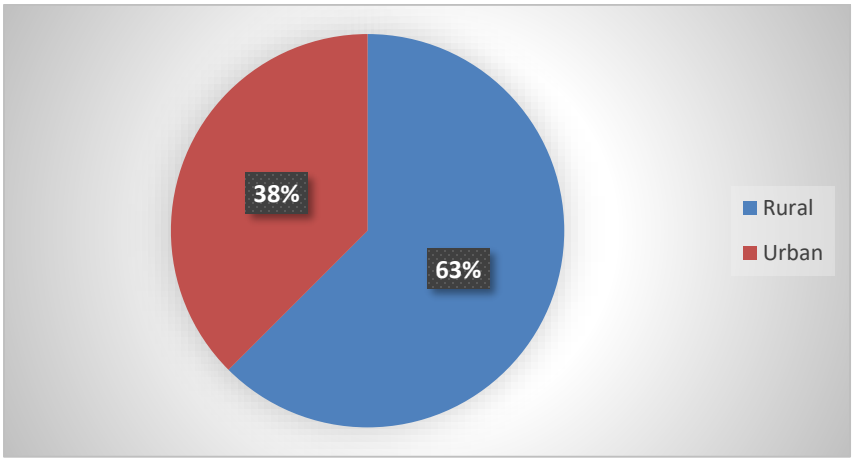


Fig 4.13. Distribution of Headmaster as per Location Wise

From the above figure, it is clear that the percentage of headmasters who are from rural areas is higher compared to those who are from urban areas. In particular, the percentage of headmasters who are from rural areas is “62%”, while the percentage of headmasters who are from urban areas is “38%”. This implies that the representation of headmasters is higher in rural areas compared to urban areas.

Perceived Effectiveness of Collaborative Pedagogy: (Objective-1)

Table 4.5 Descriptive Statistics of Collaborative Pedagogy across Dimensions

Collaborative Pedagogy across Dimensions	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
Communication and Expression	1048	10.16	2.856	6	26	8.00	10.00	12.00
Team Participation and Cooperation	1048	19.47	5.068	11	49	16.00	19.00	22.00
Leadership and Responsibility	1048	8.12	2.155	4	24	7.00	8.00	9.00
Reasoning and Decision Making	1048	8.66	2.690	4	18	7.00	8.00	10.00
Collaborative Pedagogy	1048	46.42	9.697	25	93	39.00	46.00	52.00

Table 4.6 Perceived Effectiveness of Collaborative Pedagogy:

Collaborative Pedagogy Dimension	Test Value (Midpoint)	Positive Ranks	Negative Ranks	Z Value	p-value	Interpretation
Communication & Expression	16	29	1001	-27.433	.000***	Significantly lower than midpoint

Team Participation & Cooperation	30	38	1002	-27.508	.000***	Significantly lower than midpoint
Leadership & Responsibility	14	9	1034	-27.894	.000***	Significantly lower than midpoint
Reasoning & Decision Making	11	156	812	-21.428	.000***	Significantly lower than midpoint
Collaborative Pedagogy	59	95	944	-25.441	.000***	Significantly lower than midpoint

The results of the Wilcoxon Signed-Rank test indicate that four dimensions of collaborative pedagogy were significantly lower than their respective midpoint values. This showed that the perceived effectiveness of collaborative pedagogical practices was below the expected level. In the dimension of Communication and Expression, the large number of negative ranks and significant z-value ($z = -27.433$, $p < .001$) suggest that students' opportunities to communicate ideas and express themselves through collaborative learning were not occurring as effectively as anticipated. Similarly, Team Participation and Cooperation also showed a significant negative difference ($z = -27.508$, $p < .001$), indicating that active participation and cooperative learning among students were not consistently practiced in classroom settings.

The dimension of Leadership and Responsibility records the strongest negative result ($z = -27.894$, $p < .001$), implying that collaborative pedagogy was not sufficiently promoting leadership skills or shared responsibility among learners. Hence, the Reasoning and Decision Making was found significantly lower than the midpoint ($z = -21.428$, $p < .001$), suggesting that collaborative activities were not be fully encouraging critical thinking, discussion, and joint problem-solving processes. When considered together, the Collaborative Pedagogy in terms of score ($z = -25.441$, $p < .001$) confirms that the implementation of collaborative teaching practices was found generally weaker than the expected standard.

Table 4.7: Collaborative Pedagogy: Descriptive Statistics and Group Differences

Grouping Variable	Category	N	Mean Rank	Test Used	Test Value	Z	p-value
Overall	—	1048	—	—	Mean = 46.42, SD = 9.697 (Min = 25, Max = 93)	—	—
Class	IX	478	529.10	Mann–Whitney U	U = 134029.000	-0.451	.652
	X	570	520.64	Mann–Whitney U	U = 134029.000	-0.451	.652
Locality	Rural	630	489.69	Mann–Whitney U	U = 109740.500	-4.515	.000**
	Urban	417	575.83	Mann–Whitney U	U = 109740.500	-4.515	.000**
Gender	Male	358	578.79	Mann–Whitney U	U = 104074.500	-4.185	.000**
	Female	690	496.33	Mann–Whitney U	U = 104074.500	-4.185	.000**
Divyanjan	Yes	53	517.75	Mann–Whitney U	U = 26009.500	-0.155	.877
	No	994	524.33	Mann–Whitney U	U = 26009.500	-0.155	.877
Category	ST	31	438.08	Kruskal–Wallis	$\chi^2 = 3.573$	—	.311
	SC	155	515.50	Kruskal–Wallis	$\chi^2 = 3.573$	—	.311
	OBC	236	543.21	Kruskal–Wallis	$\chi^2 = 3.573$	—	.311
	General	626	523.95	Kruskal–Wallis	$\chi^2 = 3.573$	—	.311

**Significance at 0.01 level

*Significance at 0.05 Level

Effectiveness of Collaborative Pedagogy in Social Studies

The overall findings show that students reported a moderate level of effectiveness of collaborative pedagogy in Social Studies. The mean score was **46.42** with a standard deviation of **9.697**, and the scores ranged from **25 to 93**. This variation indicates that while many students experienced collaborative learning positively, their perceptions differed to some extent.

Effectiveness Based on Class

When comparing students of Class IX and Class X, the results show no significant difference in their perceptions. Class IX students (N = 478) had a mean rank of **529.10**, while Class X students (N = 570) had a mean rank of **520.64**. The Mann–Whitney U test revealed that this difference was not statistically significant (U = 134029.000, Z = –0.451, p = .652). This suggests that collaborative pedagogy is perceived similarly by students of both classes.

Effectiveness Based on Locality

A significant difference was found between rural and urban students. Rural students (N = 630) had a mean rank of **489.69**, whereas urban students (N = 417) had a higher mean rank of **575.83**. The difference was statistically significant (U = 109740.500, Z = –4.515, p = .000). This indicates that urban students perceived collaborative pedagogy as more effective compared to rural students.

Effectiveness Based on Gender

Gender-wise analysis also revealed a significant difference. Male students (N = 358) obtained a higher mean rank of **578.79**, while female students (N = 690) had a mean rank of **496.33**. The Mann–Whitney U test showed that this difference was statistically significant (U = 104074.500, Z = –4.185, p = .000). This means that male students perceived collaborative pedagogy as more effective than female students.

Effectiveness Based on Divyanjan Status

In terms of Divyanjan status, no significant difference was observed. Divyanjan students (N = 53) had a mean rank of **517.75**, and non-Divyanjan students (N = 994) had a mean rank of **524.33**. The

difference was not statistically significant (U = 26009.500, Z = –0.155, p = .877). Therefore, collaborative pedagogy appears to be equally effective for both groups.

Effectiveness Based on Social Category

The analysis across social categories (ST, SC, OBC, and General) did not show any statistically significant difference. ST students (N = 31) had a mean rank of 438.08, SC students (N = 155) had 515.50, OBC students (N = 236) had 543.21, and General category students (N = 626) had 523.95. The Kruskal–Wallis test indicated that these differences were not significant ($\chi^2 = 3.573$, p = .311). This suggests that the effectiveness of collaborative pedagogy does not vary across social categories.

The collaborative pedagogy in Social Studies was perceived as moderately effective by students. Significant differences were found only with respect to locality and gender, while class, Divyanjan status, and social category did not show significant differences. These findings suggest that contextual and gender-related factors may influence how students experience collaborative learning.

Table 4.8: Group-wise Comparison for Dimensions of Collaborative Pedagogy (Student, N = 1048)

Demographic Variable	Dimensions of Collaborative Pedagogy	Test Used	Test Value	Z / χ^2	p-value	Significance
Class (IX vs X)	Communication & Expression	Mann–Whitney U	135830.00	-0.083	.934	Not Significant
	Team Participation & Cooperation	Mann–Whitney U	131680.50	-0.935	.350	Not Significant
	Leadership & Responsibility	Mann–Whitney U	129727.50	-1.349	.177	Not Significant
	Reasoning & Decision Making	Mann–Whitney U	131299.50	-1.017	.309	Not Significant
Locality (Rural–Urban)	Communication & Expression	Mann–Whitney U	120151.000	-2.355	.019	Significant

	Team Participation & Cooperation	Mann–Whitney U	112460.000	-3.954	.000	Significant
	Leadership & Responsibility	Mann–Whitney U	114651.500	-3.530	.000	Significant
	Reasoning & Decision Making	Mann–Whitney U	112142.000	-4.039	.000	Significant
Gender (Male–Female)	Communication & Expression	Mann–Whitney U	111094.000	-2.691	.007	Significant
	Team Participation & Cooperation	Mann–Whitney U	106277.000	-3.718	.000	Significant
	Leadership & Responsibility	Mann–Whitney U	115308.000	-1.787	.074	Not Significant
	Reasoning & Decision Making	Mann–Whitney U	106680.500	-3.647	.000	Significant
Divyangjan (Yes–No)	Communication &Expression	Mann–Whitney U	24256.500	-0.979	.328	Not Significant
	Team Participation & Cooperation	Mann–Whitney U	25416.000	-0.432	.666	Not Significant
	Leadership & Responsibility	Mann–Whitney U	20125.500	-2.933	.003	Significant
	Reasoning & Decision Making	Mann–Whitney U	25622.000	-0.338	.736	Not Significant
Category (ST/SC/OBC/Gen)	Communication & Expression	Kruskal–Wallis	$\chi^2 = 3.146$	3.146	.370	Not Significant
	Team Participation & Cooperation	Kruskal–Wallis	$\chi^2 = 2.290$	2.290	.514	Not Significant
	Leadership & Responsibility	Kruskal–Wallis	$\chi^2 = 6.117$	6.117	.106	Not Significant
	Reasoning & Decision Making	Kruskal–Wallis	$\chi^2 = 9.928$	9.928	.019	Significant

**Significance at 0.01 level

*Significance at 0.05 Level

Above table presents the group-wise comparison of four dimensions of collaborative pedagogy Communication & Expression, Team Participation & Cooperation, Leadership & Responsibility, and Reasoning & Decision Making across different demographic variables.

Class (IX vs X)

The analysis based on class revealed no statistically significant differences across any of the four dimensions. For Communication & Expression (U = 135830.00, Z = –0.083, p = .934), Team Participation & Cooperation (U = 131680.50, Z = –0.935, p = .350), Leadership & Responsibility (U = 129727.50, Z = –1.349, p = .177), and Reasoning & Decision Making (U = 131299.50, Z = –1.017, p = .309), the p-values were greater than .05. This indicates that students of Class IX and Class X perceive all dimensions of collaborative pedagogy in a similar manner.

Locality (Rural–Urban)

Significant differences were observed across all four dimensions based on locality. Communication & Expression showed a significant difference (U = 120151.000, Z = –2.355, p = .019). Similarly, Team Participation & Cooperation (U = 112460.000, Z = –3.954, p = .000), Leadership & Responsibility (U = 114651.500, Z = –3.530, p = .000), and Reasoning & Decision Making (U = 112142.000, Z = –4.039, p = .000) were also statistically significant. These findings suggest that rural and urban students differ significantly in their perceptions across all dimensions of collaborative pedagogy.

Gender (Male–Female)

Gender-wise analysis showed significant differences in three out of four dimensions. Communication & Expression (U = 111094.000, Z = –2.691, p = .007), Team Participation &Cooperation (U = 106277.000, Z = –3.718, p = .000), and Reasoning & Decision Making (U = 106680.500, Z = –3.647, p = .000) were statistically significant. However, Leadership & Responsibility did not show a significant difference (U = 115308.000, Z = –1.787, p = .074). This indicates that male and female students differ in most aspects of collaborative pedagogy, except in leadership and responsibility.

Divyangjan Status (Yes–No)

In terms of Divyangjan status, only Leadership & Responsibility showed a significant difference (U = 20125.500, Z = –2.933, p = .003). The other dimensions—Communication & Expression (U = 24256.500, Z = –0.979, p = .328), Team Participation & Cooperation (U = 25416.000, Z = –0.432, p = .666), and Reasoning & Decision Making (U = 25622.000, Z = –0.338, p = .736)—were not statistically significant. This suggests that Divyangjan and non-Divyangjan students perceive leadership and responsibility differently, while their perceptions of other dimensions remain similar.

Category (ST/SC/OBC/General)

The comparison across social categories indicated no significant differences in Communication & Expression ($\chi^2 = 3.146$, p = .370), Team Participation & Cooperation ($\chi^2 = 2.290$, p = .514), and Leadership & Responsibility ($\chi^2 = 6.117$, p = .106). However, a significant difference was found

in Reasoning & Decision Making ($\chi^2 = 9.928$, $p = .019$). This suggests that students from different social categories differ only in the dimension of reasoning and decision-making, while other aspects of collaborative pedagogy are perceived similarly.

The overall findings highlighted that the locality emerged as the most influential factor, showing significant differences across all dimensions. Gender also showed significant differences in most dimensions, except leadership. Divyangjan status influenced only leadership and responsibility, while social category affected only reasoning and decision-making. In contrast, class did not significantly influence any dimension of collaborative pedagogy. These findings highlight that contextual and demographic factors may shape specific aspects of students' collaborative learning experiences.

Perceived Effectiveness of Culturally Responsive Pedagogy (objective 2)

Table 4.9 Descriptive Statistics of Culturally Responsive Pedagogy and its Dimensions

Culturally Responsive Pedagogy and its Dimensions	N	Range	Minimum	Maximum	Mean	Std. Deviation
Social Awareness and Real Life Connection	1048	22	8	30	19.41	3.909
Cultural Sensitivity and Inclusiveness	1048	16	4	20	5.82	2.122
Culturally Responsive Pedagogy	1048	32	12	44	25.22	4.629

Table 4.10: Wilcoxon Signed-Rank Test for Perceived Effectiveness of Culturally Responsive Pedagogy

Culturally Responsive Pedagogy and its Dimensions	Test Value (H_0)	Positive (n)	Negative (n)	Zero (n)	z-value	p-value	Interpretation
Social Awareness and Real Life C	19	517	418	113	3.336	0.0009	Significant difference (higher than test value)
Cultural Sensitivity and Inclusivity	12	14	1018	16	-28.011	0.0000	Significant difference (lower than test value)
Culturally Responsive Pedagogy	28	221	747	80	-17.711	0.0000	Significant difference (lower than test value)

The Wilcoxon Signed-Rank test results indicate statistically significant differences between the observed median scores and the hypothesized values for perceived effectiveness of culturally responsive pedagogy and its two dimensions. For Social Awareness and Real Life Connection, the obtained z-value ($z = 3.336$, $p = 0.0009$) was positive and significant, indicating that the median score is significantly higher than the test value of 19. This suggests that respondents perceive Social Awareness and its connection to real-life situations as more effective than the expected benchmark level.

In contrast, Cultural Sensitivity and Inclusivity shows a highly significant negative z-value ($z = -28.011$, $p < 0.001$), indicating that the median score is significantly lower than the test value of 12. This reflects comparatively lower perceived effectiveness in promoting cultural sensitivity and inclusive practices. Hence, ultimately, the Culturally Responsive Pedagogy showed significant negative difference ($z = -17.711$, $p < 0.001$) from the hypothesized median of 28, suggesting that participants perceive its effectiveness to be below the expected standard.

Table 4.11: Culturally Responsive Pedagogy: Descriptive Statistics and Group Differences

Grouping Variable	Category	N	Mean Rank	Test Used	Test Value	Z	p-value
Overall	—	1048	—	—	Mean = 25.22, SD = 4.629 (Min = 12, Max = 44)	—	—
Class	IX	478	532.03	Mann–Whitney U	U = 132629.500	-0.740	.460
	X	570	518.18	Mann–Whitney U	U = 132629.500	-0.740	.460
Locality	Rural	630	503.00	Mann–Whitney U	U = 118124.000	-2.769	.006
	Urban	417	555.73	Mann–Whitney U	U = 118124.000	-2.769	.006
Gender	Male	358	562.92	Mann–Whitney U	U = 109756.500	-2.967	.003
	Female	690	504.57	Mann–Whitney U	U = 109756.500	-2.967	.003
Divyanjan	Yes	53	440.99	Mann–Whitney U	U = 21941.500	-2.056	.040
	No	994	528.43	Mann–Whitney U	U = 21941.500	-2.056	.040
Category	ST	31	390.11	Kruskal–Wallis	$\chi^2 = 20.486$	—	.000
	SC	155	470.51	Kruskal–Wallis	$\chi^2 = 20.486$	—	.000
	OBC	236	584.56	Kruskal–Wallis	$\chi^2 = 20.486$	—	.000
	General	626	521.88	Kruskal–Wallis	$\chi^2 = 20.486$	—	.000

**Significance at 0.01 level

*Significance at 0.05 Level

Culturally Responsive Pedagogy: Group-wise Interpretation (Students)

The overall mean score of students on Culturally Responsive Pedagogy was **25.22** with a standard deviation of **4.629**, indicating a moderate level of perception among students. The scores ranged from **12 to 44**, showing some variation in how students experienced culturally responsive practices in Social Studies classrooms.

Class (IX vs X)

With respect to class, Class IX students (N = 478) had a mean rank of **532.03**, while Class X students (N = 570) had a mean rank of **518.18**. The Mann–Whitney U test revealed that the

difference was not statistically significant (U = 132629.500, Z = –0.740, p = .460). This indicates that students of both classes perceived culturally responsive pedagogy in a similar manner.

Locality (Rural–Urban)

A significant difference was observed based on locality. Rural students (N = 630) obtained a mean rank of **503.00**, whereas urban students (N = 417) had a higher mean rank of **555.73**. The difference was statistically significant (U = 118124.000, Z = –2.769, p = .006). This suggests that urban students perceived culturally responsive pedagogy more positively than rural students.

Gender (Male–Female)

Gender-wise analysis also showed a significant difference. Male students (N = 358) had a higher mean rank of **562.92**, while female students (N = 690) had a mean rank of **504.57**. The Mann–Whitney U test confirmed that this difference was statistically significant (U = 109756.500, Z = –2.967, p = .003). This indicates that male students reported a more favourable perception of culturally responsive pedagogy compared to female students.

Divyanjan Status (Yes–No)

In terms of Divyanjan status, Divyanjan students (N = 53) had a mean rank of **440.99**, whereas non-Divyanjan students (N = 994) had a mean rank of **528.43**. The difference was statistically significant (U = 21941.500, Z = –2.056, p = .040). This suggests that non-Divyanjan students perceived culturally responsive pedagogy more positively than Divyanjan students.

Category (ST/SC/OBC/General)

The comparison across social categories revealed a statistically significant difference ($\chi^2 = 20.486$, p = .000). ST students (N = 31) had a mean rank of **390.11**, SC students (N = 155) had **470.51**, OBC students (N = 236) had the highest mean rank of **584.56**, and General category students (N = 626) had **521.88**. These results indicate that students from different social categories differ significantly in their perception of culturally responsive pedagogy, with OBC students reporting the most positive perception and ST students reporting the lowest.

In total, the significant differences were found based on locality, gender, Divyanjan status, and social category, while no significant difference was observed based on class. These findings

suggest that students' background characteristics play an important role in shaping their perception of culturally responsive pedagogy in Social Studies classrooms.

Table 4.12 Group-wise Comparison of Social Awareness and Cultural Sensitivity across Demographic Variables (N = 1048)

Demographic Variable	Dependent Variable	Groups	N	Mean Rank	Test Used	Test Value	Z / χ^2	p-value
Class (IX & X)	Social Awareness & Real-life Connection	IX	478	521.23	Mann–Whitney U	134669.00	-0.321	.748
		X	570	527.24				
	Cultural Sensitivity & Inclusiveness	IX	478	545.50	Mann–Whitney U	126193.50	-2.114	.035
		X	570	506.89				
Locality (Rural & Urban)	Social Awareness &Real Life Connection	Rural	630	504.79	Mann–Whitney U	119250.00	-2.535	.011
		Urban	417	553.03				
	Cultural Sensitivity & Inclusiveness	Rural	630	515.46	Mann–Whitney U	125977.50	-1.154	.249
		Urban	417	536.90				
Gender (Male & Female)	Social Awareness &Real Life Connection	Male	358	555.12	Mann–Whitney U	112546.50	-2.367	.018
		Female	690	508.61				
	Cultural Sensitivity & Inclusiveness	Male	358	562.54	Mann–Whitney U	109890.00	-3.012	.003
		Female	690	504.76				
Divyanjan (Yes & No)	Social Awareness &Real Life Connection	Yes	53	437.91	Mann–Whitney U	21778.00	-2.134	.033
		No	994	528.59				
	Cultural Sensitivity & Inclusiveness	Yes	53	513.08	Mann–Whitney U	25762.50	-0.277	.782
		No	994	524.58				
Category (ST, SC, OBC, General)	Social Awareness &Real Life Connection	ST	31	386.52	Kruskal–Wallis	20.151	χ^2=20.151	.000
		SC	155	481.25				
		OBC	236	587.29				
		General	626	518.37				
	Cultural Sensitivity & Inclusiveness	ST	31	512.48	Kruskal–Wallis	4.083	χ^2=4.083	.253
		SC	155	485.86				
		OBC	236	546.68				
		General	626	526.30				

**Significance at 0.01 level

*Significance at 0.05 Level

Table 4.8 shows how students perceived the effectiveness of collaborative and culturally responsive pedagogy in terms of Social Awareness & Real-Life Connection and Cultural Sensitivity & Inclusiveness across different demographic variables.

