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BREAKING SUBJECT SILOS: MULTIDISCIPLINARY LEARNING AS A CATALYST FOR VALUE INTERNALIZATION AMONG SCHOOL LEARNERS

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ABSTRACT

National Education Policy (NEP)-2020 foregrounds multidisciplinary learning as a critical pathway for nurturing holistic development and deep value internalization among school learners. By dissolving rigid subject boundaries, the policy envisions learning environments where cognitive understanding is meaningfully connected with empathy, cooperation, and ethical awareness. Despite this progressive vision, classroom adoption especially in districts like Mayurbhanj remains uneven and often limited to superficial integration. The present study critically examines how multidisciplinary learning practices influence value internalization among elementary learners.

The study was carried out in six government elementary schools involving 120 Grade VII learners and 12 teachers selected through simple random sampling. A descriptive survey method was adopted. Data were collected using a Value Internalization Scale, a Classroom Observation Tool to capture multidisciplinary classroom processes, and semi-structured interviews with teachers and students. Quantitative data were analysed through mean and standard deviation, while qualitative responses were thematically interpreted.

Findings reveal that classrooms implementing art-integrated tasks, project-based learning, and community-linked activities showed noticeable gains in learners' cooperative behaviour, reflective thinking, and sensitivity toward peers. Learners responded more positively when values were embedded within subject learning rather than taught in isolation. However, teachers reported constraints related to planning time, resource availability, and partial conceptual clarity regarding multidisciplinary pedagogy. The study concludes that multidisciplinary learning holds strong potential for meaningful value internalization, but its sustained impact depends on continuous teacher preparation, contextual resource support, and pedagogical mentoring.

KEYWORDS: *NEP-2020, Multidisciplinary Learning, Value Internalization, Holistic Development, Elementary Education.*

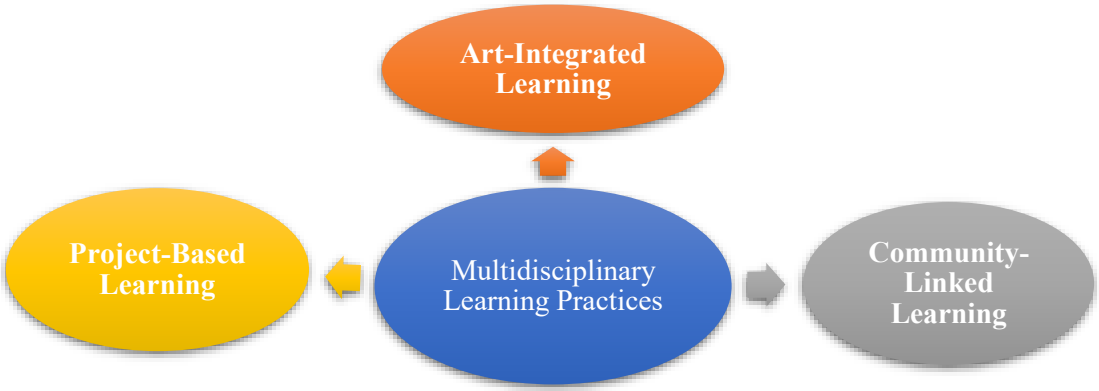
I. INTRODUCTION

Education is not merely the transmission of information but a process of developing individuals capable of critical thinking, ethical behaviour, and responsible participation in society. However, traditional schooling often compartmentalizes knowledge into rigid subject boundaries, encouraging memorization rather than meaningful understanding. The National Education Policy (NEP)-2020 addresses this concern by advocating multidisciplinary learning that integrates knowledge across disciplines while nurturing values such as empathy, cooperation, and social responsibility. Breaking subject silos refers to integrating knowledge across disciplines to promote holistic learning, critical thinking, and meaningful understanding. Such an approach promotes holistic development by connecting academic learning with real-life experiences. Despite this policy vision, many classrooms, particularly in districts like Mayurbhanj with diverse socio-cultural contexts, continue to follow subject-centred practices due to institutional constraints and limited professional support. Therefore, the present study critically examines how multidisciplinary classroom practices such as art-integrated activities, project-based learning, and community engagement contribute to the internalization of values among elementary learners.

