
AN ADVANCED AND PROFESSIONAL ARTS INTEGRATED**MATHEMATICS LEARNING****Prof. Pushendra Singh Baish^{*1}**

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ABSTRACT

Mother Teresa stated, "Joy is a net of souls through which you can catch souls." NEP 2020 improves multidisciplinary research for joyful learning through an integrated strategy in teacher education programs. Today, we presented the study titled Arts-integrated Mathematics Professional Learning. Without fear of being judged, they are able to conquer their apprehension of the subject and enjoy the process of learning by doing. Joy is not a temporary sensation; it is a powerful force that can boost self-awareness, empathy, optimism, social skills, and resilience—all of which are essential components of emotional intelligence. Our educational system is changing, and the combination of happy learning and creativity is at the center of this shift. It is a productive & pure research work. It is a qualitative approach research. Here researcher used thematic method and schematic research design.

Keywords: Art Integrated, Mathematics Learning, Professional Learning.

I. INTRODUCTION**Arts Learning**

Arts in education, sometimes known as "Arts learning," is a method of teaching and learning that uses creativity, imagination, and artistic discovery to promote outcomes. The arts celebrate diverse perspectives, and one of its main principles is that there are numerous ways to see and interpret the world. The arts educate youngsters that in sophisticated forms of problem solving, purpose is rarely permanent and can alter depending on circumstances and importance.

An art or sketching class always seemed to be a relaxing one, with no pressure and, most importantly, allowing us to be ourselves. The opportunity to choose what to draw, use our favorite colors, and collaborate with others was unique. Teachers also provided personalized assistance, resulting in more one-on-one interactions.

This same joy is required in all classes and subjects to make learning more enjoyable and effective. Joyful learning is a vital aspect of education in all institutions, including at home.

When the mind is free of stress or pressure, it is more open to new concepts, which children can understand and remember for longer. They can also generate their own ideas and apply them to real-world situations.

Art integrated Mathematics learning

Art can be defined as an act of expressing feelings, thoughts and observations. Art gives us meaning and helps us understand our world. Maths studies have proved that art appreciation improves our quality of life and makes us feel good. When we create art, we elevate our mood, we improve our ability to problem solve and open out our minds to new ideas.

Art integrated learning (AIL) is a framework for experiential learning. Where provides an equitable learning environment in which everyone learns from their personal experiences.

Students participated in art activities and created personal meaning through their learning in an art-integrated atmosphere. Art integration into math education increases students' enthusiasm and curiosity about studying. Arts integration in mathematics not only piques students' interest, but also helps them develop a deeper knowledge of arithmetic subjects. It helps children develop innovative problem-solving abilities. When students learn through arts, they go through different stages such as observing, experiencing, deducing, creating, recreating and expressing. This learning transcends the mere act of acquiring information. It encapsulates a whole host of emotions such as curiosity, excitement, engagement, and the satisfaction of achievement. It is about embracing learning with an open heart and a sense of wonder. Art is a person's creative expression that allows them to communicate their thoughts. Mathematics and art are linked in numerous ways. Mathematics

and art both require reasoning skills. Mathematics can be found in various arts, including music, dance, painting, architecture, sculpture, pottery, and textiles. Art integration is a teaching method in which students actively participate in learning via the use of an artistic medium. It stimulates pupils, sparking their creativity and combining Math and Art, achieving objectives in both. Students like participating in artistic activities. There are numerous exercises we may use to teach math using art.

Art-integrated learning is a creative and beneficial teaching-learning strategy. It represents an investigation of academic information and skill sets that a student will gain via the prism of diverse art forms.

Tribal art is frequently based on geometric shapes and figures, and it can be found in a variety of civilizations worldwide. An ancient Sri Yantra was built using a central seal polygon with 14 angles. The seal is made up of nine large triangles that combine to form 43 little triangles in which we may explain every property of triangles. Spirograph is a geometric device used to create drawings using a fixed circle, resulting in stunning artwork.

Art integration is a great technique that teachers can use to assist kids learn.

Its primary goal is to engage pupils in a creative learning process by establishing connections between two courses. Odisha's Saura Painting, which is artistically similar to Warli paintings and depicts their culture and myths, has a great deal more mathematics. It contains geometrical shapes such as lines, triangles, and circles, which are used to create beautiful sceneries or to convey various topics.

Rangoli is a traditional Indian art form that combines mathematical patterns and the application of symmetry concepts. As a result, when we combine mathematics and make learning more attractive for pupils, classrooms will quickly transform into art studios.

These stages need actual involvement of all three domains cognitive, psychomotor and affective. Also it enhances 5H.

1. Hand-larger service
2. Heart-to greater loyalty
3. Head-to clearer thinking
4. Health-to better living
5. Highlight-digital numeracy & literacy(DNL)

It is experiential in nature and leads to holistic development of every learner. Example: Deriving a formula of mathematics using an art activity provides creative space for every student to, 9E in the same time- E- Educate, E- Entice, E- Elicit, E- Explore, E- Explain, E- Engage, E- Experience, E- Express, E- Encourage.