Class (IX & X)

In terms of Social Awareness & Real-Life Connection, there was no significant difference between Class IX (mean rank = 521.23) and Class X students (mean rank = 527.24) (U = 134669.00, Z = –0.321, p = .748). This indicates that students of both classes perceived the effectiveness of pedagogy in developing social awareness similarly.

However, for Cultural Sensitivity & Inclusiveness, a significant difference was observed. Class IX students (mean rank = 545.50) perceived greater effectiveness compared to Class X students (mean rank = 506.89) (U = 126193.50, Z = –2.114, p = .035). This suggests that younger students perceived culturally responsive practices as more effective in promoting inclusiveness.

Locality (Rural & Urban)

With regard to Social Awareness & Real-Life Connection, urban students (mean rank = 553.03) perceived significantly greater effectiveness than rural students (mean rank = 504.79) (U = 119250.00, Z = –2.535, p = .011). This implies that collaborative and culturally responsive strategies may be more effectively experienced in urban settings.

For Cultural Sensitivity & Inclusiveness, no significant difference was found between rural (mean rank = 515.46) and urban students (mean rank = 536.90) (U = 125977.50, Z = –1.154, p = .249). This suggests that students from both localities perceived similar effectiveness in fostering cultural sensitivity.

Gender (Male & Female)

Male students perceived significantly higher effectiveness in both dimensions. For Social Awareness & Real-Life Connection, males (mean rank = 555.12) scored higher than females (mean rank = 508.61) (U = 112546.50, Z = –2.367, p = .018). Similarly, for Cultural Sensitivity & Inclusiveness, males (mean rank = 562.54) reported higher perceived effectiveness than females (mean rank = 504.76) (U = 109890.00, Z = –3.012, p = .003).

These findings indicate that male students perceived collaborative and culturally responsive pedagogy as more effective in enhancing both social awareness and cultural inclusiveness.

Divyanjan (Yes & No)

In terms of Social Awareness & Real-Life Connection, non-Divyanjan students (mean rank = 528.59) perceived significantly higher effectiveness compared to Divyanjan students (mean rank = 437.91) ($U = 21778.00$, $Z = –2.134$, $p = .033$).

However, for Cultural Sensitivity & Inclusiveness, no significant difference was observed between Divyanjan (mean rank = 513.08) and non-Divyanjan students (mean rank = 524.58) ($U = 25762.50$, $Z = –0.277$, $p = .782$). This suggests that inclusiveness efforts were perceived similarly by both groups.

Category (ST, SC, OBC, General)

A significant difference was found across social categories in Social Awareness & Real-Life Connection ($\chi^2 = 20.151$, $p = .000$). OBC students (mean rank = 587.29) perceived the highest effectiveness, followed by General (518.37) and SC (481.25) students, while ST students (386.52) reported the lowest perceived effectiveness.

In contrast, no significant difference was observed across categories for Cultural Sensitivity & Inclusiveness ($\chi^2 = 4.083$, $p = .253$), indicating similar perceptions of effectiveness in this dimension across social groups.

Perceived Effectiveness in Total

From the students' perspective, the effectiveness of collaborative and culturally responsive pedagogy in promoting social awareness varies across locality, gender, Divyanjan status, and social category. However, perceived effectiveness in promoting cultural sensitivity and inclusiveness is largely consistent across most demographic variables, except for differences observed by class and gender.

These findings highlight that students' background characteristics influence how effectively they experience certain aspects of collaborative and culturally responsive pedagogy.

4.6 Implementation Challenges of collaborative and culturally responsive pedagogy (Objective 3)

Conceptual and Reflective Challenges in Understanding Pedagogy

Analysis of the teachers' interview responses indicates that a major challenge in implementing collaborative and culturally responsive pedagogy lies in limited conceptual clarity and insufficient reflective articulation. Many teachers described activities such as group discussion, project work, and classroom interaction; however, when specifically asked about challenges, several were unable to clearly explain the conceptual difficulties they encounter.

A teacher said that "By interacting and participating in group activities and cultural events." (T4, Maharashtra, 2025).

Another Female "Students learn better when they work in groups." (T2, Maharashtra, 2025).

The responses suggest that teachers tend to associate collaborative pedagogy primarily with group-based classroom activities rather than understanding it as a structured, inclusive, and culturally grounded instructional approach. Similarly, culturally responsive pedagogy was often interpreted in terms of cultural celebration rather than as a systematic integration of students' lived experiences, identities, and socio-cultural realities into curriculum and pedagogy.

A male teacher said that "We organizing activities related to different cultures which encouraging our students to share their traditions" (T6, Maharashtra, 2025).

Moreover, some teachers struggled to identify explicit barriers, reflecting a gap in reflective practice. Instead of critically analyzing classroom inequities or structural constraints, responses remained general and descriptive.

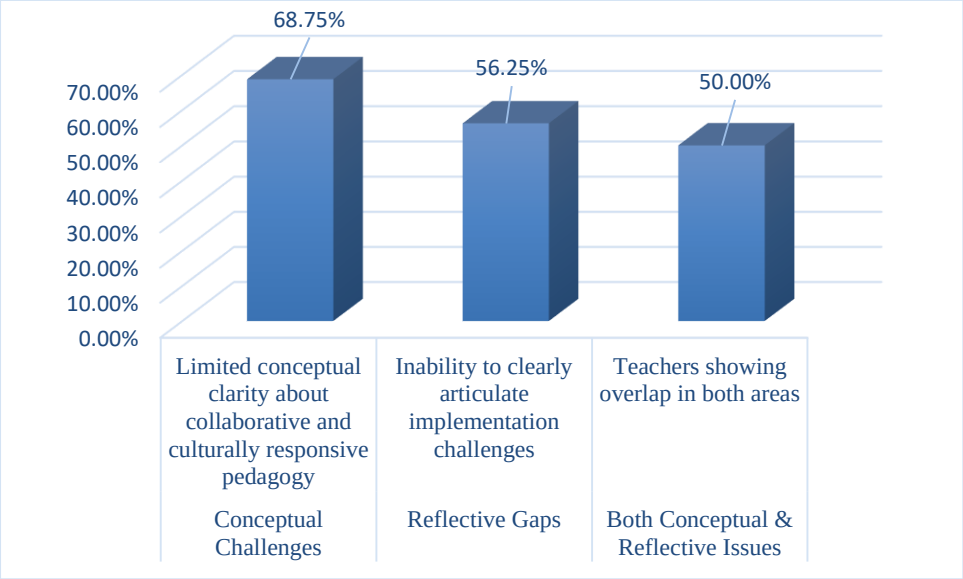


Fig 4.14: Conceptual and Reflective Challenges

The chart shows that many teachers are having difficulties in understanding and using collaborative and culturally responsive teaching methods. The highest percentage (68.75%) shows that most of the teachers do not have conceptual understanding of these approaches. It means that they are aware of these approaches, but they do not understand their meaning. Approximately 56.25% of teachers are unable to explain clearly the problems that they face while trying to apply these approaches. It shows that teachers are not reflecting on and discussing their approaches. Moreover, 50% of teachers face both difficulties. It shows that teachers are unable to understand and reflect on the challenges that they face while trying to apply collaborative and culturally responsive approaches. The findings suggest that teachers need to be trained to effectively apply collaborative and culturally responsive approaches.

This theme demonstrates that teachers face difficulties in understanding and explaining collaborative and culturally responsive pedagogy. It seems that, according to the interview answers, teachers are implementing some collaborative practices in their classrooms, but they do not understand the essence of such practices. The majority of teachers described collaboration as working in groups, discussing, and doing projects. For example:

A teacher said "Through group discussion and project work."(T5, Maharashtra, 2025).

These responses show that teachers conceptualize collaborative pedagogy mainly as group work. The teachers, however, did not elaborate on how this helps to overcome issues of diversity, equity, and learning styles. This demonstrates a lack of conceptual clarity. The teacher was simply following a teaching method like project and group work so that the curriculum is transacted to the students. Similarly, culturally responsive pedagogy was conceptualized as organizing cultural programs or allowing students to express their culture by talking about their traditions. Collaboration was conceptualized as organizing group discussion, which demonstrates a lack of conceptual expansion of this approach. Cultural responsiveness was conceptualized as organizing cultural activities, which is also a narrow understanding about cultural responsive pedagogy.

Pedagogical Constraints in Classroom Practice

This theme reflects the practical classroom-level limitations teachers face while implementing collaborative and culturally responsive pedagogy. Although teachers are attempting to involve students through interactive methods, their instructional approaches appear limited in scope, structure, and diversity.

From the interview responses, it is evident that teachers mainly rely on group-based classroom activities such as peer work, chart preparation, and project presentations. For instance:

A teacher said "Peer work, group work and dialogue speaking." (T3, Maharashtra, 2025).

Another teacher "Students prepare charts and present in the class." (T7, Maharashtra, 2025).

These responses show that collaboration is largely implemented through activity-based participation. However, the explanations remain brief and procedural, indicating that teachers may not be using structured cooperative learning models (such as role assignment, accountability structures, or differentiated grouping).

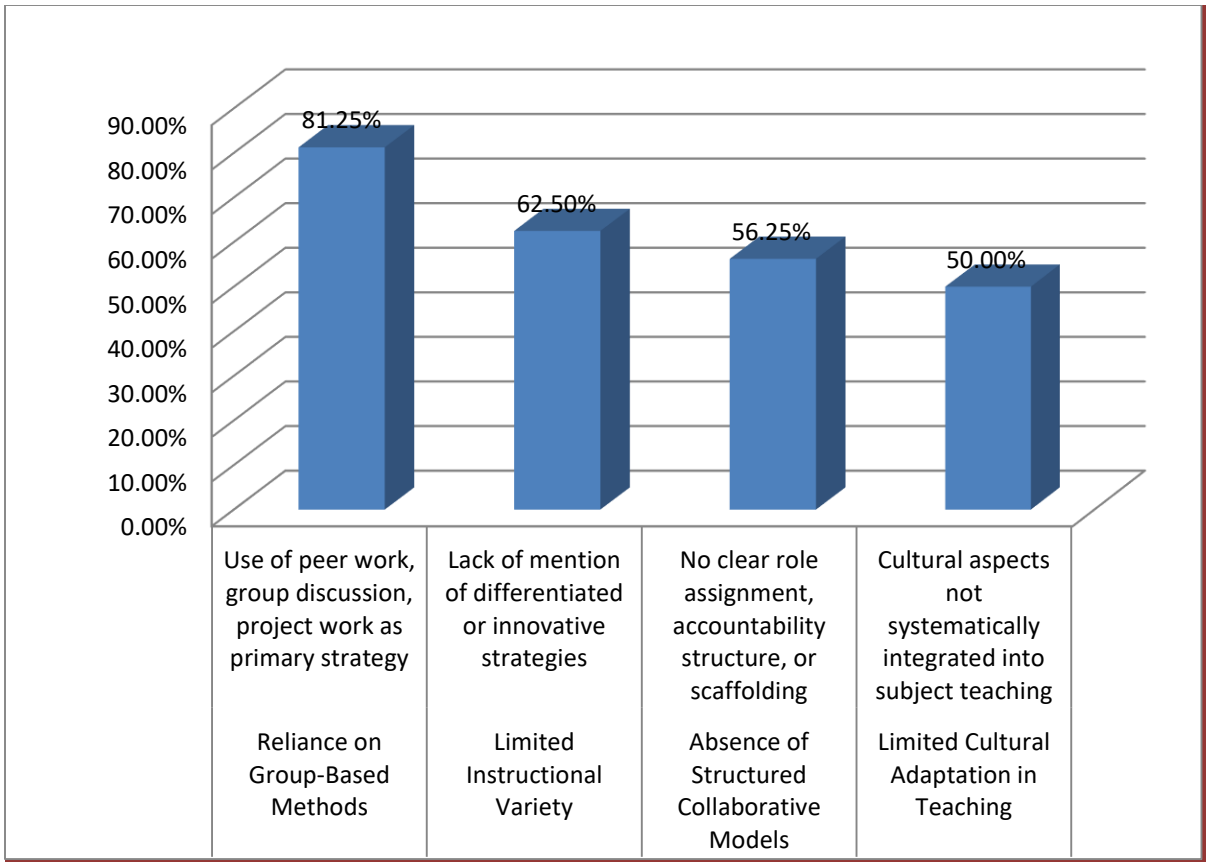


Fig. 4.15: Pedagogical Constraints in Classroom Practice

Another limitation is that teachers did not clearly describe how they adjust their teaching methods according to students' cultural backgrounds, learning pace, or socio-economic differences. Cultural responsiveness was not strongly linked with subject teaching strategies. For example:

A male teacher responded that "We give projects and ask them to work together."(T7, Maharashtra, 2025).

This response reflects implementation at a general level but does not show adaptation of instruction based on diversity or inclusion needs.

Furthermore, teachers' responses did not highlight the use of varied assessment strategies, reflective feedback mechanisms, or inclusive classroom scaffolding. The emphasis remained on completing collaborative tasks rather than ensuring meaningful learning for all students.

Major challenges highlighted in this second theme by secondary school teacher are as follows.

- Teachers are using collaborative activities, but mainly in traditional formats.
- There is limited pedagogical flexibility beyond group discussions and projects.
- Instructional practices are not deeply differentiated.
- Cultural responsiveness is not systematically embedded into lesson planning.

Thus, the challenge is not unwillingness, but restricted pedagogical repertoire. Teachers appear to rely on familiar methods rather than integrating diverse instructional strategies that fully support equity and culturally responsive learning. This indicates a need for professional development focused on expanding teachers' pedagogical tools and helping them translate collaborative and culturally responsive theory into structured classroom practice.

Resource-Dependent Implementation Practices

This theme emphasizes the point that the implementation of collaborative and culturally responsive pedagogy is often dependent on the availability of technology and resources. The teachers opined that the use of projectors, digital content, and audio-visual tools plays a key role in conducting interactive and collaborative activities in the classroom.

Fig. 4.16: Percentage Distribution of Teachers' Responses on Resource-Dependent Implementation Practices

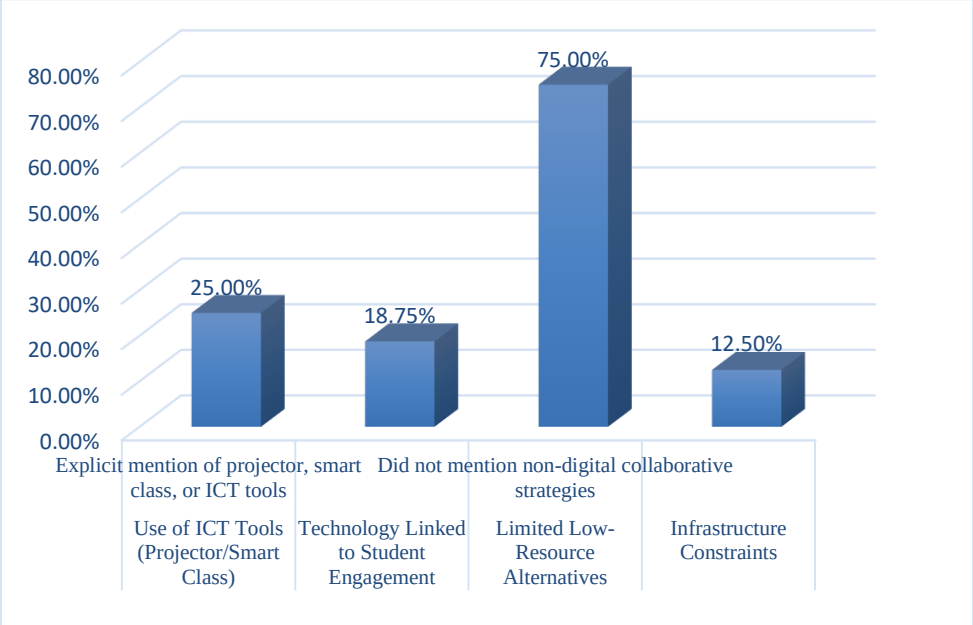


Fig. 4.16: Percentage Distribution of Teachers' Responses on Resource-Dependent Implementation Practices

The above chart indicates that teachers mainly focus on digital tools. Around 25% of teachers have explicitly mentioned that they used ICT tools like projectors/smart classrooms, while 18.75% of teachers have mentioned that technology helps to improve student engagement. Moreover, a majority of teachers (around 75%) did not mention non-digital collaborative strategies. It is clear that non-digital collaborative strategies are not discussed by teachers. Moreover, 12.5% of teachers faced infrastructure issues. It is clear that infrastructure issues affect the proper utilization of technology. It is evident that more emphasis is given to digital tools, while less emphasis is given to non-digital collaborative strategies.

From the interview responses, it is evident that some teachers associate effective collaborative teaching with the use of ICT tools. For example:

A teacher said that *"We use projector for showing videos and presentations so that students understand better."(T7, Maharashtra, 2025).*

A teacher from urban located school said that "Smart class helps students to participate actively." (T7, Maharashtra, 2025).

Such responses imply that the teachers see technology as a supportive resource for engaging students and facilitating collaborative activities. While technology can be a powerful resource for learning, the heavy use of technology may imply a resource-dependent approach. Another theme that is implied from the responses is that the teachers did not mention many alternative approaches to resource-dependent collaborative activities. There was a lack of mention of the use of local resources, knowledge of the community, or the use of stories and experiences as approaches to facilitating collaborative activities. This may imply that the teachers may face difficulties in facilitating collaborative activities in the face of a lack of technology. Another implication from the responses is that the availability of resources is not the same for all schools. In some schools, the lack of technology or the lack of access to a smart classroom may limit the use of interactive approaches.

4.7 The perceptions of teachers and headmasters (Objective 4)

Table 4.13 Descriptive Statistics of Teacher Perception of Collaborative and Culturally Responsive Pedagogy (N= 95)

Teacher Perception of Collaborative and Culturally Responsive Pedagogy	Min	Max	Mean	SD	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Awareness and Understanding	6	20	13.73	2.750	7.563	-.259	.247	.599	.490
Perceived Relevance and Importance	7	25	18.69	2.772	7.682	-1.063	.247	3.487	.490
Classroom Implementation	13	25	17.63	1.990	3.959	.534	.247	1.480	.490
Student Response and Impact	5	25	18.53	2.492	6.209	-1.528	.247	9.480	.490
Institutional Support and Professional Need	8	25	20.39	2.893	8.368	-1.085	.247	3.038	.490
Teacher Perception of Collaborative and Responsive Pedagogy	44	120	88.97	8.522	72.627	-.901	.247	8.957	.490
Valid N (list wise)									

Table 4.14 Wilcoxon Signed-Rank Test for Perceived Effectiveness Dimensions

Dimension	Test Value (Midpoint)	Positive (n)	Negative (n)	Zero (n)	z-value	p-value	Interpretation
Awareness and Understanding	13	55	33	7	2.802	0.0051	Significant; higher than midpoint
Perceived Relevance and Importance	16	83	7	5	7.038	0.000	Highly significant; higher than midpoint

Classroom Implementation	19	14	72	9	-5.912	0.000	Highly significant; lower than midpoint
Student Response and Impact	15	90	3	2	7.916	0.000	Highly significant; higher than midpoint
Institutional Support and Professional Need	16.5	89	6	0	7.746	0.000	Highly significant; higher than midpoint
Teacher Perception of Collaborative and Responsive Pedagogy	82	83	10	2	7.231	0.000	Highly significant; higher than midpoint

The results of the Wilcoxon Signed-Rank test show that teachers' perceived effectiveness was significantly different from the midpoint (average expected level) in all five dimensions. For Awareness and Understanding, the result is significant and positive ($z = 2.802$, $p < 0.01$), which means teachers have a higher level of awareness and understanding than the average level. Similarly, Perceived Relevance and Importance showed a very strong positive difference ($z = 7.038$, $p < 0.000$), indicating that teachers consider collaborative and responsive pedagogy highly relevant and important in education.

The findings also reveal very positive perceptions regarding Student Response and Impact ($z = 7.916$, $p < 0.000$), suggesting that teachers believe students respond well and benefit from these pedagogical practices. Institutional Support and Professional Need also shows a significant positive result ($z = 7.746$, $p < 0.000$), meaning teachers feel there is good institutional support and a strong need for professional development in this area. Hence, in total, the Teacher Perception of Collaborative and Responsive Pedagogy was significantly higher than the midpoint ($z = 7.231$, $p < 0.000$), showing that perception toward these teaching approaches effected because of collaborative and culturally responsive pedagogy.

However, Classroom Implementation shows a significant negative result ($z = -5.912$, $p < 0.001$), which indicates that actual classroom practice is lower than the expected level. This means that although teachers understand and value collaborative and responsive pedagogy, they may face challenges in applying it effectively in real classroom situations. Overall, the results suggest that teachers have positive beliefs and attitudes toward these pedagogical practices, but practical implementation still needs improvement.

Table 4.15 The Perceptions of Students, and Teachers Regarding the Relevance of Collaborative and Culturally Responsive Pedagogy:

Grouping Variable	Category	N	Mean Rank	Test Used	Test Value (χ^2)	df	p-value
Student Perception	ST	31	411.68	Kruskal–Wallis	9.530	3	.023*
	SC	155	497.58				
	OBC	236	563.64				
	General	626	522.00				

**Significance at 0.01 level

*Significance at 0.05 Level

A Kruskal–Wallis H test was conducted to examine whether student perception differs across social categories (ST, SC, OBC, and General). The results revealed a statistically significant difference among the four groups, χ^2 (3) = 9.530, p = .023, indicating that student perception varies across social categories. An examination of the mean ranks shows that OBC students (Mean Rank = 563.64) reported the highest level of perception, followed by General category students (Mean Rank = 522.00) and SC students (Mean Rank = 497.58), whereas ST students (Mean Rank = 411.68) reported the lowest perception scores. These findings suggest that social category is associated with differences in students' perceptions, which may reflect variations in institutional experiences, access to academic support, inclusivity practices, or socio-cultural capital within the university context. Further post-hoc analysis is recommended to identify the specific group differences contributing to the overall significance.