Conceptual Framework: The conceptual foundation of the present study is rooted in the understanding that values are internalized through experience, reflection, and social interaction rather than through direct instruction alone. Multidisciplinary learning creates opportunities where knowledge from different domains interacts with real-life contexts, enabling learners to engage cognitively, emotionally, and socially with learning situations. In the present study, were conceptualized through three major pedagogical pathways:

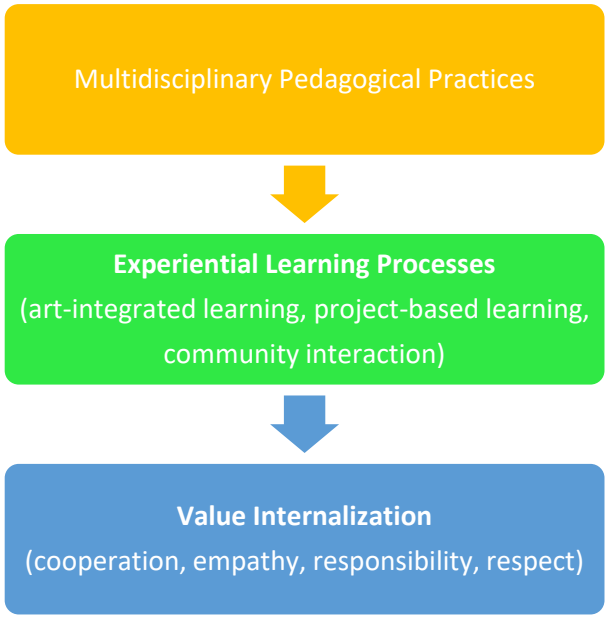
- **Art-Integrated Learning**: In art-integrated learning, artistic expression such as drawing, storytelling, music, and drama are used to connect academic concepts with emotional and cultural experiences.
- **Project-Based Learning**: In project-based learning, learners collaboratively investigate real-life issues that require integration of knowledge from multiple subjects.
- **Community-Linked Learning**: In community-linked learning, learners interact with community members and local contexts, allowing them to understand social realities and cultural values.

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(Fig. 1, Multidisciplinary Learning Practices)

These pedagogical processes are expected to influence three dimensions of value internalization: Cooperation and Collaboration, Empathy and Respect for Diversity and Reflective and Ethical Thinking. Thus, the conceptual relationship guiding the study may be summarized as:



(Fig.2, Conceptual Framework of the Study)

This framework aligns with the vision of **NEP-2020**, which emphasizes holistic education, experiential learning, and integration of knowledge across disciplines.

II. REVIEW OF LITERATURE

The growing emphasis on holistic and value-oriented education has encouraged scholars to explore pedagogical approaches that transcend rigid subject boundaries. Multidisciplinary learning, which integrates knowledge from different disciplines, is increasingly viewed as an effective strategy for fostering deeper understanding, collaboration, and value development among learners. **Alibagon & Dilag (2019)** [1] found that multidisciplinary teaching improved students' comprehension, critical thinking, and cooperative behaviour, while **Thana (2022)** [13] emphasized its relevance in developing 21st-century skills such as creativity, collaboration, and adaptability. Studies by **Sahoo & Panda (2021)** [10] highlighted the role of curriculum and teacher practices in shaping learners' moral development, though they did not specifically link value formation with multidisciplinary pedagogy. Similarly, **Pandey (2024)** [9] and **Saxena (2024)** [11] stressed the importance of integrating values through experiential learning and teacher preparation, yet their work remains largely conceptual. **Junaidi & Rohmani (2024)** [6] further noted that collaborative learning strategies support character development, while **Thakur (2025)** [12] emphasized the broader ethical significance of value education. Policy frameworks such as **National Curriculum Framework (NCF)-2005** and **National Education Policy (NEP)-2020** also advocate integrated learning connected to real-life contexts. However, empirical evidence on how multidisciplinary classroom practices promote value internalization, particularly in government elementary schools of culturally diverse districts like Mayurbhanj, remains limited.