TABLE-1

JOYFUL LEARNING (NEP-2020) ARTS INTEGRATED MATHS LEARNING

MATHEMATICS LEARNING

1. STRAIGHT LINE: AXB, CXD
2. SEGMENT: GH, EF, KL, KM, LO
3. RAY: GI, HJ, XA, XD, XC, XB, MN, OP
4. CURVE LINE: SRQ
5. POINT:
6. RIGHT ANGLE: \angle POL, \angle KMN
7. OBTUSE ANGLE: \angle

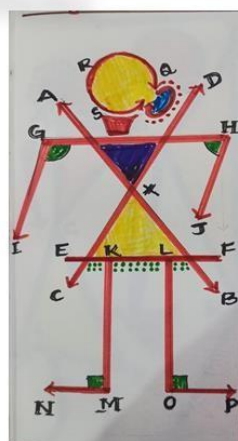


TABLE-2

**JOYFUL LEARNING
(NEP-2020)**

**ARTS INTEGRATED MATHS
LEARNING**

MATHEMATICS
LEARNING

1. TRIANGLE:
ABCA, CDEA, PQRA,
RYMA, GISA
2. RIGHT-ANGLE
TRIANGLE: DCEA
3. OBTUSE TRIANGLE:
PQRA

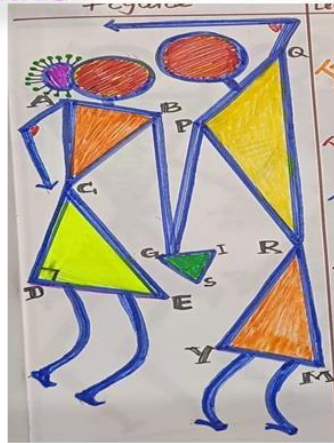


TABLE-3

**JOYFUL LEARNING
(NEP-2020)**

**ARTS INTEGRATED MATHS
LEARNING**

MATHEMATICS
LEARNING

1. CIRCLE
2. 2. ANGLE
3. MATHS SYMBOL: +, -, ×, ÷, =, <, >, <=, >=, <, >, <, >, <, >
4. SCALENE TRIANGLE:
ABCA, CDEA
5. EQUILATERAL
TRIANGLE: STFA
6. ISOSCELES TRIANGLE:
GISA
7. RIGHT ANGLE
TRIANGLE: ABCA, CEDA
8. SEGMENT
9. POINT
10. PLANE



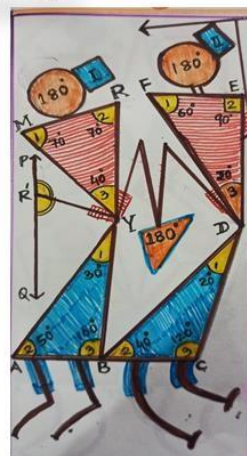
TABLE-4

**JOYFUL LEARNING
(NEP-2020)**

**ARTS INTEGRATED MATHS
LEARNING**

MATHEMATICS
LEARNING

1. RIGHT TRIANGLE: DEFA
<1=60°, <2=70°, <3=40°
2. ACTUETRIANGLE: MRYA
<1=70°, <2=70°, <3=40°
3. OBTUSE TRIANGLE: ABYA
<1=30°, <2=50°, <3=100°
- BCDA
<1=20°, <2=40°, <3=120°
4. SUM OF THE ANGLES OF Δ IS 180°
<1+ <2+ <3 = 180°
5. SQUARE-I
RECTANGLE-II
6. CIRCLE
7. CURVE LINE
8. SUPPLEMENTARY ADJACENT
ANGLES: <PRY+ <QRY=180°
9. PLANE
10. ANGLE



II. EDUCATIONAL IMPLICATION

- **Enhances Motivation:** It awakens curiosity and enthusiasm, fostering a love for learning.
- **Improves Retention:** Students engage deeply with enjoyable material, allowing better memory retention.
- **Builds Resilience:** Encouraging a growth mind set helps students overcome challenges and learn from mistakes.
- **Encourages Exploration:** Providing a space for trial and error ignites innovation.
- **Promotes Collaboration:** Team work allows different perspectives to flourish, leading to unique solutions.
- **Provides Opportunities for Expression:** Encouraging artistic expression fosters a creative atmosphere.
- **Student-Centered Approach:** Tailoring education to individual interests engages students in a personalized learning journey.
- **Interactive Tools:** Utilizing games, puzzles, and digital tools make learning engaging and fun.
- **Encourage Reflection:** Reflection connects students to the material, allowing them to learn from both successes and challenges.
- **Connect Learning to Real Life:** Demonstrating real-life applications makes learning more relevant and exciting.

III. CONCLUSION

Art integrated mathematics learning and creativity are not mere supplements but vital components of a thriving educational environment. By embracing these elements, we can create classrooms that not only educate but also inspire. The fusion of joy and creativity prepares students to be well-rounded, resilient, and innovative thinkers ready for a world that values these qualities. Are you a part of this educational transformation? How are you incorporating joyful learning and creativity in your classrooms or educational programs? Let's discuss and share ideas to create a brighter future for our students.

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