Teacher Perception

Table 4.16: Differences in Teacher Perception Regarding Collaborative and Culturally Responsive Pedagogy across Demographic Variables (N = 95)

Grouping Variable	Category	N	Mean Rank	Test Used	Test Value	Z / χ^2	p-value
Gender	Male	65	46.86	Mann–Whitney U	901.000	-0.340	.734
	Female	29	48.93				
Locality	Rural	50	45.16	Mann–Whitney U	983.000	-1.060	.289
	Urban	45	51.16				
Subject Taught	Social Science	29	54.33	Kruskal–Wallis	5.327	5.327	.620
	English	26	46.85				
	Hindi	17	50.62				
	Marathi	17	39.15				
	Urdu	3	46.50				
	Sanskrit	1	11.50				
	Maths	1	41.00				
	Science	1	48.50				
Class Taught	Class IX	3	42.17	Kruskal–Wallis	0.189	0.189	.910
	Class X	13	49.77				
	Both IX & X	79	47.93				
Years of Experience	11–20 Years	3	2.67	Kruskal–Wallis	0.533	0.533	.766
	21–30 Years	1	3.00				
	> 30 Years	1	4.00				

**Significance at 0.01 level

*Significance at 0.05 Level

The table highlights the differences in Teacher Perception Regarding Collaborative and Culturally Responsive Pedagogy (N = 95). The analysis examined whether teachers' perceptions of collaborative and culturally responsive pedagogy differed across demographic variables such as gender, locality, subject taught, class taught, and years of experience.

Gender

Male teachers (N = 65) had a mean rank of 46.86, while female teachers (N = 29) had a slightly higher mean rank of 48.93. However, the Mann–Whitney U test showed that this difference was not statistically significant (U = 901.000, Z = –0.340, p = .734). This indicates that male and female teachers hold similar perceptions regarding collaborative and culturally responsive pedagogy.

Locality

Teachers from rural areas (N = 50) had a mean rank of 45.16, whereas urban teachers (N = 45) had a mean rank of 51.16. Although urban teachers showed slightly higher perception scores, the difference was not statistically significant (U = 983.000, Z = –1.060, p = .289). Thus, locality does not significantly influence teachers' perceptions.

Subject Taught

The comparison across subjects revealed no statistically significant difference in perception (χ^2 = 5.327, p = .620). Among the subjects, Social Science teachers (mean rank = 54.33) showed relatively higher perception scores, followed by Hindi (50.62), English (46.85), Urdu (46.50), Science (48.50), Maths (41.00), and Marathi (39.15). Sanskrit (mean rank = 11.50) appeared lowest; however, the very small number of teachers in some subjects (e.g., Sanskrit, Maths, Science) limits meaningful comparison. Overall, teachers across different subjects shared similar perceptions.

Class Taught

Teachers teaching only Class IX (mean rank = 42.17), only Class X (49.77), and both IX & X (47.93) did not differ significantly in their perceptions (χ^2 = 0.189, p = .910). This suggests that the class level taught does not significantly shape teachers' views on collaborative and culturally responsive pedagogy.

Years of Experience

With respect to teaching experience, teachers with 11–20 years (mean rank = 2.67), 21–30 years (3.00), and more than 30 years (4.00) of experience did not show statistically significant differences (χ^2 = 0.533, p = .766). Although the mean ranks vary slightly, the very small number of teachers in higher experience categories limits comparison. Overall, years of experience do not appear to significantly influence teachers' perceptions.

The findings indicate that teachers' perceptions of collaborative and culturally responsive pedagogy are generally consistent across gender, locality, subject taught, class taught, and years of experience. None of the demographic variables showed a statistically significant difference.

This suggests that teachers, irrespective of their background characteristics, share a broadly similar understanding and perception of collaborative and culturally responsive teaching practices.

Kruskal–Wallis Test Showing Differences in Teachers' Perception of Collaborative and Table 4.17 Culturally Responsive Pedagogy Across Subject, Class Taught, and Job Experience:

Grouping Variable	Dimension	Mean Rank (by Category)	χ^2	df	p-value
Teacher Subject	Awareness & Understanding	SS=50.86, Eng=47.48, Hin=53.44, Mar=39.82, Urdu=55.50, Sans=3.50, Maths=47.50, Sci=47.50	6.692	7	.462
	Perceived Relevance & Importance	SS=58.52, Eng=43.21, Hin=49.03, Mar=42.65, Urdu=26.00, Sans=19.50, Maths=48.50, Sci=35.00	7.264	7	.402
	Classroom Implementation	SS=50.76, Eng=42.94, Hin=52.03, Mar=43.79, Urdu=82.33, Sans=18.50, Maths=18.50, Sci=58.50	11.893	7	.104
	Student Response & Impact	SS=47.67, Eng=48.73, Hin=44.21, Mar=48.62, Urdu=53.17, Sans=75.00, Maths=36.50, Sci=61.50	4.916	7	.670
	Institutional Support & Professional Need	SS=47.10, Eng=53.06, Hin=45.68, Mar=43.68, Urdu=48.50, Sans=56.00, Maths=56.00, Sci=38.00	8.761	7	.270
Class Taught	Awareness & Understanding	IX=50.50, X=40.58, Both=49.13	1.118	2	.572
	Perceived Relevance & Importance	IX=34.33, X=53.50, Both=47.61	1.306	2	.521
	Classroom Implementation	IX=23.50, X=43.77, Both=49.63	3.076	2	.215
	Student Response & Impact	IX=36.50, X=56.81, Both=46.99	2.055	2	.358
	Institutional Support & Professional Need	IX=64.00, X=53.62, Both=46.47	1.830	2	.401
Job Experience	Awareness &Understanding	11–20=2.17, 21–30=5.00, >30=3.50	2.667	2	.264
	Perceived Relevance & Importance	11–20=2.83, 21–30=2.50, >30=4.00	.561	2	.755
	Classroom Implementation	11–20=2.83, 21–30=1.50, >30=5.00	2.667	2	.264
	Student Response & Impact	11–20=3.00, 21–30=2.00, >30=4.00	1.000	2	.607
	Institutional Support & Professional Need	11–20=2.33, 21–30=5.00, >30=3.00	2.133	2	.344

**Significance at 0.01 level

*Significance at 0.05 Level

The Kruskal–Wallis test was conducted to examine whether secondary school teachers differed in their perceptions of collaborative and culturally responsive pedagogy across five dimensions Awareness & Understanding, Perceived Relevance & Importance, Classroom Implementation, Student Response & Impact, and Institutional Support & Professional Need with respect to subject taught, class taught, and job experience.

With regard to **subject taught**, no statistically significant differences were found across any of the five dimensions. For Awareness & Understanding ($\chi^2 = 6.692$, df = 7, p = .462), although Hindi (53.44) and Urdu (55.50) teachers showed relatively higher mean ranks and Sanskrit (3.50) appeared lowest, the difference was not significant. Similarly, Perceived Relevance & Importance did not differ significantly across subjects ($\chi^2 = 7.264$, df = 7, p = .402), even though Social Science teachers (58.52) had comparatively higher mean ranks. In Classroom Implementation, variation among subjects was also not statistically significant ($\chi^2 = 11.893$, df = 7, p = .104), despite Urdu teachers showing a notably high mean rank (82.33). The dimensions of Student Response & Impact ($\chi^2 = 4.916$, df = 7, p = .670) and Institutional Support & Professional Need ($\chi^2 = 8.761$, df = 7, p = .270) also showed no significant differences. These findings indicate that teachers across different subjects share similar perceptions regarding collaborative and culturally responsive pedagogy.

In terms of **class taught** (IX, X, or both IX & X), no statistically significant differences were observed across any dimension. Awareness & Understanding ($\chi^2 = 1.118$, df = 2, p = .572), Perceived Relevance &Importance ($\chi^2 = 1.306$, df = 2, p = .521), Classroom Implementation ($\chi^2 = 3.076$, df = 2, p = .215), Student Response & Impact ($\chi^2 = 2.055$, df = 2, p = .358), and Institutional Support & Professional Need ($\chi^2 = 1.830$, df = 2, p = .401) all had p-values greater than .05. Although minor variations in mean ranks were noted—for example, teachers teaching Class X showing slightly higher ranks in certain areas—these differences were not statistically meaningful. This suggests that teachers' perceptions do not significantly vary based on the class level they teach.

Similarly, with respect to **job experience**, no significant differences were found across any of the five dimensions. Awareness & Understanding ($\chi^2 = 2.667$, df = 2, p = .264), Perceived Relevance & Importance ($\chi^2 = .561$, df = 2, p = .755), Classroom Implementation ($\chi^2 = 2.667$, df = 2, p = .264), Student Response & Impact ($\chi^2 = 1.000$, df = 2, p = .607), and Institutional Support &

Professional Need ($\chi^2 = 2.133$, df = 2, p = .344) all indicated non-significant results. Although teachers with more than 30 years of experience showed slightly higher mean ranks in some dimensions, the small number of respondents in higher experience categories limits strong conclusions.

The findings reveal that secondary school teachers' perceptions of collaborative and culturally responsive pedagogy remain largely consistent across subject specialization, class taught, and years of teaching experience. This suggests a shared understanding and relatively uniform perception among teachers regarding the awareness, relevance, implementation, student impact, and institutional support related to collaborative and culturally responsive pedagogical practices.

Headmaster Perception regarding Collaborative and Culturally Responsive Pedagogy

Culturally Responsive Pedagogy Enhances Student Engagement

This theme mirrors the perception of the headmasters that culturally responsive pedagogy has a vital role to play in improving students' involvement, motivation, and learning by taking into account the cultural backgrounds of the students. Culturally responsive pedagogy is an important aspect of effective pedagogy, and the headmasters highlighted the significance of cultural awareness in the understanding of students' diverse backgrounds and experiences. According to the respondents, the significance of culture in the teaching and learning process is the ability to bridge the connection between the curriculum and the students' realities.

Three Headmaster response was "Yes, they gave cultural references." (HM1, HM2, HM3, Maharashtra, 2025)

Another Headmaster stated that "Our teachers in the school include cultural references relevant to the student's backgrounds in their teaching." (HM4, Maharashtra, 2025).

Headmasters Perceptions on the Integration of Cultural Elements in Teaching

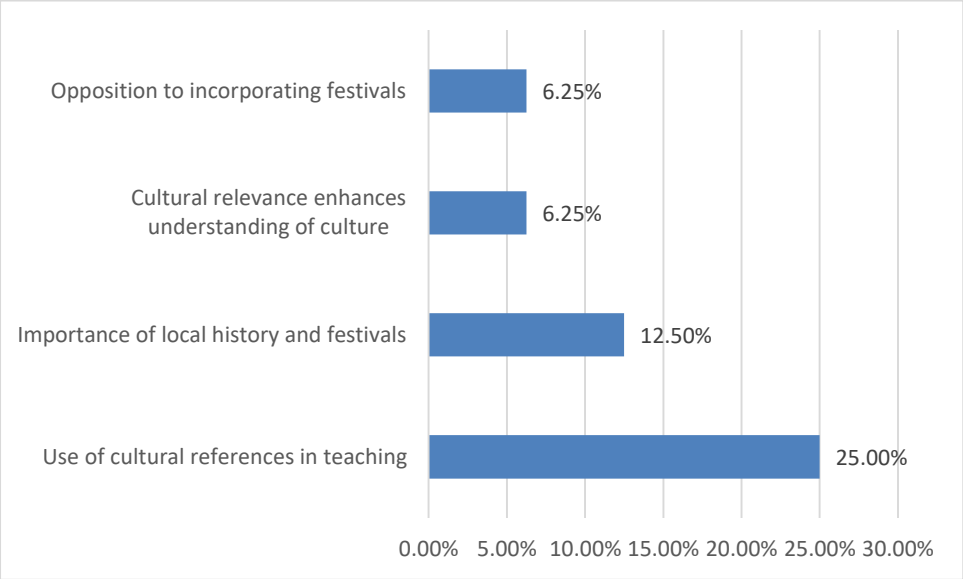


Fig. 4.17: Headmasters Perceptions on the Integration of Cultural Elements in Teaching

Figure shows the results of the distribution of opinions on the inclusion of cultural elements such as history, festivals, and culture in the process of teaching. It is clear that the largest percentage of opinions (25.00%) was based on the fact that there was active usage of cultural elements in the process of teaching, which shows a strong inclination towards a more culturally responsive pedagogy. Furthermore, 12.50% of the results highlighted the significance of history and festivals, which shows an appreciation of the relevance of the context and region. Similarly, 6.25% of the results highlighted the fact that cultural relevance aids the students' understanding of culture, as well as the fact that there was no opposition to the inclusion of festivals in the process of teaching. This shows that there was little resistance to the inclusion of culture.

A Headmaster reported that "Local history is most important part of social studies… local festival like Pola, Ganesh utsav tradition of local fair like Dushera Mahotsav etc. should be included in social science." (HM4, Maharashtra, 2025).

Headmaster from a rural setting "Without knowledge of history, students will not gain an understanding of culture." (HM6, Maharashtra, 2025).

Moreover, the inclusion of students' cultural backgrounds, such as their traditions, history, language, and community, was also viewed as enhancing students' identification with the content. When the content of the curriculum mirrors students' socio-cultural backgrounds, this also enhances their feelings of belonging. Lastly, being inclusive means that there is representation of all communities, thus promoting diversity. Therefore, culturally responsive teaching was viewed not just as referencing festivals or traditions, but also as incorporating cultural relevance into strategies.

Perceived Impact of Collaborative and Culturally Responsive Pedagogy on Students' Learning Outcomes

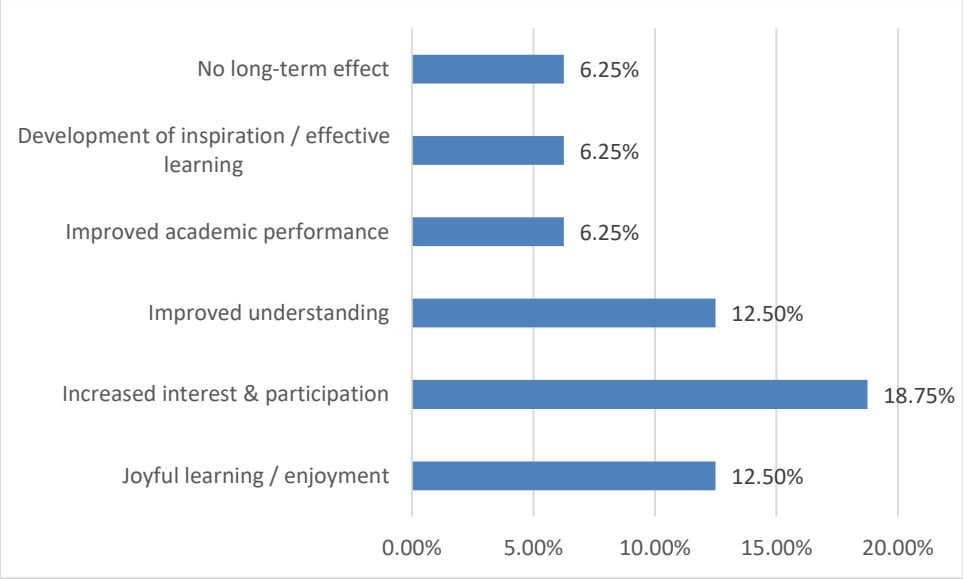


Fig. 4.18: Perceived Impact of Collaborative and Culturally Responsive Pedagogy on Students' Learning Outcomes

Figure 1: Students' perceptions on the impact of collaborative and culturally responsive pedagogy on their learning experience. The percentage of students who identified the major impact of this pedagogy on their learning experience was 18.75%, which means that this pedagogy has an important impact on the students' interest and participation. Furthermore, 12.50% of the students identified the impact of this pedagogy on their joyful learning/enjoyment and their level of understanding, which means that this pedagogy has an important impact on the students' level of understanding, as well as their joyful learning/enjoyment. Moreover, 6.25% of the students identified the impact of this pedagogy on their level of academic performance, their inspiration/effective learning, and no long-term effect, which means that this pedagogy has a

limited impact on the students' level of academic performance, their inspiration/effective learning, and no long-term effect. This figure shows that the major strength of this pedagogy is enhancing the students' engagement.

A Headmaster said that "We try to provide self-experienced and local environmental experiences, students feel enjoyment in the teaching learning process, which helps students understand the subject and increases their interest." (HM 7, Maharashtra, 2025).

Another Headmaster stated that "Students take interest and participate in this type of cultural activities and develops their union with other students." (HM 15, Maharashtra, 2025).

The headmasters practiced culturally responsive pedagogy with increased student engagement. They noted that culturally relevant approaches to teaching facilitate increased student engagement because students feel more confident to contribute to class discussions when the content is relevant to their culture.

The respondents noted that increased student motivation is facilitated by culturally responsive approaches to teaching. The increased motivation translates to increased understanding because students are able to understand better when lessons are contextualized to their environment. Moreover, culturally responsive approaches facilitate increased critical thinking because students analyze cultural issues, make comparisons, and engage in reflective discussions. The above thematic explorations revealed that the headmasters perceive culturally responsive pedagogy as a catalyst for increased student engagement that improves understanding and critical thinking.

Collaborative Learning as a Means of Promoting Equity and Inclusion

Headmasters perceived collaborative learning as a means of ensuring equity in learning opportunities. They emphasized that when students work together in groups, differences related to caste, religion, gender, and socio-economic background become less prominent, and learning becomes more inclusive.

One Headmaster said that "Students belonging to Hindu Muslim Boudh Jain etc. Cultural activities for all religious are conducted in our school." (HM9, Maharashtra, 2025).

Headmaster from Rural setting stated that "Boys and girls learn together; they participate in NCC activities and cultural programmes jointly." (HM7, Maharashtra, 2025).

Another Headmaster said that "Teachers forms group of students having different castes socio economics condition… this policy inculcates nation integration feelings." (HM11, Maharashtra, 2025).

Dimensions of Inclusive and Equitable Educational Practices -



Fig. 4.19: Dimensions of Inclusive and Equitable Educational Practices (in Percentage)

In the bar chart, the different aspects of Inclusive and Equitable Educational Practices and their respective percentages have been represented. In the chart, the highest percentage has been recorded for the aspect of Promotion of national integration and social harmony (56.30%). This implies that a majority of the respondents have a positive perception of the role of education in fostering unity and harmony among people. This is followed by the aspect of mixed grouping across caste and socio-economic background (50.00%). This implies that half of the participants have a positive perception of the role of education in fostering social integration among people. Gender equality in participation (43.80%) also represents a somewhat positive perception, albeit at a lower level compared to national integration and mixed grouping. The promotion of religious inclusion (37.50%) represents a moderate level of focus, which may indicate that there is some level of recognition and inclusion of religion, albeit at a lower level compared to other factors.

The lowest level of focus on a given topic is represented by Education should be equitable (policy perspective) (31.30%), which may indicate a lower level of awareness and implementation regarding equity.

Collaborative learning practices were widely reported across schools. Headmasters described the use of structured group activities that encourage shared responsibility and peer interaction.

A Headmaster stated that "Group learning activities enhance students' communication skills and show noticeable improvement." (HM 7, Maharashtra, 2025).

A male Headmaster said that "Students communication and team work skills are improved due to group learning activities and they learn quickly in group." (HM 10, Maharashtra, 2025).

Perceived Impact of Collaborative Learning Practices:

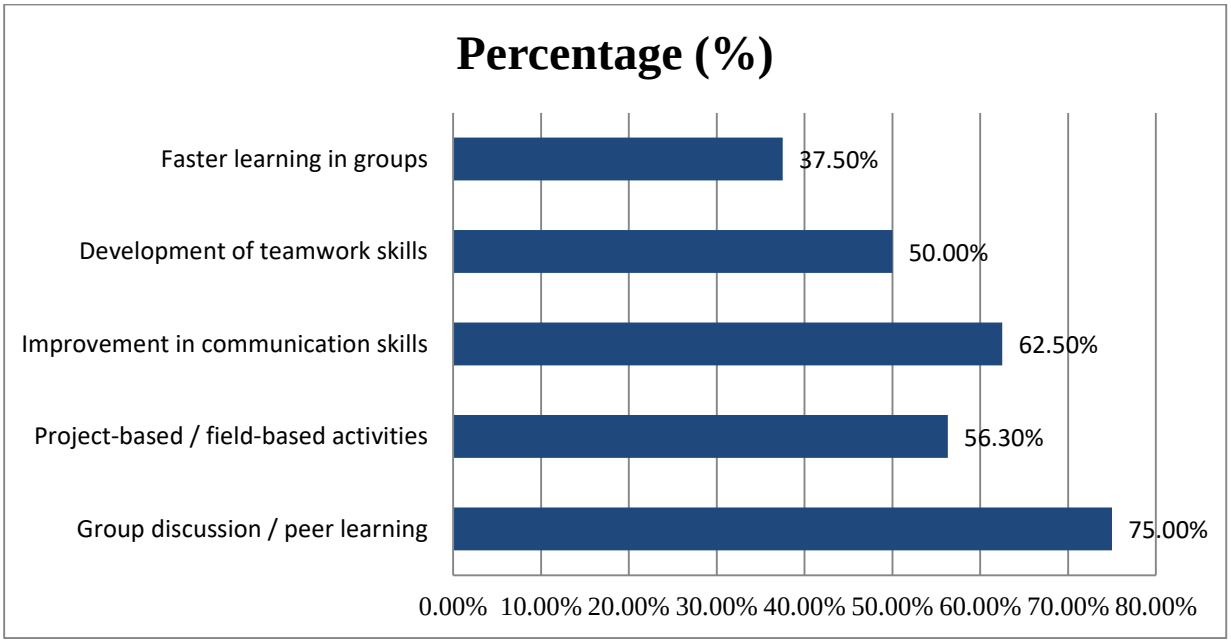


Fig. 4.20: Perceived Impact of Collaborative Learning Practices

The figure indicates how these activities in collaborative learning are benefiting the students in different ways. The maximum percentage, 75%, is related to group discussion and peer learning. This indicates that most of the teachers believe that the students can learn better if they interact with each other. The development of communication skills among the students (62.5%) and project-based or field-based learning (56.3%) are also highly identified. This indicates that these

types of learning activities can help the students express themselves in a better manner. Furthermore, half of the total respondents (50%) believe that these types of learning can develop teamwork skills among the students. In addition, 37.5% of the total respondents believe that the students can learn better in groups. The figure clearly indicates that these types of learning can also develop skills among the students that can be used in their real lives.