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III. RATIONALE OF THE STUDY

Although educational policies advocate the integration of knowledge and values, classroom practices often treat them separately, limiting meaningful value internalization among learners. Moral values are frequently taught through isolated lessons rather than embedded in everyday learning experiences, resulting in a gap between knowledge and behaviour. Multidisciplinary learning, through collaborative projects, creative activities, and community engagement, offers opportunities for learners to experience cooperation, empathy, and ethical decision-making in real contexts. However, limited research exists on how such pedagogical approaches function in culturally diverse districts like Mayurbhanj. Therefore, the present study critically examines whether activity-based multidisciplinary learning supports value internalization among elementary learners.

IV. OBJECTIVES OF THE STUDY

The following were the objectives of the study:

- To assess the role of multidisciplinary learning practices in fostering value internalization among elementary learners of Mayurbhanj district.
- To analyse classroom processes that support the integration of multiple subjects.
- To identify challenges faced by teachers in implementing multidisciplinary pedagogies.

V. RESEARCH QUESTIONS OF THE STUDY

The study addressed the following research questions.

- How do multidisciplinary learning practices influence the development of value internalization among elementary learners in Mayurbhanj district?
- What classroom processes support the integration of multiple subjects in multidisciplinary learning practices in elementary schools of Mayurbhanj district?
- What challenges are faced by teachers while implementing multidisciplinary pedagogies in elementary classrooms?

VI. DELIMITATION OF THE STUDY

The study was delimited to six government elementary schools of Baripada block in Mayurbhanj district and involved only Grade VII learners. It specifically examined selected multidisciplinary practices, namely art-integrated learning, project-based learning, and community-linked activities, to analyse their influence on value internalization.

VII. METHODOLOGY

Considering the nature of the study, a descriptive survey design was adopted to examine the role of multidisciplinary learning practices in fostering value internalization among elementary learners in Mayurbhanj district of Odisha. The population comprised students from government elementary schools, and simple random sampling was used to select six schools. The sample included 120 Grade VII learners and 12 teachers. Multidisciplinary activities such as art-integrated tasks, project-based learning, and community-linked experiences were implemented during regular classroom teaching. Data were collected through learner responses, classroom observations, and semi-structured interviews with teachers and students.

VIII. TOOLS AND TECHNIQUES

Tools and techniques are essential components of research as they facilitate systematic collection, analysis, and interpretation of data. In the present study, the researcher employed multiple tools to examine the role of multidisciplinary learning practices in fostering value internalization among elementary learners. A Value Internalization Scale was administered to learners to assess attitudes related to cooperation, empathy, responsibility, and respect for peers. A Classroom Observation Tool was used to record the nature of multidisciplinary classroom processes, including art-integrated tasks, project-based activities, and community-linked learning experiences. In addition, a semi-structured Interview Schedule was used to gather the perceptions and experiences of teachers and students regarding the implementation of multidisciplinary pedagogy. The content validity of the tools was reviewed by experts in the field of education. Quantitative data obtained from the Value Internalization Scale were analysed using statistical techniques such as mean and standard deviation, while qualitative responses were interpreted descriptively.