Some of the collaborative classroom activities mentioned by the head teachers included the preparation of charts, class discussions, oral presentations, peer activities, dialogue-based learning, field visits, and observation-based activities. These activities point to the importance of participatory and experience-based learning approaches in schools. The effectiveness of these approaches was noted in terms of the improvement in the performance of students, development of communication skills, teamwork skills, and skill development.

Collaborative settings provide opportunities for feedback and reflective learning, which enhances the teaching-learning process.

The findings suggest that the headmasters viewed collaborative learning as a potent approach for promoting inclusive and equitable education. It is not just viewed as a teaching-learning approach but a social process that bridges the gap among different student groups, promotes a sense of responsibility among students, encourages teamwork, promotes inter-cultural understanding, and enhances communication skills

A Contextualized Integrative Framework for Collaborative and Culturally Responsive Pedagogy in Secondary Schools of Marathwada (Objective-5)

Based on the empirical findings of the research, a Contextualized Integrative Framework (CIF-CCRP) is proposed to facilitate the systematic integration of Collaborative Pedagogy and Culturally Responsive Pedagogy (CRP) in the secondary school curriculum, especially in the subject area of Social Studies. The framework was informed by the quantitative differences in locality, gender, social category, and Divyanjan status, as well as qualitative findings that pointed to conceptual ambiguity, pedagogical constraints, and dependency on resources. The framework comprises five domains that are interconnected: Contextual Grounding, Structured Collaboration, Cultural Integration, Reflective Professional Practice, and Equity Monitoring & Feedback. These domains do not function in a linear fashion.

1. Contextual Grounding Domain

The first domain focuses on the socio-cultural and regional realities of Marathwada. The statistical results showed that there were considerable differences between rural and urban students in collaborative and culturally responsive pedagogy. The effectiveness of the pedagogy was higher in the case of urban students, as their mean ranks were higher. Moreover, the perception of ST students was also low in the case of culturally responsive pedagogy. This shows that the curriculum content and pedagogy may not reflect or validate the experiences of all students.

Thus, the framework has included the domain of contextual mapping, which focuses on the inclusion of socio-cultural and regional realities of the area. This means that the curriculum content can be more meaningful by including regional case studies and community realities. This would reduce the perception gaps between different social groups. This domain is also informed by statistics, which shows considerable differences between groups based on locality ($p < 0.01$) and category ($p < 0.001$) for culturally responsive pedagogy.

2. Structured Collaborative Pedagogy Domain

The second domain concerned the transformation of informal group work to a more structured form of cooperative learning. Quantitative results revealed that there were significant differences between gender and locality on various collaborative aspects, particularly on Communication, Participation, and Reasoning. There were no significant differences found between class levels, which implies that the effectiveness of a collaborative design may be more dependent on its structure rather than its content.

Moreover, results from qualitative research revealed that teachers associated collaboration with “group discussion” and “project work.” The results indicate that teachers lacked a theoretical basis for their perception of collaborative learning. The second domain includes various elements that promote a more structured form of cooperation, such as roles, accountability, peer evaluation, and reflection. The results support the effectiveness of these design elements, which indicate that differences in leadership between Divyanjan students ($p = .003$) may be minimized by structuring roles in a collaborative group.

3. Deep Cultural Integration Domain

The third domain deals with the extension of culturally responsive practices to include more than just celebrations. The headmasters were unanimous that learning about local festivals, history, and traditions would motivate and engage students. The statistical analysis revealed that perceptions of this domain were unevenly distributed across social categories and Divyanjan status. The differences were statistically significant for "Culturally Responsive Pedagogy" ($\chi^2 = 20.486$, $p < .001$).

The implications of this domain are that while culture is reflected, it may not be equally reflected. There is a need to incorporate the cultural identities of the students into learning examples, problem-based learning, and assessments. It includes learning about marginalized history, socio-economic conditions of regions, and critical themes of social awareness. The evidence of "Social Awareness & Real-Life Connection" from this dimension was significant to both categories and locality.

4. Reflective Professional Practice Domain

The fourth domain deals with the conceptual and reflective gaps among the teachers. The results from the interviews showed that the teachers were not able to express the theoretical gaps; rather, they expressed their practices in procedural terms. Although the results from the teacher perception scores were positive, the lack of significant demographic variations indicates a general and possibly superficial level of understanding.

This domain introduces systematic reflective practices such as peer observation, reflective journals, and action research cycles. The goal is to shift the teachers from activity-based implementation to theory-driven pedagogy. The evidence base for this domain is the qualitative results that highlighted the conceptual ambiguity and lack of differentiation strategies. The lack of reflective practices may result in superficial collaborative and culturally responsive teaching practices.

5. Equity Monitoring and Feedback Domain

The last domain deals with the formulation of institutional arrangements for monitoring inclusion and effectiveness. Though there was no significant variation in the perception of the teachers with

respect to demographics, there was a variation with respect to students. This shows that the perception of the teacher alone cannot provide an inclusive experience.

Thus, the framework has included periodic perception audits, tracking of participation, and equity indicators. It has also been recommended that schools need to monitor whether participation, leadership, and cultural representation are equitably distributed. This domain is also empirically supported, as there was a statistically significant variation with respect to several demographic variables.

Integrative Logic of the Framework

The CIF-CCRP framework is cyclical. Contextual grounding is used to facilitate structured collaboration. Structured collaboration is used to facilitate deep cultural integration. Deep cultural integration requires reflective professional practice. Reflective professional practice is used to facilitate feedback for equity monitoring. Feedback for equity monitoring is used to facilitate contextual redesign.

The empirical evidence that has been provided for all of the objectives shows that there is no unwillingness to close gaps, but rather it is an issue of contextualization, conceptual clarity, and structural gaps. The framework is, therefore, not just theoretical but is actually derived from statistical and qualitative evidence.

The proposed framework is supported by existing pedagogical theories and is empirically supported by the findings of this current study. The framework is supported by existing theories of cooperative learning, as proposed by David W. Johnson and Roger T. Johnson (Johnson & Johnson, 1989), which emphasize interdependence, promotive interaction, and collective responsibility as important factors that improve student engagement and academic performance. The framework is also supported by culturally responsive teaching, as proposed by Gloria Ladson-Billings (1995), which was further refined by Geneva Gay (2000) that proposes that validating students' identity is an important factor that improves student engagement and academic performance. The framework is also supported by reflective practice theory, as proposed by Donald Schön (1983), which proposes that critical reflective thinking by teachers is an important factor that improves the quality of instruction. Finally, the framework is supported by existing theories of education reform, as proposed by Linda Darling-Hammond (2010), which emphasize

the importance of systemic monitoring, institutional accountability, and policy-based intervention to reduce structural inequality in education.

Thus, the empirical evidence of this study justifies the relevance of the proposed framework. In addition, the findings of the study reveal statistically significant differences in the implementation of collaborative and culturally responsive pedagogies in rural and urban areas ($p < 0.01$). Furthermore, the findings reveal significant differences in the implementation of collaborative pedagogies by male and female students ($p < 0.01$) and differences in the implementation of culturally responsive pedagogies by different categories of students ($p < 0.001$). In addition, the findings reveal significant differences in the implementation of collaborative pedagogies by students of different leadership groups ($p = 0.003$). Furthermore, the findings reveal conceptual ambiguity of the teachers about collaborative and culturally responsive pedagogies and the perceptions of the headmasters about cultural inclusion and the level of students' engagement.

These findings substantiate the necessity of an integrated and context-sensitive framework. The framework that has been proposed conceptualizes collaborative and culturally responsive pedagogy as a set of strategies that are integrated with one another and have the goal of achieving equity, engagement, and cultural relevance in secondary education. This integration of socio-educational strategies would be particularly necessary in the socio-educational scenario of Marathwada.

Table 4.18 Contextualized Integrative Framework (CIF–CCRP) for Secondary Schools in Marathwada

Framework Domain	Core Focus	Key Components	Empirical Evidence from Study	Expected Outcome
1. Contextual Grounding	Align curriculum with regional and socio-cultural realities	• Local case studies (agrarian issues, water scarcity) • Inclusion of marginalized histories (ST, SC communities) • Community knowledge integration	Significant rural–urban differences ($p < .01$); Significant category differences in CRP ($\chi^2 = 20.486$, $p < .001$); Lower perception among ST students	Increased relevance of Social Studies; Reduction in locality and social category perception gap

2. Structured Collaboration	Transform informal group work into accountable cooperative learning	• Role-based groups (leader, recorder, presenter) • Peer accountability • Reflective group evaluation • Inclusive leadership rotation	Significant gender differences in collaborative dimensions ($p < .01$); Leadership difference among Divyanjan students ($p = .003$); Qualitative evidence of surface-level group work	Balanced participation; Improved communication & reasoning skills; Inclusion of marginalized learners
3. Deep Cultural Integration	Embed culture systematically into lesson planning	• Identity-based examples • Real-life problem-based learning • Cultural relevance in assessment • Representation of diverse communities	Significant differences across social category in CRP ($p < .001$); Differences in Social Awareness & Real-Life Connection ($\chi^2 = 20.151$, $p < .001$); Headmasters reported increased engagement	Stronger student engagement; Improved social awareness; Enhanced motivation and comprehension
4. Reflective Professional Practice	Strengthen teachers' conceptual clarity and critical reflection	• Teacher reflection logs • Peer observation cycles • Action research projects • Equity-focused lesson review	Interview data revealed conceptual ambiguity and limited reflective articulation; Uniform teacher perception but procedural implementation	Deeper pedagogical understanding; Theory-informed practice; Continuous professional growth
5. Equity Monitoring & Feedback	Institutionalize equity tracking and feedback loops	• Participation audit by gender/category • Divyanjan inclusion indicators s• Periodic perception surveys• Data-driven curriculum review	Multiple demographic disparities in student perception (locality, gender, Divyanjan, category); Teachers' perception not reflecting student gaps	Data-informed improvement; Reduced participation inequity; Sustainable inclusive practice

Contextualized Integrative Framework for Collaborative and Culturally Responsive Pedagogy in Marathwada Secondary Schools:



Fig. 4.21: Contextualized Integrative Framework for Collaborative and Culturally Responsive Pedagogy in Marathwada Secondary Schools

Implementation Strategy for Integrating Collaborative and Culturally Responsive Pedagogy

In light of the empirical results obtained in the study, particularly with regard to rural-urban differences, gender differences, social category differences, leadership differences among Divyanjan students, and conceptual differences among teachers, a two-tier implementation plan is recommended: (A) School Level Strategy and (B) Systemic Level Strategy, which are consistent with the Contextualized Integrative Framework (CIF-CCRP).

A. School-Level Implementation Strategy

Implementation strategies at the school level should include classroom implementation, teacher development, and equity participation.

1. Curriculum Planning and Contextualization

The school should form a Curriculum Adaptation Committee with Social Studies teachers, headmaster, and representatives from the local community.

The committee should:

- Recognize local issues (agrarian distress, water scarcity, migration, caste etc.)
- Include local case studies in the lesson plan
- Include local history and traditions in the Social Studies course

This is important because statistical results highlighted locality and category variations in culturally responsive teaching strategies. Contextualization could bridge the perception gaps.

2. Structured Collaborative Classroom Model

It is recommended that each school should incorporate the use of structured cooperative learning methods instead of group work. This can be done by:

- Defining roles within the group (e.g., leader, timekeeper, recorder, and presenter).
- Using a rotation system to ensure gender equality among the group leaders.
- Using peer accountability rubrics.
- Using short group reflection sessions.

This recommendation has been proposed due to the differences in collaborative qualities and leadership skills among the Divyanjan students.

3. Inclusive Classroom Practices

For bridging the gap among Divyanjan children and other groups of children, the schools should adopt the following practices:

- Follow the principles of Universal Design for Learning.
- Ensure adaptive roles for students.
- Monitor the pattern of participation.
- Maintain a mixed composition of social categories.

Statistically significant differences were found among the categories and Divyanjan status. Hence, the need for inclusion is felt.

4. Reflective Professional Practice Mechanism

For the schools to adopt the reflective practice mechanism for the teachers, the following practices should be adopted:

- Maintain a log for the teachers to reflect on a monthly basis.
- Facilitate peer observations.
- Support action research.
- Maintain quarterly review meetings.

It was found from the interview data that the teachers lacked conceptual clarity. This will help the teachers to deepen their understanding and move beyond the routine group work.

5. Resource Flexible Teaching Approaches

In view of the dependency on ICT tools identified in the interviews, schools can:

- Train teachers in low-resource collaborative approaches.
- Utilize knowledge holders in the community, such as farmers, artisans, and SHG members.
- Encourage field visits and experiential learning.
- Develop local teaching aids.

This will ensure sustainability in rural schools with scarce resources.

6. School-Level Equity Monitoring

Schools can develop monitoring indicators:

- Participation audit by gender and social category.
- Leadership distribution tracking.
- Student perception surveys (bi-annual).
- Assessment pattern review.

School review based on these monitoring indicators can ensure reduced demographic differences identified in the study.

B. Systemic-Level Implementation Strategy

Systemic-level strategy is the district, state, and policy-level strategies that are required to implement change.

1. Policy Integration in Curriculum Framework

The State Education Department should:

- Make collaborative and culturally responsive pedagogies explicit in the secondary curriculum framework.
- Provide a structure of lesson templates.
- Make equity-based instructional guidelines explicit in the teacher manuals.

This would ensure that pedagogies move from being optional to being mandatory.

2. Teacher Professional Development Reform

Teacher training programs at the district level need to include:

- The conceptual basis of collaborative pedagogy.
- Cultural responsiveness beyond the celebration of festivals.
- Methods to address gaps between genders and categories.
- Reflective practice and auditing skills.

Training needs to move beyond procedural demonstration to theoretical underpinnings, addressing the reflective gap identified through interviews.

3. Institutional Support Structures

At the education authority level, there is a need to:

- Develop Teacher Learning Communities (TLCs) at the cluster level.
- Encourage inter-school sharing of inclusive education practices.
- Develop micro-grant systems for community-based projects.
- Develop mentorship systems for teachers in rural schools.

This would address the disparities between rural and urban schools identified through the findings.

4. Monitoring and Accountability Framework

At the systemic level, the monitoring framework would comprise:

- Inclusion indicators in school inspection reports.
- Equity-based evaluation criteria.
- District-level trends of student engagement and perception.
- Student engagement surveys.

Since there was no major change observed in teacher perception, which was different from the student perception, the systemic level of monitoring needs to be more focused on the students.

5. Assessment and Examination Reform

At the state level, there is a need to:

- Develop project-based assessment.
- Encourage collaborative projects.
- Add real-life problems.
- Add reflective components.

There is a need to reform the assessment system to ensure alignment with pedagogy.

6. Resource Allocation Strategy

In order to reduce the dependency disparities, the following strategies should be adopted:

- Equitable allocation of ICT resources.
- Funding for culturally relevant teaching materials.
- Funding for inclusive classroom infrastructure for Divyanjan students.
- Funding for locally developed educational resources.

This is a structural support for the implementation challenges identified in the qualitative study.

Table 4.19 Strategies for Implementing Integrating Framework of Collaborative and Culturally Responsive Pedagogy

Level	Focus	Strategy Type	Primary Goal
School Level	Classroom Practice	Structured collaboration, reflective practice, inclusion audit	Immediate reduction of participation gaps
District Level	Capacity Building	Professional development, TLCs, mentoring	Strengthen teacher conceptual clarity
State Level	Policy & Monitoring	Curriculum reform, assessment redesign, equity indicators	Institutionalize inclusive pedagogy

4.8 Summary of Major Findings

The current study aimed to examine the effectiveness of collaborative pedagogy and culturally responsive pedagogy in Social Studies at the secondary level. The results showed that the students have a moderate perception towards collaborative and culturally responsive pedagogies, which indicated that despite the positive experiences, their experiences in the classroom are quite diverse. However, the teachers have a high and positive perception, which indicated that the teachers have a strong conceptual understanding of collaborative and culturally responsive pedagogies. The normality tests revealed that the perception data of both students and teachers were not normally distributed; hence, non-parametric statistical analysis was conducted. The demographic analysis revealed that the student population was dominated by females and rural students, while the teacher and headmaster population were dominated by males, with moderate to high teaching experience and a higher presence in rural areas.

Regarding collaborative pedagogy, the students rated it to be moderately effective in Social Studies. There were no significant differences based on class, Divyangjan, and social category. However, significant differences were found on the basis of locality and gender, where urban and male students rated it to be more effective compared to rural and female students. Dimension-wise

analysis revealed that locality had a significant effect on all dimensions of collaborative pedagogy, and differences based on gender were significant for all dimensions except leadership and responsibility. Divyangjan status had a significant difference only on the leadership dimension, and differences based on social category were found only on the reasoning and decision-making dimension.

In regard to culturally responsive teaching, the students' perception level was moderate. There were no significant differences between Class IX and Class X students. But there were significant differences based on locality, gender, Divyangjan, and social category. The students of urban areas and males showed more positive perceptions, and non-Divyangjan students were more culturally responsive than Divyangjan students. The students of different social categories also differed, and OBC students showed the highest perception level, while ST students showed the lowest perception level. The dimension-wise analysis also showed that social awareness and cultural sensitivity differed among the demographic groups, and the factors that influenced them were gender, locality, and Divyangjan.

The result recommends a Contextualized Integrative Framework (CIF-CCRP) for the systematic integration of collaborative and culturally responsive approaches in the secondary schools of Marathwada, especially in Social Studies, to fill empirical gaps such as rural-urban variations, gender and social category inequities, leadership deficit among Divyanjan students, and teachers' conceptual ambiguities. The CIF-CCRP framework is divided into five interrelated domains: Contextual Grounding (integrating the curriculum with the socio-cultural context of the local setting), Structured Collaboration (role-based and accountable cooperative learning), Deep Cultural Integration (integrating students' identities and contexts into the curriculum), Reflective Professional Practice (teachers' reflection, peer observation, and action research), and Equity Monitoring & Feedback (tracking participation, leadership, and inclusion). The CIF-CCRP framework is to be implemented through a two-tier approach, which includes school-level interventions such as curriculum contextualization, inclusive classroom practices, structured collaboration, teacher development, resource flexible approaches, and equity monitoring, along with system-level interventions such as policy integration, professional development reform, institutional support, monitoring frameworks, and assessment reforms. The CIF-CCRP framework, developed on the basis of both quantitative and qualitative evidence and in consonance with the existing theories of pedagogy, seeks to promote equity, engagement, cultural relevance, and sustained inclusive practices in the secondary education system of Marathwada.

CHAPTER - V

DISCUSSION, RECOMMENDATION AND CONCLUSION

5.1 Introduction

This chapter discusses the findings, conclusions, implications, and recommendations of the study, based on the analysis and interpretation of the data collected from students, teachers, and headmasters. The main aim of this chapter is to discuss the findings in the context of the objectives of the study, the existing literature, and the context of collaborative pedagogy and culturally responsive pedagogy in secondary education.

The discussion chapter critically reviews each research objective, focusing on how the findings support, extend, or contradict existing studies. It describes the trends emerging from the students' perceptions, teachers' practices, and headmasters' views on collaborative and culturally responsive teaching practices in Social Studies classes. Particular emphasis is placed on demographic variables such as locality, gender, social category, and Divyangjan status, which were identified as playing a significant role in the effectiveness and perception of these teaching practices.

The chapter also highlights the key findings that have been obtained from the quantitative and qualitative analysis, followed by a detailed discussion of the findings in terms of their implications for education. On the basis of the findings, an integrative framework is also discussed to improve the implementation of collaborative and culturally responsive teaching practices in secondary schools.In addition, the chapter highlights the implications of the research study for teaching, teacher education, school administration, curriculum design, and educational policies. The chapter finally concludes with the overall conclusions of the research study, its limitations, recommendations for stakeholders, and suggestions for future studies.

In this way, the current chapter offers a comprehensive synthesis of the findings of the research study and places them within theoretical, practical, and policy frameworks to improve inclusive, equitable, and participatory teaching practices in secondary education.

5.1 Introduction
5.2 Major Findings of the Study
5.3 Discussion of Findings
5.4 Implications of the Study
5.5 Conclusion of the Study
5.6 Recommendations of the Study
5.7 Suggestions for Further Research

5.2 Major Findings of the Study

Major Findings of Objective 1

(Effectiveness of Collaborative Pedagogy among Secondary Students in Social Studies with Reference to Critical Thinking and Teamwork Skills)

1. Total Effectiveness of Collaborative Pedagogy

   Analysis of the results showed that collaborative pedagogy in Social Studies was a moderately effective method for secondary school students. The overall mean score showed that students had a positive perception towards collaborative learning, although some variations were noticed among individuals.

2. Effectiveness with Respect to Class

   No significant difference was found between Class IX and Class X students in their perception of collaborative pedagogy. Both groups perceived similar levels of effectiveness in terms of communication, teamwork, leadership, and critical thinking skills.

3. Effectiveness with Respect to Locality

   A significant difference was noticed between rural and urban students. Urban students found collaborative pedagogy more effective than rural students. Locality was found to be the most important factor, which showed significant differences in all aspects, such as communication, teamwork, leadership, and critical thinking.

4. Effectiveness with Respect to Gender

   Gender-wise analysis showed significant differences in most areas. Collaborative pedagogy was perceived as more effective by male students than female students, especially in terms of communication skills, teamwork, and reasoning abilities. However, there was no significant difference between male and female students in leadership and responsibility.

5. Effectiveness with Respect to Divyangjan Status

   There was no significant difference between Divyangjan and non-Divyangjan students in terms of overall effectiveness. However, there was a significant difference noticed only in the aspect of leadership and responsibility, which showed slight differences in leadership experiences.

6. Effectiveness with Respect to Social Category

No significant difference was found among students belonging to different social categories in overall collaborative pedagogy effectiveness. However, a major difference was noticed in the aspect of reasoning and decision-making, which is an indicator of critical thinking skills.

7. Findings Related to Critical Thinking Skills

   Critical thinking, as an indicator of reasoning and decision-making skills, has shown significant differences in terms of locality, gender, and social category. The development of critical thinking skills using collaborative pedagogy has been higher in urban and male students.

8. Findings Related to Teamwork Skills

   Teamwork skills, as an indicator of participation and cooperation, have shown significant differences in terms of locality and gender. The development of teamwork skills using collaborative learning has been higher in urban and male students.

The study has found that collaborative pedagogy is an effective strategy for developing critical thinking and teamwork skills among secondary school students. However, the effectiveness of collaborative pedagogy is majorly affected by locality and gender, while class, Divyangjan, and social category have less influence.

Major Findings of Objective 2

1. Level of Culturally Responsive Pedagogy

2. The overall results showed that students rated culturally responsive pedagogy moderately. The mean score indicated that students felt a sense of cultural inclusiveness and responsiveness in Social Studies classes, although some differences were noticed in individual

3. Effectiveness with Respect to Class

   There was no significant difference between Class IX and Class X students in their overall perception of culturally responsive pedagogy. This showed that students of both classes experienced culturally responsive pedagogy in a similar manner.

3. Effectiveness with Respect to Locality

   There was a significant difference between rural and urban students. Urban students rated culturally responsive pedagogy higher than rural students, which showed that locality is an important factor in determining students' experiences.

4. Effectiveness with Respect to Gender

Gender-wise analysis revealed a significant difference. Male students rated culturally responsive pedagogy more positively than female students, which showed that students' experiences in the classroom differ according to gender.

5. Effectiveness with Respect to Divyangjan Status

   There was a remarkable difference between Divyangjan and non-Divyangjan students. Non-Divyangjan students showed higher perceptions of culturally responsive pedagogy.

6. Effectiveness with Respect to Social Category

   There were significant differences among the social categories. OBC students showed the highest perception of culturally responsive pedagogy, followed by General and SC students, but the lowest perception was shown by ST students.

7. Findings Related to Social Awareness and Real-Life Connection

   There were significant differences based on locality, gender, Divyangjan status, and social category. Urban and male students showed higher perceptions of social awareness and real-life connection with culturally responsive pedagogy. OBC students showed the highest effectiveness, but the lowest was shown by ST students.

8. Findings Related to Cultural Sensitivity and Inclusiveness

   Cultural sensitivity and inclusiveness revealed fewer differences on the demographic variables. Significant differences were observed only with regard to class and gender, whereas locality, Divyangjan, and social category did not reveal significant variation.

The results of the study reveal that culturally responsive pedagogy in Social Studies is moderately effective in developing social awareness, real-life connections, and cultural sensitivity among students. However, students' perceptions vary significantly based on background characteristics such as locality, gender, Divyangjan, and social category, whereas class has little effect.

Major Findings of Objective 3

1. Conceptual and Reflective Challenges

1. The research revealed that most teachers do not have a conceptual understanding of collaborative and culturally responsive pedagogies. Only about 31.25% of teachers demonstrated a good

understanding of these pedagogies, while about 68.75% of teachers demonstrated a lack of clarity about the meaning and principles of these pedagogies.

2. Teachers generally had a superficial understanding of collaborative pedagogy and tended to see it as group work, discussions, and projects, without recognizing it as a planned teaching approach that can facilitate inclusion, equity, and shared responsibility for learning.

3. Teachers also had a superficial understanding of culturally responsive pedagogy and tended to see it as organizing cultural events or encouraging students to share their traditions, without recognizing it as a teaching approach that can incorporate students' experiences, identities, and socio-cultural contexts into teaching

4. Approximately 56.25% of the teachers were unable to articulate the difficulties they encounter while applying these strategies, and this reflects a lack of reflective practice.

5. Approximately 50% of the teachers encountered difficulties in both conceptual and reflective aspects, and this reveals that teachers are not only struggling to understand these pedagogies but also to reflect on the difficulties they encounter in the classroom.

6. From the results, it can be interpreted that there is a need for professional training to enhance the conceptual understanding and reflective practice of the teachers.

2. **Pedagogical Constraints in Classroom Practice**

1. Collaboration was observed to be practiced by teachers mainly using traditional activity-based approaches like peer tasks, group discussions, chart preparation, and project presentations.
2. There was limited application of structured cooperative learning approaches like role assignment, accountability structures, differentiated grouping, and inclusive scaffolding.
3. Instructional practices lacked pedagogical flexibility, as teachers rarely varied teaching approaches according to students' cultural backgrounds, learning requirements, and socio-economic diversity.
4. Cultural responsiveness was not systematically incorporated into teaching practices, and there was a weak link between cultural responsiveness and subject teaching strategies.
5. Teachers were more concerned with task achievement rather than inclusive learning outcomes.
6. The results indicate that the core problem is not the teachers' lack of willingness, but their constrained pedagogical repertoire and limited experience with diverse inclusive teaching approaches.

3. Resource-Dependent Implementation Practices

1. From the study, it was found that the application of collaborative and culturally responsive pedagogy is highly technology-dependent.
2. Approximately 25% of teachers stressed the importance of using ICT tools such as projectors and smart classrooms for collaborative learning.
3. Approximately 18.75% of teachers stated that technology increases student engagement during collaborative learning.
4. However, almost 75% of teachers did not stress non-technology collaborative approaches, showing overdependence on technology.
5. Approximately 12.5% of teachers stated that infrastructure issues, such as the absence of ICT facilities, obstruct effective application.
6. Teachers did not stress the application of local community resources, experiential learning, or culturally responsive non-technology approaches, showing a lack of adaptability in the absence of resources.

Major Findings of Objective 4

Based on the quantitative and qualitative analyses of students, teachers, and headmasters, the major findings of the study are summarized as follows:

1. Differences in Student Perception Across Social Categories

The Kruskal-Wallis H test showed that there was a statistically significant difference in the students' perceptions of collaborative and culturally responsive teaching practices based on social categories (χ^2 = 9.530, p = .023). The perception scores of OBC students were the highest, followed by General and SC students, while the lowest perception scores were found in ST students. This result indicates that social categories have an effect on the experiences and perceptions of students, which may be attributed to differences in the inclusivity of the institutions, socio-cultural capital, and access to academic support.

2. Uniformity in Teachers' Overall Perception

The results of the analysis conducted using both the Mann-Whitney U Test and the Kruskal-Wallis H Test revealed that there were no statistically significant differences in the perceptions of teachers with respect to demographic variables such as gender, locality, subject taught, class taught, and years of experience. This

is an indication that teachers have a similar understanding and perception of collaborative and culturally responsive pedagogy regardless of their background characteristics.

3. No Dimensional Differences Across Subject, Class, and Experience

On the five dimensions of Awareness & Understanding, Perceived Relevance & Importance, Classroom Implementation, Student Response & Impact, and Institutional Support & Professional Need, there were no significant differences with respect to subject specialization, class taught, and job experience. Although there were some minor differences in the mean ranks (for example, Social Science teachers had relatively higher awareness), these were not statistically significant.

4. Headmasters' Positive Perception of Culturally Responsive Pedagogy

Qualitative results show that headmasters believe that culturally responsive teaching is an effective approach to improve engagement, motivation, understanding, and critical thinking skills of students. They stressed the need to incorporate local history, festivals, and traditions in the classroom. Headmasters also believed that connecting the curriculum to the students' socio-cultural background would help students feel a sense of belonging.

5. Collaborative Learning as a Tool for Equity and Inclusion

Headmasters believed that collaborative learning is a way to achieve equity and social inclusion in the classroom. They stressed that mixed grouping of students from caste, religious, gender, and socio-economic differences would help achieve national integration and social harmony.

6. Enhancement of Student Skills Through Collaborative Practices

Group discussions, peer learning, project work, field visits, and presentations were largely practiced under collaborative learning. These were believed to improve communication skills, teamwork, participation, and application-based skills. The greatest perceived benefit was in engagement and interaction.

7. Greater Impact on Engagement Than Academic Performance

Though culturally responsive and collaborative learning had a great positive impact on student engagement, enjoyment, and understanding, the perceived long-term effect on academic performance was relatively moderate. This implies that the major advantage of such learning strategies is in motivating and engaging students rather than in achieving immediate academic results.

8. Overall Convergence of Stakeholder Perceptions

The results show a convergence of perceptions among teachers and headmasters on the need for collaborative and culturally responsive learning. Though there was variation in student perceptions across social groups, the stakeholders in the institution (teachers and headmasters) showed a collective commitment to inclusive, participatory, and culturally responsive teaching practices.

All total, the findings from this objective underscore that the value of collaborative and culturally responsive teaching practices is recognized across schools as a way of improving engagement and promoting equity, although differences in student perceptions across social categories are deserving of further attention.

Major Findings of Objective Five-

(Framework and Implementation)

1. A holistic pedagogical framework has been designed by integrating collaborative pedagogy and culturally responsive pedagogy for Social Studies classrooms at the secondary level.
2. The framework views collaborative pedagogy as the base process that encourages interaction, peer collaboration, and shared responsibility, and culturally responsive pedagogy as the contextual process that ensures inclusivity and cultural relevance.
3. The framework identifies major implementation elements such as cooperative learning structures, inclusive classroom discourse, culturally responsive examples, and student-centered participation.
4. The framework stresses that for successful implementation, safe and participatory learning environments need to be established where students' cultural identities and experiences are recognized and appreciated.
5. It suggests that teachers can act as major facilitators in structuring collaborative learning while incorporating culturally responsive practices in classroom interaction and content delivery.
6. The framework illustrates that by integrating collaborative learning strategies, culturally responsive teaching can be made operational in the classroom.
7. The framework presents a systematic approach for implementing collaborative processes and achieving inclusive outcomes like equity, participation, and cultural sensitivity in Social Studies classrooms.
8. The framework developed in this study presents a viable model for implementing inclusive pedagogical practices that are aligned with the current educational objectives.

5.3 Discussion

Discussion of Objective One: Effectiveness of Collaborative Pedagogy among Secondary Students in Social Studies

The results of the current study show that the collaborative pedagogy in Social Studies was rated as moderately effective by secondary school students. The mean score shows that the students were positively affected by the collaborative learning process, although the variations in the responses show that the learning contexts of the students differ from one student to another. This is in line with the previous studies that have shown that the collaborative learning process usually leads to moderate to high levels of improvement in engagement, understanding, and participation (Laal & Laal, 2022; Gillies, 2023). The collaborative pedagogy has been shown to lead to active learning, interaction, and knowledge construction among students (**Laal & Laal, 2022; Gillies, 2023)**

The findings also showed that there was no significant difference in the results based on the class level (Class IX and X), which means that collaborative pedagogy is appropriate for both levels. This supports the idea that collaborative learning strategies can be appropriately used at all levels of secondary education because they emphasize interaction, cooperation, and shared problem-solving, as opposed to cognitive demands at different levels (Slavin, 2022; Johnson & Johnson, 2021). It is also supported by the fact that cooperative structures promote social interdependence.

However, the study found a significant difference in the effectiveness of collaborative learning based on locality, with students in urban areas perceiving the effectiveness of collaborative learning over those in rural areas. This could be explained by the differences in learning facilities, exposure to interactive learning processes, and availability of supportive learning environments. Previous studies have shown that the effectiveness of collaborative learning is highly dependent on factors such as learning infrastructure, facilitation, and availability of learning materials (Buchs et al., 2022; Van Leeuwen & Janssen, 2022). Learning environments in urban areas are likely to offer more opportunities for group learning, online collaboration tools, and interactive discussions, which may improve students' perceptions of collaborative learning.

There was also a notable difference in gender, with male students perceiving a higher level of effectiveness than female students. This result may be attributed to the differences in levels of participation, confidence, and social interactions. Previous studies have shown that gender differences in collaborative learning may arise due to differences in communication styles, levels of participation, and social expectations in group

work (Ghaith, 2023; Hsu, 2022). However, collaborative learning is generally known to enhance social skills and minimize participation gaps when well-structured.

The results also showed that there were no significant differences based on the Divyangjan category, indicating that collaborative pedagogy is an inclusive and equally effective approach for both disabled and non-disabled students. This result is consistent with previous research that highlighted the importance of cooperative learning in creating an inclusive classroom where students feel encouraged to support and help each other (Gillies, 2023; Slavin, 2022). An inclusive classroom provides opportunities for diverse students to engage actively and benefit from collaborative learning experiences.

There were also no significant differences in the results based on social categories, indicating that collaborative pedagogy is an equitable teaching strategy. This finding is consistent with the idea that cooperative learning can eliminate achievement gaps by promoting group interdependence (Johnson & Johnson, 2021).

Further analysis of the data on the dimensions of collaborative pedagogy revealed that locality and gender were significant predictors of most dimensions of communication, teamwork, and reasoning skills. These results are supported by research evidence that collaborative learning has been shown to improve critical thinking, communication, and decision-making skills (Gokhale, 2021; Kaddoura, 2023; Sari et al., 2024). Additionally, collaborative discussions in Social Studies help to improve civic understanding, reasoning, and learning participation, which are key to the subject matter outcomes (Hess, 2022; Kawashima-Ginsberg, 2022).

The results indicate that, although collaborative pedagogy is an effective and inclusive approach, its effectiveness is influenced by certain contextual and demographic variables, such as locality and gender. This is in line with the existing literature that highlights the importance of not only instructional but also environmental and interactional factors in the effectiveness of collaborative learning (Chen et al., 2024; Li, 2024; Schindler et al., 2021). Hence, to enhance effectiveness, teachers need to ensure proper implementation, opportunities for equal participation, and favorable classroom environments, especially in rural areas.

In conclusion, the findings of this study support the existing knowledge that collaborative pedagogy is an effective teaching strategy in Social Studies education, as it encourages engagement, social skills, and critical thinking. However, variations according to context indicate that there is a need for specific interventions to ensure that all students benefit equally from collaborative learning environments.

Discussion of Objective Two: Culturally Responsive Pedagogy among Secondary Students in Social Studies

The results of the current study showed that students rated culturally responsive pedagogy (CRP) moderately, which means that while culturally responsive practices were being implemented in Social Studies classes, the process of implementation may not have been entirely comprehensive. This is in line with previous studies that have found that culturally responsive teaching practices may not develop overnight and are highly dependent on teacher readiness and preparedness (Buchs et al., 2022; Van Leeuwen & Janssen, 2022). Culturally responsive pedagogy seeks to make connections between students' cultural backgrounds and learning experiences, which helps to increase engagement and participation.

Analysis revealed that there was no significant difference based on the class level, which means that both Class IX and Class X students had similar perceptions of culturally responsive practices. This is consistent with previous studies that have found culturally responsive practices to be universally effective across grade levels because they are centered on inclusivity and cultural relevance rather than age-related learning needs (Laal & Laal, 2022; Gillies, 2023). Nevertheless, a significant difference was found in the aspect of cultural sensitivity and inclusiveness, where Class IX students had higher perceptions than Class X students. This could imply that younger students are more open to inclusive practices or that they are more explicitly exposed to these practices in the classroom.

One of the findings of the study was that there was a significant difference based on locality, with urban students viewing culturally responsive pedagogy more favorably than rural students. This can be explained by the varying levels of exposure to diverse cultural interactions, teacher training, and access to inclusive learning resources. It has been found that school infrastructure, teacher knowledge, and availability of multicultural learning materials have a significant impact on the effectiveness of culturally responsive pedagogy (Buchs et al., 2022; Chen et al., 2024). There are greater opportunities for diverse interactions in urban classrooms, which could have a positive impact on students' experiences of culturally responsive pedagogy.

Analysis of data by gender also showed that there were significant differences, with male students having more positive perceptions of culturally responsive pedagogy than female students. This result can be attributed to the differences in levels of participation, confidence, and engagement experiences. Previous research has indicated that collaborative and culturally responsive strategies could be perceived differently by male and female students as a result of socialization processes, communication styles, and classroom interaction dynamics (Ghaith, 2023; Hsu, 2022).

A notable difference was also found on the basis of Divyangjan, as non-Divyangjan students found culturally responsive pedagogy more positive than Divyangjan students. This finding indicates that even if culturally inclusive practices are being implemented, they may not be entirely effective in catering to the needs of differently-abled students. It is highlighted in research that culturally responsive teaching practices should also include inclusive practices to ensure equitable participation (Gillies, 2023; Slavin, 2022).

The results also showed that there were significant differences in the perception of culturally responsive pedagogy among the social categories, with OBC students having the highest perception and ST students having the lowest perception. This result is significant in that it reveals the complex association between social identity and educational experiences. Culturally responsive pedagogy is designed to address inequities by taking into consideration the cultural backgrounds of students; nevertheless, its success relies on the ability of teachers to incorporate diverse viewpoints into the classroom (Kawashima-Ginsberg, 2022; Parker, 2021).

Analysis of the factors of culturally responsive teaching showed that social awareness and real-world connections were highly variable across a number of demographic factors, whereas cultural inclusiveness and sensitivity were relatively stable across all groups. This is consistent with previous studies that found culturally responsive teaching to be an effective means of developing social awareness, critical thinking, and real-world connections by making connections between curriculum and students' experiences (Levstik, 2023; Hess, 2022). The stability of cultural inclusiveness perceptions, however, suggests that fundamental inclusive strategies are already in place in the classroom.

In general, the results emphasize the importance of culturally responsive pedagogy in improving the social awareness and engagement of students in Social Studies education. The results are in line with previous studies that showed culturally responsive pedagogy can positively affect student motivation, engagement, and academic achievement by establishing a meaningful connection between learning and cultural identity (Chen et al., 2024; Li, 2024; Schindler et al., 2021). Nonetheless, differences among demographic groups suggest that there are social and individual factors that affect the experience of culturally responsive pedagogy among students.

In conclusion, although culturally responsive pedagogy is moderately effective in Social Studies classrooms, its effectiveness differs depending on the locality, gender, social group, and Divyangjan status of the students. The results of this study underscore the importance of providing teacher training and practices that are inclusive and equitable in order to ensure that culturally responsive pedagogy has an equal positive effect on all students. Improving culturally responsive teaching practices can also help improve the social awareness and cultural sensitivity of secondary school students.

Discussion of Objective Three: Implementation Challenges of Collaborative and Culturally Responsive Pedagogy

The results of Objective Three indicate that there are several interrelated issues for teachers in implementing collaborative and culturally responsive teaching, particularly in relation to conceptual understanding, classroom practice, and resource dependency. These issues are reflective of broader concerns that have been identified in the existing literature related to teacher education, pedagogical knowledge, and systemic barriers in implementing inclusive teaching practices.

One of the most visible challenges that emerged in the study was a lack of conceptual understanding and reflection among teachers. While teachers were able to identify group discussions, project-based learning, and cultural activities in the classroom, their responses suggested a very limited conceptual understanding of collaborative pedagogy as simply group-based classroom participation, and not as a planned learning approach that incorporates interdependence, accountability, and inclusive learning. Similarly, culturally responsive pedagogy was often conceptualized as organizing cultural events or celebrations, and not as an approach to integrate students' experiences, identities, and socio-cultural contexts into the learning process. This is consistent with previous research that has suggested that teachers often conceptualize culturally responsive pedagogy in a very superficial way without a deep understanding of the theoretical underpinnings of the approach (Gay, 2018; Ladson-Billings, 2014). A lack of adequate teacher preparation and professional development opportunities have also been identified as significant factors in this lack of conceptual understanding (Gay, 2020; Villegas & Lucas, 2021).

The findings also underscore the absence of reflective practice among teachers, as most teachers were not able to articulate the challenges they encountered and critically analyze issues of inequity and diversity in their classrooms. This is consistent with the findings of previous studies, which suggest that teachers are often not able to engage in critical self-reflection necessary for culturally responsive teaching, especially when teacher education is not focused on equity-based pedagogical reflection (Warren, 2018; Gorski, 2019). Reflective practice is deemed crucial for recognizing systemic inequities and modifying teaching practices to meet the needs of diverse learners (Howard, 2020).

Another important finding of this study was the existence of pedagogical constraints in the classroom. The teachers were found to be using conventional collaborative approaches like group work, class discussions, and project presentations, but there was little evidence of systematic cooperative learning approaches, differentiation, and inclusive assessment. This implies that although the teachers are trying to integrate interactive approaches, their pedagogical toolkit is limited. Similar observations have been made in previous studies, which suggest that teachers tend to use collaborative approaches in a procedural manner

without fully embracing the structural components required for effective cooperative learning (Richards et al., 2019; Smith & McCoy, 2022). The absence of differentiation and adaptation to diverse needs also points towards a mismatch between theoretical knowledge and the application of inclusive pedagogy (Thorius & Sullivan, 2020).

Regarding culturally responsive teaching, the results showed that teachers seldom made connections between teaching practices and students' socio-cultural backgrounds or identities. Cultural responsiveness was not incorporated into lesson planning and subject teaching strategies. This result is consistent with previous research, which has indicated that teachers often experience challenges in incorporating cultural knowledge into academic teaching (Castagno, 2019; Young, 2021). Researchers have argued that culturally responsive teaching involves more than awareness of diversity; it also involves the intentional integration of curricula and teaching practices (Paris & Alim, 2017; Nieto, 2017).

The study also revealed resource-dependent implementation practices as a challenge. Teachers believed that effective collaborative teaching is dependent on the use of ICT resources such as projectors and smart classrooms. Although technology can facilitate engagement and interaction, overdependence on technology may suggest a lack of knowledge of other non-technology collaborative approaches. This is supported by previous studies that have found that resource dependency is a factor in the implementation of innovative approaches to teaching, especially in schools with disparities in infrastructure (Aronson & Laughter, 2016; Bennett, 2021). In addition, overdependence on technology may lead to disparities in learning, especially in disadvantaged schools with limited technology infrastructure (Sleeter, 2018).