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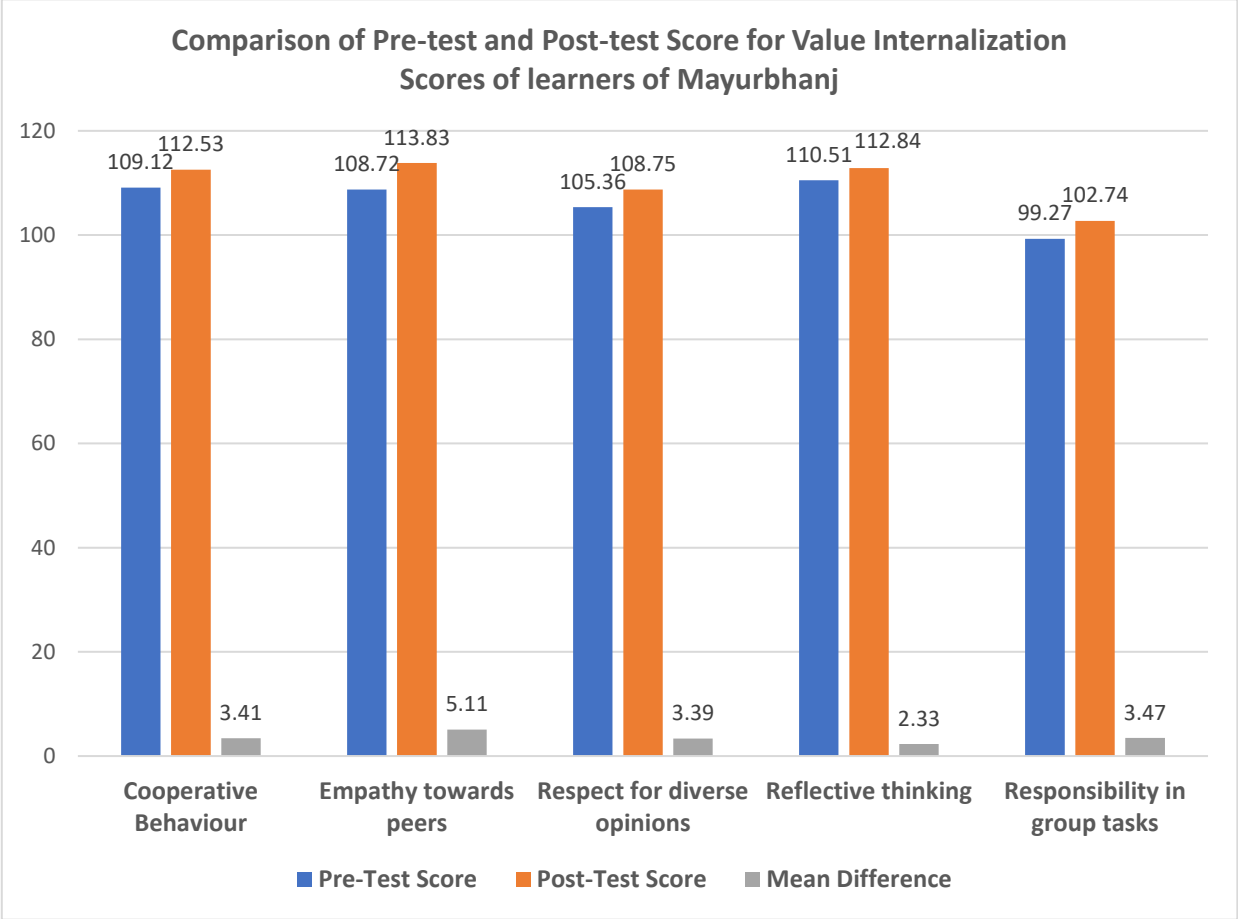
IX. ANALYSIS AND INTERPRETATION

Table 1: Comparison of Pre-test and Post-test Score for Value Internalization Scores of learners of Mayurbhanj

Sl. No.	Dimension of Value Internalization	No of Sample	Pre-Test Score	Post-Test Score	Mean Difference	Remark
1	Cooperative Behaviour	120	109.12	112.53	3.41	Improved
2	Empathy towards peers		108.72	113.83	5.11	Improved
3	Respect for diverse opinions		105.36	108.75	3.39	Improved
4	Reflective thinking		110.51	112.84	2.33	Improved
5	Responsibility in group tasks		99.27	102.74	3.47	Improved

Interpretation: The table shows an improvement in all dimensions of value internalization after the implementation of multidisciplinary learning activities. The highest increase is observed in empathy towards peers (5.11), indicating stronger peer sensitivity and cooperation. Moderate improvements are seen in cooperative behaviour, respect for diverse opinions, and responsibility. Reflective thinking shows relatively lower improvement, suggesting the need for more structured reflective practices in classroom learning.

Graphical Representation: The comparison of pre-test and post-test scores of value internalization among learners of Mayurbhanj district is shown in the above table and further illustrated through the following bar diagram.