Another significant implication of the findings is the minimal utilization of community-based knowledge and cultural resources in collaborative teaching. The teachers did not often refer to the use of students' cultural experiences or local contexts as teaching resources. This is a significant challenge that has been identified in the literature, which argues that culturally responsive teaching must integrate community knowledge (Hollie, 2018; Hammond, 2015).

In general, the results point to the fact that the issues being faced by teachers are not because of resistance or lack of willingness but are a result of a lack of conceptual understanding, limited skills, and constraints. This is in line with the fact that effective implementation of collaborative and culturally responsive teaching is highly dependent on teacher training and development (Gay, 2020; Villegas & Lucas, 2021).

The challenges of implementation that have been identified in this study underscore the importance of comprehensive capacity-building programs for teachers that aim to enhance conceptual understanding, reflective practice, pedagogical practice, and resource independence. It is important that these challenges

are addressed in order to ensure that collaborative and culturally responsive pedagogy can be effectively implemented in order to achieve equity and inclusion.

Discussion of Objective Four

The results obtained from Objective Four are very significant in understanding the perceptions of students, teachers, and headmasters regarding collaborative and culturally responsive pedagogy (CCRP). Overall, the findings of this study suggest that although the perceptions of students differ across social categories, the perceptions of teachers are relatively consistent across demographic variables, and headmasters are very strong on the importance of CCRP in engagement, inclusion, and equity.

Differences in Students' Perceptions Across Social Categories

The statistically significant differences in the results for students belonging to different social categories indicate that the perception of CCRP is shaped by social location and educational experiences. The students belonging to OBC and General categories have shown higher levels of perception compared to students belonging to SC and ST categories. This could be due to inequalities in access to academic support, institutional inclusion, and socio-cultural capital, which influence the experience of culturally responsive teaching.

These results are consistent with the claim that culturally relevant pedagogy aims to redress historical injustices in education by recognizing students' cultural identities and promoting equitable engagement (Ladson-Billings, 2014; Gay, 2018). There is evidence that when the learning environment bridges the connection between learning and students' cultural experiences, historically marginalized students demonstrate higher levels of engagement, motivation, and achievement (Dee & Penner, 2017; Byrd, 2016). The tendency for historically disadvantaged groups to score lower in perception may thus signal that culturally responsive teaching is not yet an equitable experience across social categories.

In addition, culturally responsive teaching serves as a means of closing the achievement gap and mitigating the effects of stereotype threat through the affirmation of students' identities and a sense of belonging (Steele & Aronson, 2016; Howard, 2019). The differences found in this study among the various social groups support previous studies that have shown the need for equity-focused teaching practices to be implemented on a systematic level to reach all students equally (Sleeter, 2018; Schachner et al., 2019).

Teachers' Uniform Perceptions Across Demographic Variables

The results indicate that there are no significant differences in teachers' perceptions of CCRP based on gender, locality, subject area taught, level of class, and years of teaching experience. This indicates that

there is a common understanding of collaborative and culturally responsive teaching practices among teachers. This is consistent with the literature that suggests cultural responsiveness as a teaching practice is being increasingly promoted in professional discourse and policy documents as a teaching standard (Villegas & Lucas, 2021).

Further, research literature suggests that culturally responsive teaching practices are based on universal teaching principles such as inclusiveness, diversity, and student-centered learning that cut across demographic differences among teachers (Ginsberg & Wlodkowski, 2015; Richards et al., 2019).

However, it is important to note that uniform perception does not necessarily mean uniform practice. Research suggests that although teachers may ideologically believe in culturally responsive teaching practices, actual implementation can differ due to constraints and resource limitations (Aronson & Laughter, 2016; Hammond, 2015). Therefore, the results of this study emphasize the importance of ongoing professional development to ensure that collective beliefs are translated into consistent classroom practices.

Consistency Across Subject, Class, and Experience Dimensions

The Kruskal-Wallis analysis showed that there were no significant differences in teachers' perceptions regarding subject specialization, class taught, and job experience on any of the five dimensions of CCRP. This indicates that awareness, relevance, implementation, impact on students, and institutional support are perceived in a similar manner irrespective of professional background.

The results are in line with the meta-analytic findings that cultural diversity approaches in education have a tendency to yield consistent perceptions among educators, as they are based on universal principles of equity, inclusion, and engagement (Civitillo et al., 2019). Moreover, culturally responsive teaching practices have been identified as a holistic approach that is not subject-specific but applicable across disciplines and grade levels (Paris & Alim, 2017; Santamaria, 2020).The absence of differences based on levels of experience may also indicate that culturally responsive teaching is becoming more integrated into modern teacher preparation programs, resulting in a similar level of understanding across different generations of teachers (Phuntsog, 2018; Warren, 2018).

Headmasters' Perspectives on Engagement and Inclusion

The qualitative data from headmasters is a strong confirmation of the results, and the culturally responsive pedagogy is identified as one of the most important factors that contribute to students' engagement, motivation, and participation. The headmasters stressed the significance of incorporating the local culture, traditions, and experiences of students into the learning process, which corresponds to the basic principle

that culturally responsive education connects the curriculum to the students' reality (Gay, 2018; Ladson-Billings, 2014).

Studies have found that culturally relevant teaching has a significant effect on students' interest, achievement, and critical thinking by making connections between learning and identity (Dee & Penner, 2017; Howard, 2019). The headmasters' views on the effectiveness of culturally relevant teaching in understanding and participation are consistent with the findings.Moreover, the focus on collaborative learning as an approach to equity and inclusion acknowledges the importance of group-based learning in overcoming social divisions and building intergroup relations (Thorius & Sullivan, 2020). Collaborative environments promote peer interactions, empathy, and respect, which contribute to inclusive learning environments (Schachner et al., 2019; Khalifa et al., 2016).

The headmasters' emphasis on mixed grouping irrespective of caste, gender, and socio-economic status also resonates with research that suggests culturally responsive school leadership is an important factor in promoting equity and inclusive learning environments (Khalifa et al., 2016).

Implications of the Findings

The findings suggest that despite the high level of awareness and acceptance of culturally responsive pedagogy, the differences in perceptions of students reveal an imbalance in the experience of the implementation of CCRP. This is important in the context of:

- Enhancing support systems within institutions to ensure a uniform experience in the implementation of CCRP.
- Designing teacher training programs that emphasize equity-focused teaching practices.
- Enhancing the role of school administrators in developing a culturally responsive school environment.

These implications are in line with other studies that have recommended that culturally responsive teaching practices are most effective when implemented through systemic approaches at the classroom, school, and policy levels (Aronson & Laughter, 2016; Sleeter, 2018).

In conclusion, the research has confirmed that collaborative and culturally responsive pedagogy is widely acknowledged as a crucial element in promoting engagement, inclusion, and equitable learning outcomes. Although there is strong conceptual alignment between teachers and headmasters and the principles of CCRP, the differences in student perceptions have brought to light the challenges that exist in the equitable implementation of the principles.

Discussion of Objective 5

The current objective proposed a Contextualized Integrative Framework for Collaborative and Culturally Responsive Pedagogy (CIF-CCRP) based on the empirical findings of the study. The CIF-CCRP seeks to integrate principles of collaborative learning, culturally responsive pedagogy, reflective practice, and systemic equity monitoring to address the realities of secondary schooling in Marathwada. The following discussion locates each area of the CIF-CCRP within the existing theoretical and empirical literature, while also illustrating how the CIF-CCRP directly addresses the findings of the study.

Contextual Grounding and Socio-Cultural Relevance

The first domain of the framework highlights the importance of grounding the framework in context by incorporating regional realities, community knowledge, and culturally relevant curriculum content. The findings of the study showed that there were large differences in the perception levels of CRP between rural and urban areas and among social categories, with marginalized groups, especially ST students, having lower perception levels. This indicates that the existing curriculum and teaching practices may not be reflective of the experiences of all students.

These results show a strong congruence with the basic tenets of culturally responsive teaching, which recognize the significance of linking academic learning to students' cultural contexts, realities, and experiences of identity (Gay, 2018; Ladson-Billings, 2014). The existing literature clearly shows that by linking academic learning to cultural contexts, students exhibit increased levels of engagement, motivation, and achievement (Dee & Penner, 2017; Byrd, 2016).

Moreover, the existing literature on diversity climate in schools suggests that culturally inclusive schools are associated with increased levels of belongingness and decreased gaps among diverse student groups (Schachner et al., 2019). The domain of contextual grounding thus addresses the empirical gaps identified in the study by ensuring that the curriculum is designed in a manner that is grounded in regional realities, thereby increasing relevance and decreasing perception gaps among social categories and localities.

Structured Collaboration and Equity in Participation

The second domain is concerned with improving informal group work to cooperative learning. The analysis revealed that there were large differences in terms of gender, locality, and Divyanjan leadership involvement in collaborative pedagogy. The addition of structured collaborative components such as role assignment, accountability, and peer assessment is supported by the theory of cooperative learning, which views positive interdependence, individual accountability, and promotive interaction as key elements of

successful collaboration (Johnson & Johnson, 1989). Research also suggests that structured collaborative learning improves communication skills, reasoning, and participation of diverse learners (Thorius & Sullivan, 2020).

The emphasis on structured collaboration in the framework is also consistent with literature that highlights the importance of collaborative pedagogies in achieving social integration, closing participation gaps, and creating an equitable classroom environment (Warren, 2018; Sleeter, 2018). This particular domain tackles structural inequities in group participation, which is a direct response to the findings of the study on gender and leadership gaps.

Deep Cultural Integration and Critical Awareness

The third domain involves going beyond surface-level cultural representation to integrate culture more deeply into the curriculum, teaching, and assessment. Although the headmasters and teachers reported the inclusion of cultural elements such as festivals and traditions, the findings showed an unequal distribution of culturally responsive practices among different social groups, with marked differences in perceptions regarding social awareness and real-life relevance.

This is in line with the views of scholars who argue that culturally responsive teaching practices need to go beyond tokenistic inclusion to engage critically with cultural identities, social realities, and issues of equity (Paris & Alim, 2017; Aronson & Laughter, 2016). It has been found that culturally responsive teaching practices can improve not only engagement but also critical thinking, social awareness, and academic achievement (Howard, 2019; Santamaria, 2020).

The emphasis on identity-based examples, problem-based learning, and representation of marginalized histories in the framework is a manifestation of this underlying conceptualization of cultural integration. These strategies are especially important in diverse learning environments, where representation is crucial for promoting equitable learning outcomes (Civitillo et al., 2019).

Reflective Professional Practice and Teacher Capacity

The fourth domain focuses on the gaps in conceptual and reflective thinking that were identified among teachers. Despite the positive perceptions among teachers regarding collaborative and culturally responsive teaching, there was a procedural understanding with little theoretical development.

This domain is based on the theory of reflective practice, which emphasizes the significance of critical reflection in enhancing the quality of teaching and promoting professional development (Schön, 1983). Studies have found that reflective approaches to teaching facilitate teachers in developing culturally

responsive teaching skills, modifying teaching strategies, and addressing diverse classroom needs (Villegas & Lucas, 2021).

Moreover, research has shown that teacher professional development activities focusing on reflection, peer collaboration, and action research have been effective in improving the implementation of inclusive pedagogies (Richards et al., 2019). The inclusion of reflective components in the framework, therefore, fills the gap that was identified between teachers' conceptual understanding and implementation.

Equity Monitoring and Institutional Accountability

The last domain is concerned with equity monitoring and feedback systems to promote long-term implementation and accountability. The findings showed inequities in student perceptions despite relatively equal teacher perceptions, suggesting the need for institutional frameworks to monitor outcomes of inclusion.

This domain is supported by literature on education reform, which argues that systemic monitoring and accountability are crucial in overcoming structural inequities in education (Darling-Hammond, 2010). Literature also suggests that equity monitoring systems are essential in helping schools address participation gaps and promote inclusive practices and culturally responsive teaching initiatives (Khalifa et al., 2016).

With the inclusion of participation audits, perception surveys, and equity indicators, the framework ensures that pedagogical practices are constantly assessed and improved to ensure inclusive and equitable learning environments.

Integrative and Context-Sensitive Nature of the Framework

The cyclical nature of the CIF-CCRP framework captures the interrelatedness of contextual grounding, collaboration, cultural integration, reflective practice, and equity monitoring. The framework is consistent with the current literature that suggests that culturally responsive education needs to be addressed through systemic and multidimensional approaches rather than single-classroom-level interventions (Aronson & Laughter, 2016; Sleeter, 2018).

The importance of the framework’s sensitivity to context becomes even more pertinent in the context of the socio-educational realities of Marathwada, where inequalities based on location, gender, social category, and disability status impact the learning experiences of students. The framework’s ability to synthesize research findings with existing theories of pedagogy offers a useful template for overcoming contextual difficulties while ensuring equity, engagement, and relevance in secondary education.

Implications of the Framework

The proposed framework has a number of important implications:

1. For Curriculum Development: It emphasizes the need for contextual and culturally appropriate curriculum development.
2. For Teacher Education: It emphasizes the need for reflective and theory-based professional development.
3. For School Leadership: It emphasizes the importance of institutional monitoring for the promotion of inclusive practices.
4. For Policy Reform: It emphasizes the need for systemic integration of collaborative and culturally responsive practices in educational policies.

The discussion shows that the CIF-CCRP framework is both theoretically informed and empirically supported. The discussion covers some of the key gaps that have been identified in the study, such as the mismatch between context, ambiguity of concepts, and inequities in structures of pedagogy. The framework is comprehensive and context-specific in its approach to improving inclusive and equitable secondary education in Marathwada.

5.4 Implications of the Study

The results of the current study on collaborative pedagogy and culturally responsive pedagogy (CRP) in the secondary schools of Marathwada have important implications at various levels, such as classroom levels, teacher education programs, school administration, curriculum development, and educational policies. These implications arise from the quantitative data, which points to the demographic disparities in perceptions, as well as the qualitative findings.

1. Pedagogical Implications

One of the most significant implications of this study is the need to enhance structured collaborative teaching approaches in secondary schools. The results of the study revealed that collaborative learning was often conducted in an unstructured group work setting that lacked roles, accountability, and structured interaction. This indicates that teachers need to be supported in structured cooperative learning approaches that promote equal participation of students.

Research suggests that structured collaboration improves communication skills, fosters critical thinking, and eliminates inequalities of participation, especially for marginalized students (Thorius & Sullivan,

2020). This means that schools need to go beyond activity-based group work and focus on designing cooperative learning structures that entail role assignment, peer assessment, and reflective discussion.

2. Implications for Culturally Responsive Teaching Practices

Findings showed large gaps in the perception of culturally responsive teaching between locality, social category, and Divyanjan status, with marginalized groups showing lower levels of perceived cultural inclusion. This indicates that the current practices in the classroom do not adequately represent the socio-cultural experiences of the learners.

The implication is that culturally responsive teaching should move beyond the symbolic representation of culture through activities such as festivals and celebrations and integrate the identities, knowledge, and experiences of the students into the curriculum. There is overwhelming evidence that culturally responsive teaching improves student engagement, academic achievement, and feelings of belonging (Gay, 2018; Byrd, 2016).

Thus, teachers must incorporate culturally meaningful examples, local case studies, and community-based knowledge into classroom instruction to promote equitable learning experiences.

3. Implications for Teacher Professional Development

The findings revealed a gap between teachers' positive perceptions and their limited conceptual clarity regarding collaborative and culturally responsive pedagogies. Teachers often described practices in procedural terms without articulating theoretical understanding.

This highlights the need for professional development programs that emphasize not only practical strategies but also the conceptual foundations of inclusive pedagogy. Studies suggest that reflective professional development enhances teachers' capacity to implement culturally responsive and collaborative instructional approaches effectively (Villegas & Lucas, 2021; Richards et al., 2019).

Therefore, teachers need to bring culturally relevant examples, local case studies, and community knowledge into the classroom to ensure equitable learning experiences for all students.

4. Implications for Equity and Inclusive Education

The results showed a mismatch between teachers' positive attitudes and their lack of conceptual understanding of collaborative and culturally responsive teaching approaches. Teachers tended to focus on procedural descriptions of practices without mentioning their conceptual understanding.

This is an important area for professional development programs to focus on not only practical approaches but also conceptual underpinnings of inclusive teaching practices. Research indicates that reflective professional development improves teachers' ability to effectively implement culturally responsive and collaborative teaching practices (Villegas & Lucas, 2021; Richards et al., 2019).Thus, professional development programs for teachers should incorporate reflective activities such as peer observation, action research, and equity-based lesson analysis to improve pedagogical understanding.

5. Implications for Curriculum Development

The results indicate a need for a change in the curriculum to include local and contextual elements, especially in the field of Social Studies. Large differences between rural and urban areas, as well as between social groups, in the perceptions of the curriculum suggest that standardized curricula may not be representative of the local context.

Studies on culturally responsive curriculum development have emphasized the importance of incorporating local knowledge and real-life social issues into the curriculum to make it more relevant and increase critical social awareness among students (Paris & Alim, 2017; Howard, 2019). Curriculum developers can make use of local content and culturally responsive approaches to make the learning experience more meaningful for students.

6. Implications for School Leadership

The qualitative results revealed the significance of headmasters in creating a culturally inclusive and collaborative school environment. The perceptions of the headmasters underscored the significance of cultural integration, inclusive participation, and collaborative learning practices.

This implies that school leadership is critical in creating a supportive context for the implementation of inclusive learning practices. Culturally responsive school leadership literature suggests that school leaders have a profound impact on equity practices in schools by promoting inclusive policies, providing professional support, and ensuring accountability (Khalifa et al., 2016). School leaders, therefore, need to play an important role in promoting teacher training, collaborative planning, and inclusive practices in classrooms.

7. Implications for Educational Policy

From a policy perspective, the findings of this study underscore the importance of embedding collaborative and culturally responsive teaching practices in curriculum policies and school assessment policies. The fact

that demographic gaps exist despite positive teacher attitudes indicates that inclusive teaching practice cannot be left to the initiative of individual teachers alone.

Education reform literature underscores the importance of policy integration, resource allocation, and accountability in achieving equity (Darling-Hammond, 2010). Thus, policymakers must embed equity indicators, culturally responsive best practices, and collaborative learning structures into education policies.

8. Implications for Future Research

The study also points towards the future research directions, especially in understanding the long-term effects of collaborative and culturally responsive teaching on student outcomes, socialization, and critical thinking skills. Further research is also required to understand the efficacy of structured implementation models like the proposed CIF-CCRP framework in different educational settings.

The implications of the current study, in general, are that there is a need for a comprehensive and systemic approach towards integrating collaborative and culturally responsive teaching in secondary education. The results of the study indicate that in order to enhance equity, engagement, and cultural relevance, it is not only required to focus on the classroom-level changes but also to develop the capacity of the teachers and make changes at the curriculum and policy levels.

By focusing on these different fronts, it is possible to develop more inclusive, participatory, and culturally relevant learning environments for the diverse needs of secondary school students.

5.5 Conclusion of the Study

The major finding of the study is that there is a significant relationship between the variables identified in the study, which have a major influence on the findings of the study. The findings of the study also identify patterns that support the initial assumptions of the study. The findings of the study provide a better understanding of the problem by identifying how and why certain factors or variables have an influence on the problem under investigation.

From a critical point of view, the study is an important contribution to knowledge as it provides evidence-based findings. The major strength of the study is that it provides a clear research design and logical interpretation of the findings, which increases the validity of the findings. The study also adds value to existing knowledge by providing insights into the factors that are important for practical application.

However, some limitations and weaknesses must be accepted. The study partly depended on limited sources of data, as well as some responses that might be prone to subjective bias. Moreover, the study did not have

the capacity to investigate all the possible variables of the problem at hand. The study also has some limitations. The study had a small sample size, which is a limitation in terms of generalizing the results to the entire population. The study was carried out within a particular time frame and setting, which might not be representative of changes over time or in other settings. Moreover, the study only investigated some variables and not others.

In conclusion, despite the limitations and weaknesses, the study has successfully fulfilled its objectives and shed light on the research problem. The study forms a solid basis for future studies, which can extend the scope of the study and investigate more variables to gain a comprehensive understanding of the subject.

5.6 Recommendations of the Study:

1. The School Principal (Headmaster) needs to hold monthly pedagogical review sessions to check if teachers are employing structured collaborative approaches instead of informal group work, as the study revealed that most teachers associated collaboration only with group discussion and project work.

2. The Vice-Principal / Academic Coordinator needs to ensure that Social Studies teaching plans incorporate local case studies, community problems, and culturally contextual examples, as the study revealed large rural-urban and social category disparities in culturally responsive teaching practices.

3. The Heads of Departments (HODs) need to train teachers on how to allocate specific roles such as leader, recorder, and presenter in group work to overcome the leadership deficit observed among Divyanjan students.

4. The School Administrative Officer / Office Superintendent needs to simplify record-keeping and reporting procedures to minimize the clerical workload of teachers, as the study revealed that administrative workload hinders teachers' reflective and innovative practices.

5. The Accounts Officer and School Accountant need to allocate more budget to low-cost collaborative teaching resources, community-based learning activities, and inclusive classroom materials instead of ICT equipment.

6. The Student Welfare Officer and School Counselor should conduct cultural dialogue sessions and peer engagement activities to facilitate inclusiveness and overcome social category perception gaps identified in the findings.

7. The Admission In-charge should ensure balanced class composition in terms of gender, social category, and Divyanjan representation to facilitate equal participation in collaborative learning.

8. The Human Resource / Establishment Officer should incorporate collaborative pedagogy, inclusive teaching, and cultural responsiveness competencies in teacher performance appraisal.

9. The District Education and Training Institute (DIET)/ authorities may be directed to develop in-service training programs emphasizing conceptual understanding, reflective practice, and collaborative activities, as the findings revealed substantial theoretical gaps among teachers.

10. The Facility Manager/Infrastructure Supervisor must facilitate flexible seating and interactive class room designs to facilitate group interaction and collaborative learning.