(Fig. 3, Comparison of pre-test and post-test scores of value internalization among learners of Mayurbhanj district)

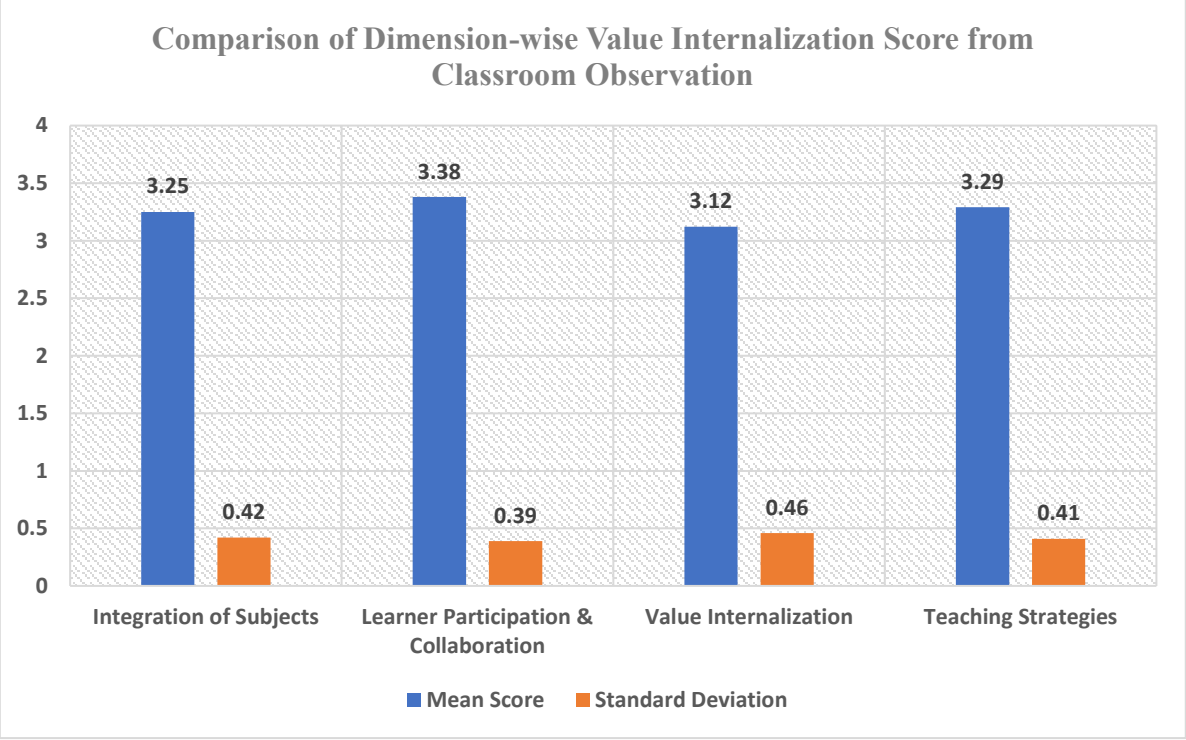
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Table 2: Comparison of Dimension-wise Value Internalization Score from Classroom Observation (N = 12 Classrooms)

Sl. No	Dimension	No. of Items	Mean Score	Standard Deviation	Interpretation
1	Integration of Subjects	5	3.25	0.42	Evident
2	Learner Participation & Collaboration	5	3.38	0.39	Evident to Highly Evident
3	Value Internalization	5	3.12	0.46	Evident
4	Teaching Strategies	5	3.29	0.41	Evident
Overall Mean			**3.26**	**Evident**	

Interpretation: The classroom observation results indicate that multidisciplinary teaching practices were generally evident in the observed classrooms, with an overall mean score of 3.26. Learner participation and collaboration recorded the highest mean (3.38), suggesting active engagement and cooperative learning among students. Teaching strategies and subject integration were also clearly practiced. However, the slightly lower mean for value internalization (3.12) indicates that while values are developing through classroom activities, more structured opportunities for reflection and value-oriented discussions may further strengthen their internalization.

Graphical Representation: The dimension-wise mean and standard deviation scores of value internalization obtained from classroom observations are presented in the above table and illustrated through following bar graph.