11. The Cluster Resource Coordinators (CRC) and Block Education Officers (BEO) may be directed to track inclusion indicators of participation, leadership allocation, and cultural representation in class room practices.

12. The Samagra Shiksha Programme Officers should provide dedicated funding support for inclusive infrastructure, culturally appropriate class room resources, and teacher capacity building initiatives in rural schools.

13. The State-level policy administrators and Directors employed with the Maharashtra School Education Department must embed collaborative and culturally responsive teaching practices into class room curriculum and teacher guides, as well as school inspection criteria.

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महाराष्ट्र शासन
शालेय शिक्षण व क्रीडा विभाग
राज्य शैक्षणिक संशोधन व प्रशिक्षण परिषद, महाराष्ट्र
७०८ सदाशिवपेठ, कुमठेकरमार्ग, पुणे.४११०३०.

जा.क्र./राशैसंप्रपम/सा.शा.वि / २०२५ **दिनांक**: २६-०७-२०२५

प्रति,
शिक्षणाधिकारी (माध्यमिक)
जि.- नांदेड, परभणी, हिंगोली, लातूर आणि छत्रपती संभाजीनगर.

विषय :. RIE भोपाळ यांना द्यावयाची माहिती सादर करणेबाबत... .
संदर्भ:१.प्रो.शिवकुमार गुप्ता, RIE भोपाळ यांचे पत्र F.No.RIEB/DEE/PAC २३.१७/२०२५-२६/१२२१ दि. २५/०७/२०२५.

उपरोक्त संदर्भिय पत्रान्वये, **"Permission to Conduct Research Study on "A study of effectiveness of collaborative and culturally responsive pedagogy in social studies among secondary school students of Marathwada region of Maharashtra State "**याबाबतच्या संशोधन कार्यासाठी महाराष्ट्र राज्यातील नांदेड, परभणी, हिंगोली, लातूर आणि छत्रपती संभाजीनगर या पाच जिल्ह्याची निवड झालेली आहे. या जिल्ह्यातील **नमुना निवड पद्धतीने (Random Sampling)**माध्यमिक शाळांची निवड करून शाळेसंबंधी खालील माहिती RIE भोपाळ यांना उपलब्ध करून द्यावयाची आहे. .

१) ५०० विद्यार्थी (प्रती जिल्हा २० विद्यार्थी ५ शाळेतून)
२) १०० शिक्षक (प्रती जिल्हा ५ शाळेतून ४ शिक्षक)
३) २५ मुख्याध्यापक आणि २० शाळा (प्रती जिल्हा ५ मुख्याध्यापक, ४ शाळा)

याबाबत निवड करण्यात आलेल्या माध्यमिक शाळेच्या मुख्याध्यापकांची माहिती सोबतच्या विहीत नमुन्यात इंग्रजी भाषेत देण्यात यावी.

Sr. no	Name of Head Masters	School Address	Mobile No	Email-Id

तसेच सदर शाळेतील शिक्षक व विद्यार्थी (प्रती जिल्हा २० विद्यार्थी ५ शाळेतून आणि प्रती जिल्हा ५ शाळेतून ४ शिक्षक)यांची माहिती वरील संख्येच्या प्रमाणात देण्यात यावी. उपरोक्त प्रमाणे आवश्यक माहिती तात्काळ सामाजिक शास्त्र विभागाच्या socialsciencedept@maa.ac.in या ई-मेलवर सादर करण्यात यावी.

Digitally signed by
Arun Maruti Jadhav
Date: 30-07-2025
10:36:59

(अरुण जाधव)
उपसंचालक,
सामाजिक शास्त्र व कला क्रीडा विभाग,
राज्य शैक्षणिक संशोधन व
प्रशिक्षण परिषद महाराष्ट्र, पुणे-३०

प्रत माहिती व कार्यवाहीस्तव सविनय सादर -

१. मा .मुख्य कार्यकारी अधिकारी ,जिल्हा परिषद, नांदेड, परभणी, हिंगोली, लातूर आणि छत्रपती संभाजीनगर .

Tool-1
SCALE FOR COLLABORATIVE AND CULTURALLY RESPONSIVE PEDAGOGY FOR STUDENTS

संशोधन प्रकल्पाचे शीर्षक:

"महाराष्ट्र राज्यातील मराठवाडा विभागातील माध्यमिक शाळांमधील सामाजिक अध्ययन विषयासाठी सहकार्यात्मक व संस्कृती संवेदनशील अध्यापन पद्धतीच्या-परिणामकारकतेचा अभ्यास"

<u>संमतीपत्र</u>

मी, (**विद्यार्थ्याचे नाव**) : ----------

वरील संशोधन प्रकल्पात स्वेच्छेने सहभागी होण्यास सहमती देत आहे. याबाबत मला खालील बाबी समजल्या आहेत:

- मी सामाजिक अध्ययनाशी संबंधित वर्गातील उपक्रमांमध्ये भाग घेणार आहे.
- माझे प्रतिसाद केवळ शैक्षणिक कारणासाठी वापरले जातील आणि गोपनीय ठेवले जातील.
- सहभाग स्वेच्छेचा आहे, आणि मी कोणत्याही वेळी मागे घेऊ शकतो.शकते/
- यामध्ये कोणताही धोका किंवा हानी नाही.

दिनांक: --/---/------ **सही: ----------**

विद्यार्थ्याची सामान्य माहिती (General Information):

Name and place of the School:…….. **शाळेचे नाव व स्थान:**…….	Name of Student:…… **(विद्यार्थ्याचे नाव)** : ……
Tahsil (**तालुका**) :-…… District (**जिल्हा**) :……	Class: **(वर्ग)** : …….. Age: (**वय**) : ……
Gender: **(लिंग)** : ☐ Male (**पुरुष**) ☐ Female (**महिला**) ☐ Prefer not to say (**सांगायचे नाही**)	Locality (**भौगोलिक स्थान**) : ☐ Rural (**ग्रामीण**) ☐ Urban (**शहरी**)
Social Category (**सामाजिक श्रेणी:**)-1 ST (**अनुसूचित जमाती**) ☐,2-SC (**अनुसूचित**	Do you belong to Divyang category? (**आपण दिव्यांग आहात का?** 1-Yes (**होय**) ☐, 2-No (**नाही**)☐

जाती) ☐,3-OBC **(इतर मागासवर्गीय)** ☐,4 -GEN (**सामान्य)** ☐	

Instructions (सूचना)

- Please read each statement carefully and tick (✓) the option that best represents your opinion.
  कृपया प्रत्येक विधान काळजीपूर्वक वाचा आणि तुमच्या मतानुसार योग्य पर्यायावर ✓ चिन्ह टाका.
- There are no right or wrong answers – we are only interested in your honest opinion.
  बरोबर किंवा चुक असा काहीही नाही - आम्हाला फक्त तुमचं प्रामाणिक मत महत्त्वाचं आहे.

S.N. (स.क्र)	Statement (वक्तव्य)	Strongly Agree (पूर्णपणे सहमत)	Agree (सहमत)	Neutral (तटस्थ)	Disagree (असहमत)	Strongly Disagree (पूर्णपणे असहमत)
1	I recognise the existing social problems which require attention. ज्या सामाजिक समस्यांकडे लक्ष देण्याची गरज आहे, त्या मी ओळखतो.					
2	I examine the causes and consequences of social issues with determination and clarity. मी सामाजिक समस्यांच्या कारणांचा, परिणामांचा, एकाग्र पणे आणि स्पष्टतेने विचार करतो					
3	I have strong reasons and clear explanations for my answers to the Social issues.					

	सामाजिक समस्यांवरील माझ्या उत्तरांसाठी माझ्याकडे ठोस कारणे आणि स्पष्ट विश्लेषणे आहेत.					
4	Engaging in classroom discussions enhances my logical reasoning skills. वर्गातील संवादात सहभागी होण्यामुळे माझ्या तार्किक विचारशक्तीमध्ये विकास होतो					
5	I am confident in my ability to ask questions. मला प्रश्न विचारण्याच्या माझ्या क्षमतेवर विश्वास आहे.					
6	I connect classroom teaching to my real-life situations. मी वर्गातील शिक्षण माझ्या वास्तविक जीवनातील परिस्थितींशी जोडतो					
7	I feel ignored during my classroom teaching and discussions. वर्गात शिकवताना आणि चर्चा करताना मला दुर्लक्षित केल्यासारखे वाटते.					

8	I assess the strengths and weaknesses of classroom activities. मी वर्गातील कार्यक्षमता व उणिवा यांचे मूल्यमापन करतो					
9	I leverage cultural examples to evaluate and address social issues. सामाजिक समस्यांचे मूल्यांकन करण्यासाठी आणि त्यांचे निराकरण करण्यासाठी मी सांस्कृतिक उदाहरणांचा वापर करतो.					
10	I find practical solutions to social problems. मी सामाजिक समस्यांसाठी व्यावहारिक समाधान शोधतो					
11	I value diverse cultures. मला विविध संस्कृती आवडतात.					
12	I enhance my decision-making skills through debate and discussion. मी वादविवाद आणि चर्चेद्वारे माझे निर्णय घेण्याचे कौशल्य वाढवतो.					
13	I draw clear and logical conclusions.					

	मी स्पष्ट आणि तार्किक निष्कर्ष काढू शकतो					
14	I actively participate in team-based activities. मी गट आधारित उपक्रमा मध्ये सक्रियपणे सहभागी होतो.					
15	I pay close attention when my teammates speak. जेव्हा माझे गट सदस्य बोलतात, तेव्हा मी लक्षपूर्वक ऐकतो					
16	I value and embrace the opinions of others. मी इतरांच्या मतांना महत्त्व देतो आणि त्यांचा स्वीकार करतो.					
17	I actively participate in group tasks and projects. मी गट कार्य व प्रकल्पा मध्ये सक्रिय सहभाग घेतो					
18	I communicate my ideas assertively in a team environment. मी गटामध्ये माझे विचार स्पष्ट्पणे व्यक्त करतो					
19	I encourage my teammates during					

	group work. मी समूह कार्य करताना माझ्या समूह सदस्यांना प्रोत्साहन देतो					
20	I share my views and opinions with clear reasoning when asked in the group. गटान विचारले असता मी माझे विचार आणि मते स्पष्टपणे मांडतो.					
21	Collaboration in a group helps incorporate various opinions before reaching to conclusion. गटातील सहकार्यामुळे निष्कर्षापर्यंत पोहोचण्यापूर्वी विविध मते समाविष्ट करण्यास मदत होते.					
22	I work well with classmates from diverse cultures. मी विविध संस्कृतीतील वर्ग मित्रांबरोबर चांगले काम करतो/ करते					
23	I solve problems calmly and fairly. मी शांतपणे आणि निष्पक्षपणे समस्या सोडवतो.					
24	I don't feel comfortable taking the lead in teamwork. गटकार्या मध्ये पुढाकार					

	घेण्यास मला सोयीस्कर वाटत नाही.					
25	I actively assist my classmates in successfully completing their tasks. मी माझ्या वर्गमित्रांना त्यांची कामे प्रभावीपणे पूर्ण करण्यात सक्रियपणे मदत करतो.					
26	I work more efficiently and effectively in teams. मी गटामध्ये अधिक कार्यक्षमतेने आणि प्रभावीपणे काम करतो.					
27	I encourage boys and girls equally to lead in the teamwork. मी मुलांना आणि मुलींना टीमवर्कमध्ये समानपणे नेतृत्व करण्यास प्रोत्साहित करतो.					
28	I feel classroom teaching is not connected to day-to-day life. वर्गातील शिकवण रोजच्या जीवनाशी जोडलेली नाही असं मला वाटतं.					
29	I appreciate the ideas and contributions of others in a group. मी गटातील इतरांचे					

	विचार आणि योगदानाचे कौतुक करतो					
30	I wholeheartedly participate in group activities. मी गटातील क्रियाकलापांमध्ये मनापासून सहभागी होतो					
31	I communicate with peers clearly and aptly. मी माझ्या मित्रांशी नीट आणि सोप्या भाषेत बोलतो/बोलते					
32	I welcome feedback from others in a group. मी गटातील इतरांचे टिप्पणी स्वीकारतो					
33	I try to complete my work on time. मी माझे काम वेळेवर करण्याचा प्रयत्न करतो					
34	I acquire new skills through collaboration with my teammates. मी टीमसोबत काम करून नवीन कौशल्य शिकतो/शिकते					
35	I work with my classmates to effectively tackle problems together. मी वर्गमित्रांसोबत					

	मिळून समस्यांचे समाधान करतो/ करते					
36	I respect students of all identities. मी सर्व जाती-धर्माच्या विद्यार्थ्यांचा आदर करतो.					
37	I treat all students equally, regardless of their religion, caste, or language. मी धर्म, जात, भाषा न पाहता सगळ्या विद्यार्थ्यांशी एकसारखं वागतो/वागते					

TOOL- II

Scale for Perceptions of Teachers Regarding Collaborative and Culturally Responsive Pedagogy

संशोधन प्रकल्पाचे शीर्षक:

"महाराष्ट्र राज्यातील मराठवाडा विभागातील माध्यमिक शाळांमधील सामाजिक अध्ययन विषयासाठी सहकार्यात्मक व संस्कृती संवेदनशील अध्यापन पद्धतीच्या-परिणामकारकतेचा अभ्यास"

<u>संमतीपत्र</u>

मी, (**शिक्षकाचे नाव**) : ----------**शाळेचे नाव**: ----------

वरील संशोधन प्रकल्पात **सामाजिक अध्ययन शिक्षक** म्हणून स्वेच्छेने सहभागी होण्यास सहमती देत आहे:मला खालील गोष्टी समजल्या आहेत .

- या अभ्यासात सहकार्यात्मक आणि संस्कृतीसंवेदनशील अध्यापन पद्धतींची अंमलबजावणी - .अपेक्षित आहे
- माझी ओळख आणि प्रतिसाद गोपनीय ठेवले जातील.
- यामध्ये कोणताही धोका नाही आणि माझ्या व्यावसायिक जबाबदाऱ्यांवर याचा परिणाम होणार नाही.
- मी कोणत्याही वेळी सहभाग मागे घेऊ शकतो./शकते

दिनांक: --/---/------- **सही**: _____

शिक्षकाची सामान्य माहिती (General Information)

Name and place of the School:…….. **शाळेचे नाव व स्थान**:……	Tahsil (**तालुका**) :-…… District (**जिल्हा**) :……
Class: **(वर्ग)** : …….. Age: (**वय**) : ……	Gender: **(लिंग)** ☐ Male (**पुरुष**) ☐ Female (**महिला**) ☐ Prefer not to say (**सांगायचे नाही**)

Experience in Years: --- अनुभव: ----------	School Locality (**भौगोलिक स्थान**) : ☐ Rural (**ग्रामीण**) ☐ Urban (**शहरी**)

Instructions / सूचनाः

English:

Dear Teacher, please read each statement carefully and tick (✓) the option that best reflects your opinion. Your honest responses will help us understand your views on collaborative and culturally responsive teaching practices. There are no right or wrong answers.

Marathi:

प्रिय शिक्षकांनो, कृपया प्रत्येक विधान काळजीपूर्वक वाचा आणि आपल्या मताशी सर्वाधिक जुळणाऱ्या पर्यायावर (✓) खूण करा. सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणाऱ्या अध्यापन पद्धतीबाबत तुमचे विचार जाणून घेण्यासाठी तुमच्या प्रामाणिक उत्तरांची मदत होईल. या प्रश्नमंजुषेत बरोबर किंवा चूक अशी उत्तरे नाहीत.

A. Awareness and Understanding:

Sr. No	**Statement (English / मराठी)**	**Strongly Disagree (पूर्णपणे असहमत)**	**Disagree (असहमत)**	**Neutral (तटस्थ)**	**Agree (सहमत)**	**Strongly Agree (पूर्णपणे सहमत)**
1	I am aware of the collaborative and culturally responsive pedagogy (C & CRP). मला सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणारे अध्यापनशास्त्र (C & CRP) बद्दल माहिती आहे.					
2	I am able to implement collaborative and culturally responsive pedagogy. मी सहयोगी आणि					

	सांस्कृतिकदृष्ट्या प्रतिसाद देणारे अध्यापनशास्त्र अंमलात आणण्यास सक्षम आहे.					
3	I have received training on CRP and collaborative learning strategies. मला Culturally Responsive Pedagogies आणि सहयोगी शिक्षण धोरणांचे प्रशिक्षण मिळाले आहे.					
4	The collaborative and culturally responsive pedagogies are not essential for teaching in a multicultural or diverse classroom. बहुसांस्कृतिक किंवा वैविध्यपूर्ण वर्गात शिकवण्यासाठी सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणारे अध्यापनशास्त्र आवश्यक नाही.					

B. Perceived Relevance and Importance:

Sr. No	Statement (English / मराठी)	Strongly Disagree (पूर्णपणे असहमत)	Disagree (असहमत)	Neutral (तटस्थ)	Agree (सहमत)	Strongly Agree (पूर्णपणे सहमत)
5	Collaborative and culturally responsive learning increases student					

	engagement and participation. सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद शिक्षणामुळे विद्यार्थ्यांचा सक्रिय सहभाग आणि संलग्नता वाढतो.					
6	Collaborative and culturally responsive pedagogy helps address the diverse cultural backgrounds of students effectively. सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणारे अध्यापनशास्त्र विद्यार्थ्यांच्या विविध सांस्कृतिक पार्श्वभूमींना प्रभावीपणे संबोधित करण्यास मदत करते.					
7	Collaborative and culturally responsive pedagogy is relevant in today's inclusive education system. आजच्या समावेशक शिक्षण व्यवस्थेत सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणारे					

	अध्यापनशास्त्र प्रासंगिक आहे.					
8	Collaborative and culturally responsive pedagogy can help reduce cultural bias in teaching and assessment. सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणारे अध्यापनशास्त्र अध्यापन आणि मूल्यांकनातील सांस्कृतिक पूर्वाग्रह कमी करण्यास मदत करू शकते.					
9	Peer collaboration doesn't support learning and development. समवयस्कांचे सहकार्य शिक्षण आणि विकासाला समर्थन देत नाही.					

C. Classroom Implementation:

10	I regularly use collaborative teaching methods like group work or project-based learning. मी नियमितपणे गटकार्य किंवा प्रकल्प-आधारित शिक्षण					

	यासारख्या सहयोगी शिक्षण पद्धती वापरतो.					
11	I incorporate students' cultural experiences and backgrounds in my teaching. मी माझ्या अध्यापनात विद्यार्थ्यांचे सांस्कृतिक अनुभव आणि पार्श्वभूमी समाविष्ट करतो.					
12	I feel uncomfortable adapting my teaching to students' diverse learning styles and cultures. विद्यार्थ्यांच्या विविध शिक्षण शैली आणि संस्कृतींनुसार माझे शिक्षण जुळवून घेणे मला अस्वस्थ वाटते.					
13	I allow students to express themselves in their regional language when appropriate. जेव्हा योग्य असेल तेव्हा मी विद्यार्थ्यांना त्यांच्या क्षेत्रीय भाषेत व्यक्त होण्याची परवानगी देतो.					
14	I face challenges in implementing					

	collaborative and culturally responsive pedagogy in my classroom. वर्गात सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणारे शिक्षण करणे मला आव्हान वाटते.					

D. Student Response and Impact:

Sr. No	Statement (English / मराठी)	Strongly Disagree (पूर्णपणे असहमत)	Disagree (असहमत)	Neutral (तटस्थ)	Agree (सहमत)	Strongly Agree (पूर्णपणे सहमत)
15	I have observed better student participation after using collaborative and culturally responsive pedagogical strategies. सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणाऱ्या शैक्षणिक धोरणांचा वापर केल्यानंतर मी विद्यार्थ्यांचा सहभाग चांगला झाल्याचे पाहिले आहे.					
16	My students don't respond positively to group tasks and culturally relevant content. माझे विद्यार्थी गट कार्यांना आणि सांस्कृतिकदृष्ट्या संबंधित					

	सामग्रीला सकारात्मक प्रतिसाद देत नाहीत.					
17	Collaborative learning improves communication and mutual respect among students. सहयोगात्मक शिक्षणामुळे विद्यार्थ्यांमधील संवाद आणि परस्पर आदर सुधारतो.					
18	Collaborative and culturally responsive pedagogy improves academic performance of underrepresented or marginalized students. सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणारे अध्यापनशास्त्र कमी प्रतिनिधित्व असलेल्या किंवा दुर्लक्षित विद्यार्थ्यांची शैक्षणिक प्रगति सुधारते.					
19	Collaborative and culturally responsive pedagogy promotes positive interactions among students from different backgrounds. सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणारे अध्यापनशास्त्र वेगवेगळ्या पार्श्वभूमीतील					

	विद्यार्थ्यांमध्ये सकारात्मक संवादांना प्रोत्साहन देते.					

E. Institutional Support and Professional Needs:

Sr. No	Statement (English / मराठी)	Strongly Disagree (पूर्णपणे असहमत)	Disagree (असहमत)	Neutral (तटस्थ)	Agree (सहमत)	Strongly Agree (पूर्णपणे सहमत)
20	My school supports the implementation of collaborative and culturally responsive pedagogical strategies. माझी शाळा सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणाऱ्या शैक्षणिक धोरणांच्या अंमलबजावणीला पाठिंबा देते.					
21	Adequate resources are available to support collaborative and culturally responsive pedagogy in my school. माझ्या शाळेतील सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसादात्मक अध्यापनशास्त्राला पाठिंबा देण्यासाठी पुरेशी संसाधने उपलब्ध आहेत.					
22	Teachers need more professional knowledge on collaborative and culturally responsive pedagogies.					

	शिक्षकांना सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणाऱ्या अध्यापनशास्त्रांबद्दल अधिक व्यावसायिक ज्ञानाची आवश्यकता आहे.					
23	I am willing to attend workshops to enhance my skills in collaborative and culturally responsive pedagogies. सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणाऱ्या अध्यापनशास्त्रातील माझे कौशल्य वाढविण्यासाठी मी कार्यशाळांना उपस्थित राहण्यास तयार आहे.					
24	I need more support (training, resources, and time) to effectively implement collaborative and culturally responsive pedagogies. सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसाद देणारे अध्यापनशास्त्र प्रभावीपणे अंमलात आणण्यासाठी मला अधिक मदतेची (प्रशिक्षण, संसाधने आणि वेळ) आवश्यकता आहे.					