(Fig. 4, Dimension-wise mean and standard deviation scores of value internalization obtained from classroom observations)

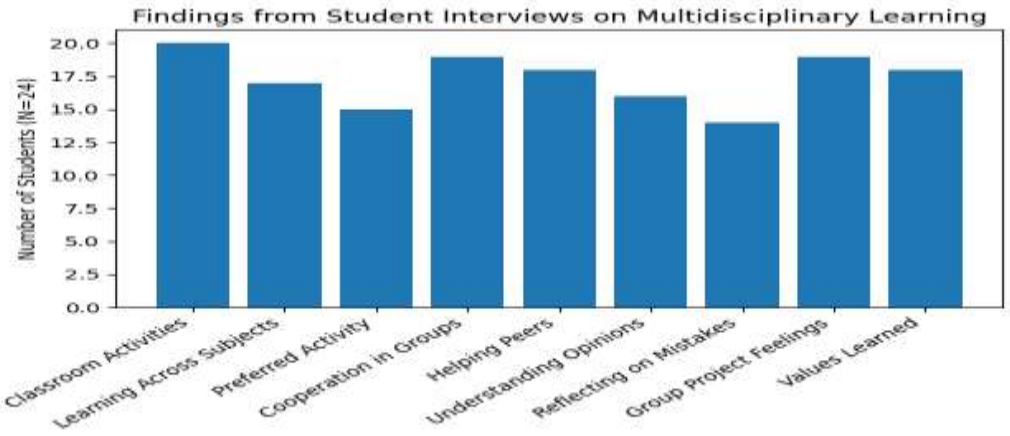
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Table 3: Analysis of Interview with Students and Their Responses (N=24 Students)

Sl. No	Theme	Key Responses from Student	Frequency	Interpretation
1	Classroom Activities	Drawing, group discussions, project work, role play, storytelling.	20	Multidisciplinary activities are commonly used in classrooms.
2	Learning Across Subjects	Students reported learning concepts of science, language and social science together during activities.	17	Subject integration is moderately evident.
3	Preferred Activity	Group projects and drawing activities.	15	Creative and collaborative tasks are most engaging.
4	Cooperation in Groups	Students said they share ideas and help each other during activities.	19	Multidisciplinary tasks encourage cooperative behaviour.
5	Helping Peers	Students reported explaining lessons or sharing materials.	18	Empathy and peer support are developing
6	Understanding Others' Opinions	Students stated that discussions help them listen to others.	16	Classroom discussions promote respect for diverse opinions.
7	Reflecting on Mistakes	Students reported trying to correct mistakes after teacher feedback.	14	Reflective thinking is emerging but not fully developed.
8	Feelings in Group Projects	Most students felt happy and confident while working in groups.	19	Collaborative learning increases motivation.
9	Values Learned	Cooperation, helping others, respecting ideas, responsibility.	18	Multidisciplinary learning supports value internalization.

Interpretation: The interview responses indicate that multidisciplinary classroom activities such as drawing, group discussions, and project work are commonly practiced and positively received by students. These activities promote cooperation, peer support, and respect for others' opinions, contributing to value internalization. Students particularly enjoy collaborative and creative tasks, which enhance motivation and participation. However, reflective thinking appears comparatively less developed, suggesting the need for greater emphasis on reflection-oriented activities to deepen learners' value-based understanding.

Graphical Representation: The findings from student interviews on multidisciplinary learning is presented in the above table and illustrated through following bar graph.



(Fig. 5, Analysis of interview with students and their responses on multidisciplinary learning)