INTERVIEW QUESTIONS FOR TEACHERS

Tool-III

शिक्षकांसाठी प्रश्नावली

Name of the Teacher / शिक्षकाचे नाव:

_____Subject/विषय……

School Name / Board / शाळेचे नाव / मंडळ: _____

Date / दिनांक: _____

School – (Rural / Urban) / शाळा – (ग्रामीण / शहरी): _____

Tahsil / तालुका: _____

District / जिल्हा: _____

State / राज्य: _____Mo.No./मोबाईल नंबर: _____

Introductory Questions:

1. Please provide a brief overview of your teaching background and experience in teaching social studies?

(कृपया तुमच्या अध्यापनाच्या पार्श्वभूमीचा आणि सामाजिक शास्त्र शिकवण्याच्या अनुभवाचा संक्षिप्त वर्णन करा?)

---

2. How do you define collaborative and culturally responsive pedagogy in the context of your classroom teaching?

(तुमच्या वर्गातील अध्यापनाच्या संदर्भात तुम्ही सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसादात्मक अध्यापनशास्त्र कसे परिभाषित करता?) (Record)

Collaborative Pedagogy:

Culturally responsive pedagogy

Collaborative Pedagogy:

1. Can you please describe any specific collaborative activities which you have implemented in your social studies classes?

   (तुमच्या सामाजिक अभ्यास वर्गात तुम्ही राबवलेल्या कोणत्याही विशिष्ट सहयोगी उपक्रमांचे वर्णन करू शकाल का?)

   ---

2. How do you facilitate collaboration among students and tell about strategies you use to ensure that all students are actively engaged?

   (विद्यार्थ्यांमध्ये सहकार्य कसे सुलभ करता आणि सर्व विद्यार्थी सक्रियपणे सहभागी आहेत याची खात्री करण्यासाठी तुम्ही वापरत असलेल्या धोरणांबद्दल सांगा?)

   ---

3. What outcomes have you observed in students, when utilizing collaborative learning methods? Can you share any specific examples?

   (सहयोगी शिक्षण पद्धती वापरताना विद्यार्थ्यांमध्ये तुम्हाला कोणते परिणाम दिसून आले आहेत? तुम्ही काही विशिष्ट उदाहरणे सांगू शकाल का?)

<u>Culturally Responsive Pedagogy:</u>

1. How do you incorporate students' cultural backgrounds into your social studies curriculum? Can you provide specific examples?

(तुमच्या सामाजिक अभ्यासाच्या अभ्यासक्रमात विद्यार्थ्यांच्या सांस्कृतिक पार्श्वभूमीचा समावेश कसा करता? तुम्ही विशिष्ट उदाहरणे देऊ शकाल का?)

---

2. What role do you believe culturally responsive pedagogy plays in fostering student engagement and understanding in social studies?

(सामाजिक अभ्यास शिकवताना विद्यार्थ्यांचा सहभाग आणि समज वाढवण्यासाठी, विविध संस्कृती लक्षात घेऊन शिकवणे कसे उपयुक्त ठरते?")

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3. Can you share any feedback from students regarding the cultural relevance of your lessons? How have you used this feedback to improve your teaching?

(तुमच्या धड्यांच्या सांस्कृतिक प्रासंगिकतेबद्दल विद्यार्थ्यांकडून काही अभिप्राय तुम्ही व्यक्त करू शकाल का? तुमचे अध्यापन सुधारण्यासाठी तुम्ही या अभिप्रायाचा कसा वापर केला आहे?)

Effectiveness and Impact:

1. Based on your observations, how do collaborative and culturally responsive pedagogies impact student learning outcomes in social studies?

(तुमच्या निरीक्षणांवर आधारित, सामाजिक अभ्यासातील विद्यार्थ्यांच्या शिक्षणाच्या निकालांवर सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसादात्मक अध्यापनशास्त्राचा कसा परिणाम होतो?)

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2. Do you think these pedagogical approaches contribute to a positive classroom environment? If so,how?

(तुम्हाला असे वाटते का की या शैक्षणिक दृष्टिकोनांमुळे वर्गात सकारात्मक वातावरण निर्माण होते? जर असेल तर कसे?)

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3. What challenges do you encounter in incorporating collaborative and culturally responsive practices into your teaching? How do you overcome these challenges?

(तुमच्या अध्यापनात सहयोगी आणि सांस्कृतिकदृष्ट्या प्रतिसादात्मक पद्धतींचा समावेश करताना तुम्हाला कोणत्या आव्हानांना तोंड द्यावे लागते? तुम्ही या आव्हानांवर कसे मात करता?)

---x---

Regional Institute of Education (NCERT) Bhopal

Tool IV

Head Teachers Interview - साधन ४ मुख्याध्यापकांची मुलाखत –

Title / शीर्षक:

A study of effectiveness of collaborative and culturally responsive pedagogy in social studies among secondary schools students of Marathwada region of Maharashtra State

मराठवाडा विभागातील माध्यमिक शाळांमधील विद्यार्थ्यांमध्ये सामाजिक शास्त्र विषयात सहकार्यात्मक व सांस्कृतिकदृष्ट्या प्रतिसादक्षम अध्यापन पद्धतीच्या परिणामकारकतेचा अभ्यास

Name of the Head Teacher / मुख्याध्यापकाचे नाव: _____

School Name / Board / शाळेचे नाव: मंडळ/ _____

Date / दिनांक: _____

School – (Rural / Urban) / शाळा) –ग्रामीण :(शहरी / _____

Tahsil / तालुका :_____

District / जिल्हा: _____

State / राज्य: _____

Section A: General Background (Contextual Information)

विभाग अ **(परिस्थितीजन्य माहिती) सर्वसाधारण पार्श्वभूमी : (रेकॉर्डिंग करा)

1. Please describe your school (location, type – rural/urban, student population, etc.).
   कृपया आपल्या शाळेचे वर्णन करा स्थान), प्रकार शहरी/ग्रामीण -, विद्यार्थ्यांची संख्या इ

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2. How many social studies teachers are currently working in your school?
   आपल्या शाळेत सध्या सामाजिक शास्त्र विषयाचे किती शिक्षक कार्यरत आहेत?

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3. What is the student-teacher ratio in your school for social studies at the secondary level?
   आपल्या शाळेत माध्यमिक स्तरावर सामाजिक शास्त्र विषयासाठी विद्यार्थी शिक्षक-गुणोत्तर किती आहे?

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4. How would you describe the socio-cultural diversity among students in your school?
   आपल्या शाळेतील विद्यार्थ्यांमध्ये सामाजिकसांस्कृतिक वैविध्याचे आपण कसे वर्णन - कराल?

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5. Do you believe your teachers are aware of collaborative and culturally responsive pedagogical approaches?
   आपल्याला वाटते का की आपल्या शिक्षकांना सहकार्यात्मक व सांस्कृतिकदृष्ट्या प्रतिसादक्षम अध्यापन पद्धतींची जाणीव आहे?

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Section B: Collaborative Pedagogy (Objective 1)

विभाग ब सहकार्यात्मक अध्यापन पद्धती :

1. In your observation, how often do teachers use group-based or collaborative learning strategies in social studies classes?
   आपल्या निरीक्षणानुसार सामाजिक शास्त्र वर्गात शिक्षक किती वेळा गटआधारित किंवा - सहकार्यात्मक शिकण्याच्या पद्धती वापरतात?

2. What kinds of collaborative activities are generally conducted in social studies?
   सामाजिक शास्त्र विषयात साधारणपणे कोणत्या प्रकारच्या सहकार्यात्मक क्रिया घेतल्या जातात?

3. How do collaborative teaching practices impact students' engagement and academic performance?
   सहकार्यात्मक अध्यापन पद्धतींमुळे विद्यार्थ्यांच्या सहभागावर आणि शैक्षणिक कामगिरीवर कसा परिणाम होतो?

4. Do you observe any improvement in students' communication and teamwork skills due to group learning activities?
   गट आधारित शिकण्याच्या क्रियांमुळे विद्यार्थ्यांच्या संवादकौशल्य आणि संघभावनेत सुधारणा दिसून येते का?

5. What are the challenges faced by teachers in implementing collaborative teaching?
   सहकार्यात्मक अध्यापन राबविताना शिक्षकांना कोणत्या अडचणी येतात?

Section C: Culturally Responsive Pedagogy (Objective 2)

विभाग क सांस्कृतिकदृष्ट्या प्रतिसादक्षम अध्यापन :

1. Do teachers in your school include cultural references relevant to the students' backgrounds in their teaching?
   आपल्या शाळेतील शिक्षक विद्यार्थ्यांच्या पार्श्वभूमीशी संबंधित सांस्कृतिक संदर्भ त्यांच्या अध्यापनात समाविष्ट करतात का?

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2. How important do you think it is to incorporate local history, festivals, and traditions in social studies teaching?
   सामाजिक शास्त्र विषयात स्थानिक इतिहास, सण आणि परंपरा समाविष्ट करणे किती महत्त्वाचे आहे असे आपल्याला वाटते?

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3. How do culturally relevant examples affect student participation and interest in class?
   सांस्कृतिकदृष्ट्या संबंधित उदाहरणांमुळे विद्यार्थ्यांचा वर्गातील सहभाग आणि रस कसा वाढतो?

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4. Are any specific strategies used by your teachers to ensure inclusivity across caste, gender, and socio-economic differences?
   जात, लिंग आणि सामाजिकआर्थिक भिन्नता यामध्ये समावेशकता राखण्यासाठी शिक्षक - कोणत्या विशेष धोरणांचा वापरकरतात?

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5. What training or resources are available to help teachers adopt culturally responsive pedagogy?
   शिक्षकांना सांस्कृतिकदृष्ट्या प्रतिसादक्षम अध्यापन पद्धती स्वीकारण्यासाठी कोणते प्रशिक्षण किंवा साधनसामग्री उपलब्ध आहे?

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Section D: School Environment and Support

विभाग डशाळेचे वातावरण आणि सहाय्य :

1. How does your school promote inclusive and student-centered learning?
   आपली शाळा समावेशक आणि विद्यार्थीकेंद्रित शिक्षणाला कसे प्रोत्साहन देते-?

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2. What type of support (academic or administrative) is extended to social studies teachers to adopt innovative teaching practices?
   सामाजिक शास्त्र शिक्षकांना नवकल्पक अध्यापन पद्धती स्वीकारण्यासाठी कोणत्या प्रकारचे सहाय्य दिले जाते (शैक्षणिक किंवा प्रशासकीय)?

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3. Do you encourage peer collaboration or co-teaching among teachers?
   आपण शिक्षकांमधील सहकारी अध्यापन किंवा एकत्रित अध्यापनास प्रोत्साहन देता का?

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4. Is there a practice of reviewing or observing classrooms to assess the effectiveness of teaching methods? Yes, what is that method?
   अध्यापन पद्धतींची परिणामकारकता तपासण्यासाठी वर्गांचे पुनरावलोकन किंवा निरीक्षण करण्याची पद्धत आहे का ? हो, तर त्या पद्धत्ति कोणत्या

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5. How does your school involve parents or the community in educational decisions?
   आपल्या शाळेत शैक्षणिक निर्णयांमध्ये पालक किंवा समुदायाचा सहभाग कसा घेतला जातो?

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Section E: Challenges in Implementation (Objective 3)

विभाग ई(उद्दिष्ट ३) अंमलबजावणीतील आव्हाने :

1. What are the major obstacles teachers face while implementing collaborative or culturally responsive methods?
   सहकार्यात्मक किंवा सांस्कृतिकदृष्ट्या प्रतिसादक्षम पद्धती राबविताना शिक्षकांना कोणती मोठी अडचण येते?

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2. How does the school manage large class sizes when implementing group activities?
   गट क्रिया राबविताना शाळा मोठ्या वर्गसंख्येचे व्यवस्थापन कसे करते?

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3. Are there infrastructural limitations (e.g., classroom space, resources) that hinder innovative pedagogical methods? If so, which ones?
   पायाभूत सुविधांच्या मर्यादा वर्गखोलीची जागा .उदा), साधनेनवकल्पक अध्यापन पद्धतींना (अडथळा ठरतात का? असेल तर त्या कोणत्या

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4. Is there enough time allotted in the curriculum to conduct collaborative activities effectively? If yes, what effective study routine do you follow?
अभ्यासक्रमात सहकार्यात्मक क्रिया प्रभावीपणे राबविण्यासाठी पुरेसा वेळ दिला जातो का? हो तर तुम्ही कोण कोणत्या प्रभावी अभ्यास क्रम करता

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5. What kind of professional development do your teachers need in this regard?
या संदर्भात आपल्या शिक्षकांना कोणत्या प्रकारचा व्यावसायिक विकास आवश्यक आहे?

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Section F: Perception and Impact (Objective 4)

विभाग फ(उद्दिष्ट ४) धारणा आणि परिणाम :

1. What feedback have you received from students and parents about collaborative and culturally inclusive teaching?
सहकार्यात्मक आणि सांस्कृतिकदृष्ट्या समावेशक अध्यापनाबद्दल विद्यार्थ्यांकडून आणि पालकांकडून आपणास कोणते अभिप्राय मिळाले आहेत?

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2. Do you think these methods have a long-term impact on students' learning? Yes, but how.
या पद्धती विद्यार्थ्यांच्या शिक्षणावर दीर्घकालीन परिणाम करतात असे आपल्याला वाटते का ? हो, पण कसा ते सांगा ?

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3. How do you evaluate whether these pedagogical methods are working effectively in your school?
   आपल्या शाळेत या अध्यापन पद्धती प्रभावीपणे कार्य करत आहेत की नाही हे आपण कसे मूल्यांकन करता?

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Section G: Suggestions and Recommendations (Objective 5)

विभाग ग(उद्दिष्ट ५) सूचना आणि शिफारसी :

1. What recommendations would you offer to improve the use of collaborative and culturally responsive teaching practices in schools?
   शाळांमध्ये सहकार्यात्मक आणि सांस्कृतिकदृष्ट्या प्रतिसादक्षम अध्यापन पद्धतींचा वापर सुधारण्यासाठी आपण कोणत्या शिफारसी कराल?

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2. What policy or curriculum-level changes do you think are needed to support these teaching approaches across Marathwada?
   मराठवाडा विभागात या अध्यापन पद्धतींना पाठबळ देण्यासाठी धोरण किंवा अभ्यासक्रम स्तरावर कोणते बदल आवश्यक आहेत असे आपल्याला वाटते?

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Photos of Schools



















Teachers Meeting for related pedagogy



Teachers perception form related work



Vidhya Niketan Girls High School Biloli



Vidhya Niketan Girls High School Biloli


GPS Map Camera
Kasrali, Maharashtra, India
Qmm7+gxr, Kasrali, Maharashtra 431710, India
Lat 18.783696° Long 77.664882°
09/09/2025 01:03 PM GMT +05:30
Google




GPS Map Camera
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Qmm7+gxr, Kasrali, Maharashtra 431710, India
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Google


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Google


GPS Map Camera
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Google





Survey data filling work and guideline given by Prof.Dr.Jayant .S.Shankar,RIE,Bhopal






PW3G+XM2, Shankar nagar,
Ahmedpur, Maharashtra 413515,
Lat: 18.70485, Lng: 76.92670


PW3G+XM2, Shankar nagar,
Ahmedpur, Maharashtra 413515,
Lat: 18.70485, Lng: 76.92670


विमलाबाई देशमुख कन्या शाळा (माध्यमिक)








GPS Map Camera
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Google








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Maharashtra 413531, India
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8HWM+P92, Kava Rd, Kavha,
Maharashtra 413531, India
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श्री छत्रपती शिवाजी विद्यालय मळवटी ता.लातूर
सांस्कृतिक सभागृह
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C65F+9C5 Temparary Helipad, Kurunda, Maharashtra 431512,
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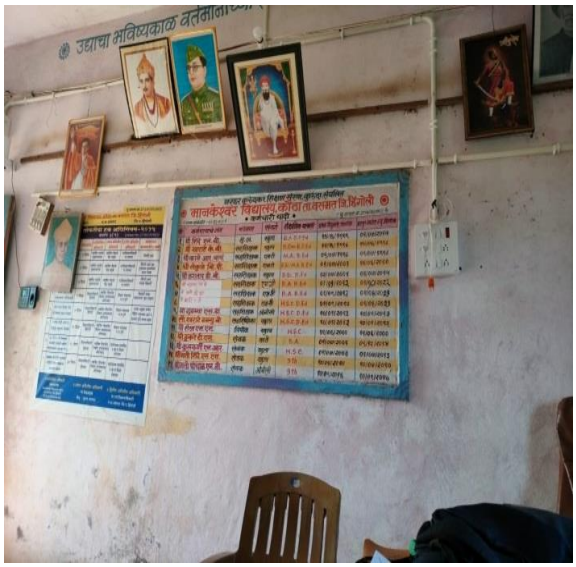

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Kurunda, Maharashtra 431512,
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9692+9GQ, Kawatha,
Maharashtra 431512, India
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जिल्हा परिषद बहुविध प्रशाला, हिंगोली
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12/11/25 12:33:55 PM GMT+05:30








GPS Map Camera
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7qc6+jhf, Prabhavati Nagar, Parbhani, Maharashtra 431401, India
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Thursday, 11/12/2025 12:44 PM GMT +05:30
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GPS Map Camera
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GPS Map Camera
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Google


GPS Map Camera
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7qc6+x9q, Prabhavati Nagar, Parbhani, Maharashtra 431401, India
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Google


जिल्हा परिषद प्रशाला


7MHM+GJV, NH61, Jamb, Maharashtra 431537, India
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Longitude: 76.68549620
11/12/2025 02:59 PM GMT+05:30


जि.प.प्रशाला,पेडगाव ता.जि.परभणी















आज मा. सुशीलकुमारजी बजाज (कलकत्ता) हस्ते 'GSVM ELLORA' ह्या APP चे उद्घाटन व लोकार्पण झाले.

आज दि. २६ /१२ /२०१९ रोजी मा. सुशीलकुमारजी बजाज, कोलकाता निवासी (उद्योगपती) यांच्या शुभ हस्ते GSVM ELLORA या
चि. समय सुकुमार नवले (वर्ग 10 वा 'अ') या विद्यार्थी निर्मित
शाळेच्या app चे उद्घाटन झाले.











Robology Lab


SOLAR SYSTEM







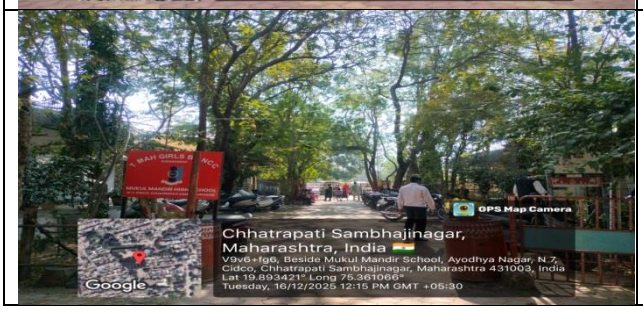

Table of Size and Distance






GPS Map Camera
Chhatrapati Sambhajinagar,
Maharashtra, India
V9v6+f6c, Ayodhya Nagar, N 7, Cidco, Chhatrapati Sambhajinagar, Maharashtra 431003, India
Lat 19.893553° Long 75.360862°
Tuesday, 16/12/2025 12:10 PM GMT +05:30
Google


GPS Map Camera
Chhatrapati Sambhajinagar,
Maharashtra, India
Google


GPS Map Camera
Chhatrapati Sambhajinagar,
Maharashtra, India
V9v6+fg6, Beside Mukul Mandir School, Ayodhya Nagar, N 7, Cidco, Chhatrapati Sambhajinagar, Maharashtra 431003, India
Lat 19.893421° Long 75.361066°
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Google

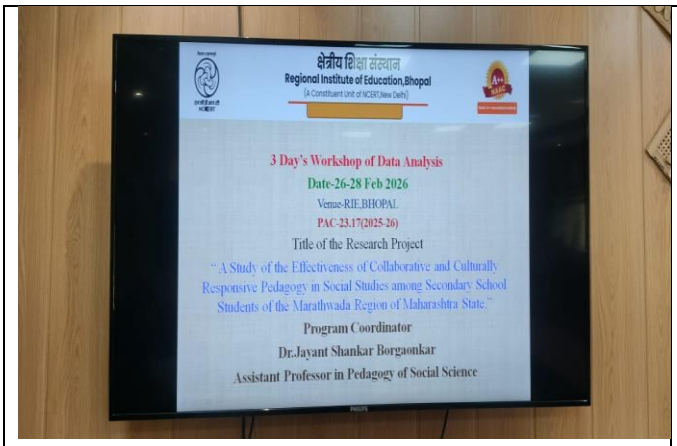



GPS Map Camera
Chhatrapati Sambhajinagar,
Maharashtra, India
V8jh+x5p, Saraswatinagar, Gulmandi, Aurangpura,
Chhatrapati Sambhajinagar, Maharashtra 431001, India
Lat 19.882136° Long 75.328287°
Tuesday, 16/12/2025 10:25 AM GMT +05:30
Google


सरस्वती भुवन शिक्षण संस्था
छत्रपती संभाजीनगर
७९" भारतीय स्वातंत्र्य दिन






क्षेत्रीय शिक्षा संस्थान
Regional Institute of Education, Bhopal
(A Constituent Unit of NCERT, New Delhi)
3 Day's Workshop of Data Analysis
Date-26-28 Feb 2026
Venue-RIE,BHOPAL
PAC-23.17(2025-26)
Title of the Research Project
"A Study of the Effectiveness of Collaborative and Culturally Responsive Pedagogy in Social Studies among Secondary School Students of the Marathwada Region of Maharashtra State."
Program Coordinator
Dr.Jayant Shankar Borgaonkar
Assistant Professor in Pedagogy of Social Science


NATIONAL SCIENCE DAY