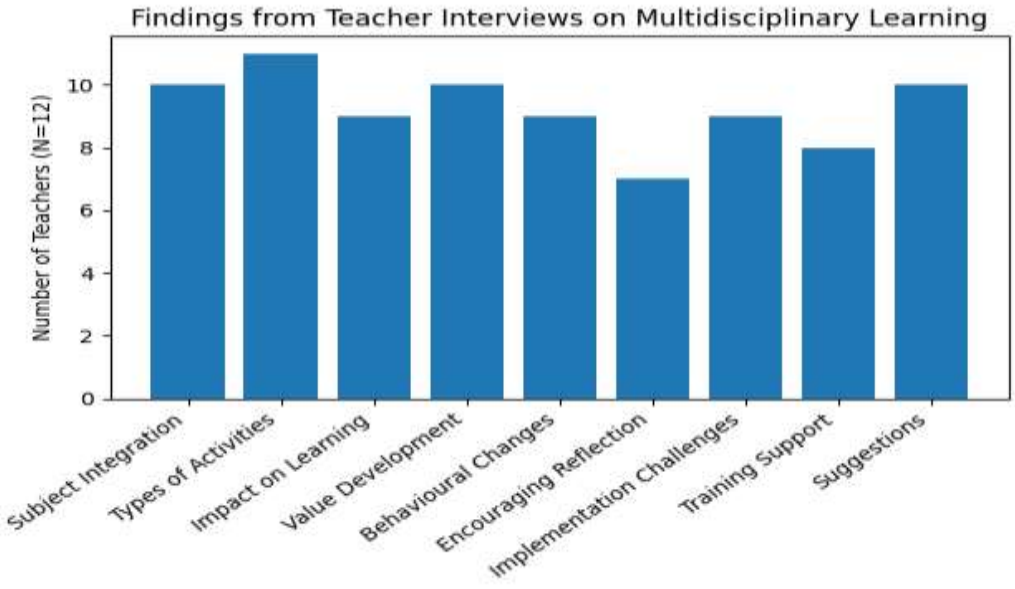
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Table 4: Analysis of Interview with Teachers and their Responses (N=12 Teachers)

Sl. No	Theme	Key Responses from Student	Frequency	Interpretation
1	Subject Integration	Teachers integrate language with EVS, mathematics with project work, and art with science lessons.	10	Multidisciplinary integration is moderately practiced.
2	Types of Activities	Art-integrated activities, group projects, community discussions, storytelling.	11	Activity-based learning supports integration
3	Impact on Learning	Students show better understanding and engagement during integrated activities.	9	Multidisciplinary learning improves classroom participation.
4	Value Development	Teachers observed improved cooperation and empathy among learners.	10	Positive influence on value internalization.
5	Behavioural Changes	Students help peers, share materials, and participate actively.	9	Collaborative behaviour has improved.
6	Encouraging Reflection	Teachers use discussion and feedback to help students reflect.	7	Reflective learning practices exist but are limited.
7	Implementation Challenges	Lack of time, heavy syllabus, limited teaching resources	9	Structural constraints affect implementation.
8	Training Support	Most teachers reported limited formal training on multidisciplinary teaching.	8	Need for professional development.
9	Suggestions	More teacher training, flexible timetable, resource materials.	10	Institutional support needed.

Interpretation: The interview responses of teachers indicate that multidisciplinary teaching practices are moderately implemented through art-integrated activities, projects, and community discussions, which enhance students' engagement and collaborative behaviour. Teachers observed positive changes in learners' cooperation and empathy, supporting value internalization. However, reflective practices remain limited. Major challenges include time constraints, heavy syllabus, and lack of training. These findings highlight the need for professional development, institutional support, and flexible teaching structures to effectively implement multidisciplinary pedagogy.

Graphical Representation: The findings from student interviews on multidisciplinary learning is presented in the above table and illustrated through following bar graph.



(Fig. 6, Analysis of interview with teachers and their responses on multidisciplinary learning)

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X. FINDINGS AND EDUCATIONAL IMPLICATIONS

The findings of the study indicate that multidisciplinary learning practices such as art-integrated teaching, project-based activities, and community-linked learning positively influenced value internalization among elementary learners in Mayurbhanj district. The pre-test and post-test results showed a significant improvement in dimensions such as cooperative behaviour, empathy towards peers, respect for diverse opinions, and responsibility. Classroom observations revealed that subject integration and collaborative participation were generally evident, though reflective thinking among learners remained comparatively less developed. Interview responses from both students and teachers further confirmed that integrated learning activities enhanced classroom engagement, cooperation, and mutual respect. However, teachers reported challenges such as limited planning time, heavy curriculum workload, and inadequate training in multidisciplinary pedagogy. The study highlights the need for strengthening teacher preparation, providing institutional support, and promoting reflective learning practices to effectively implement multidisciplinary approaches aligned with the vision of NEP-2020.

The educational implications of the study were.

- ✓ Firstly, the findings are relevant for key stakeholders including teachers, school administrators, policymakers, and curriculum planners.
- ✓ Secondly, the study demonstrates that integrating subjects through experiential and collaborative learning activities can make the teaching-learning process more engaging and meaningful for learners.
- ✓ Thirdly, the findings suggest that teacher preparation programmes should emphasize multidisciplinary pedagogies, reflective learning strategies, and value-based instructional practices.
- ✓ Finally, educational administrators and academic supervisors can utilize these insights to organize training programmes and mentoring support for teachers to strengthen interdisciplinary teaching practices.

XI. RECOMMENDATIONS

The study recommends promoting multidisciplinary teaching through art-integrated, project-based, and community-linked activities to enhance meaningful learning and value internalization. Teacher education programmes should emphasize interdisciplinary pedagogy and reflective practices. Schools need institutional support, flexible timetables, and resource materials to facilitate such approaches. Curriculum planners should design context-based learning modules, especially in culturally diverse regions like Mayurbhanj. Assessment systems should incorporate reflective and portfolio-based evaluation, and further research is needed across different educational levels and regions.

XII. CONCLUSION

The study concludes that multidisciplinary learning significantly promotes value internalization among elementary learners in Mayurbhanj by enhancing cooperation, empathy, responsibility, and respect for diverse opinions. Integrated, experiential classroom activities foster active participation and connect learning with real-life contexts. However, effective implementation requires adequate teacher preparation, institutional support, and appropriate resources. Challenges such as limited training and heavy curriculum demands highlight the need for professional development and supportive school environments to strengthen multidisciplinary pedagogy for holistic and value-based education.

REFERENCES

1. ***Alibagon, I.P., & Dilag, C.D. (2019)***. *Multidisciplinary Approach and Academic Performance of Grade 11 Students, International Journal of Interdisciplinary Research and Innovations, 7(1), 183-208.*
2. ***Beane, A. J. (1997).*** *Curriculum Integration: Designing the Core of Democratic Education, New York: Teachers College, Columbia University.*
3. ***Drake, S.M. & Reid, J.L. (2018).*** *Integrated curriculum as an Effective Way to Teach 21st Century capabilities, Asia Pacific Journal of Educational Research, 1(1), 31-50. DOI: 10.30777/APJER.2018.1.1.03.*
4. ***Evasco, K. E. (2015).*** *The integration of values in the teaching of social sciences, International Journal of Education and Social Science, 2(6), 45-53.*
5. ***Jehlicka, V. & Rejsek, O. (2018).*** *A Multidisciplinary Approach to Teaching Mathematics and Information and Communication Technology, EURASIA Journal of Mathematics, Science and Technology Education, 2018, 14(5), 1705-1718. https://doi.org/10.29333/ejmste/85109.*
6. ***Junaidi & Rohmani* (2024).** *Effective Learning Strategies in Improving Elementary School Students' Character: A Systematic Literature Review, International Journal of Multidisciplinary Approach Research and Science, 2(3), 1104-1113.*
7. ***Ministry of Education.* (2020).** *National Education Policy (NEP)-2020. Government of India.*
8. ***National Council of Educational Research and Training. (2005).*** *National Curriculum Framework (NCF)-2005. NCERT.*
9. ***Pandey R. (2024).*** *Integrating Value Education into Curriculum Development: A Comprehensive Approach, Omni Science: A Multi-disciplinary Journal, 14(2), 13-20.*
10. ***Sahoo, S. & Panda, B. N. (2021).*** *Factors and Effects of Value Education among Adolescent Learners, Pedagogy of Learning, 7(3), 21-28.*

SJIF Impact Factor (2026): 8.863| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 3 | March 2026 - Peer Reviewed Journal

11. ***Saxena, V.* (2024).** *Value Based Education: Professional Development Is Indispensable for Effective Integration, International Journal of Creative Research Thoughts, 12(12), 1-6.*
12. ***Thakur, A.S.* (2025).** *The Integral Role of Value Education in Institutions of Higher Learning, International Journal for Multidisciplinary Research, 7(1), 1-8.*
13. ***Thana, P.M.* (2022).** *Developing Students' 21st-Century Skills Through A Multidisciplinary Approach, Journal of Digital Learning and Distance Education, 1(7), 277-283. http:/doi.org/10.56778/jdlde.v1i7.64.*