

# **CHAPTER 1:**

## **INTRODUCTION**

### **1.1 Introduction**

According to Kothari Commission (1964-66), “The Destiny of our country is being shaped in our classroom”. But certainly, the demands which our classroom are expected to meet have grown many folds. New education paradigms fostering creativity, risk-taking and re-discovery are needed for developing innovative individuals to stimulate growth.

It has been observed that children’s voices and experiences do not find expression in the classroom. Often the only voice heard is that of the teacher. When children speak, they are usually only answering the teacher’s questions or repeating the teacher’s words. They rarely do things, nor do they have opportunities to take initiative. The curriculum as well as the method of teaching must enable children to find their voices, nurture their curiosity to do things, to ask questions and to pursue investigations, sharing and integrating their experiences with school knowledge rather than their ability to reproduce textual knowledge. According to NCF 2005 there is need for ‘Child-centered’ pedagogy which means giving primacy to children’s experiences, their voices, and their active participation. This kind of pedagogy requires us to plan learning in keeping with children’s psychological development and interests. The learning plans therefore must respond to physical, cultural, and social preferences within the wide diversity of characteristics and needs.

Globalization necessitates people from different continents to form connections despite having different norms and culture. It is imperative for the people of every country to understand one another along with their standards, and traditions. A way to achieve this understanding is through arts education.

### **1.2 Theoretical Framework**

Through the arts education, people may learn to address and embrace diversity, present emotions, and differentiate values in the world. Arts education allows schools to provide the students with knowledge of ethics, see social realities and understand their rights and responsibilities.

Arts-based curriculum breaks traditional boundaries allowing students to challenge established ideas and resist stereotyped worldviews. Effective art education including art-integration encourages active, problem-based inquiry, data collection, evaluation, and communication.

### **1.2.1 Art Education**

John Dewey (1900, 1902, 1934) stated that art is related to intelligence; therefore, the arts should be integrated into education. He believed that "arts education is a process that yields first experience, then a product. The experiences comprise interactions with the environment and nature, involve stability and order, and produce through rhythms and patterns orderly changes with balance and counterbalance" (p. 18).

Creating an environment that supports children's mental imagery is essential to heightening sensory awareness, sharpening children's representational abilities, and nurturing meaning-making (Galda & Cullinan, 1993, p. 308). For example, using stories and journal writing and integrating the visual arts and music into these writings can inspire creative thoughts. Using written responses to a painting or drawing, or analysis and aesthetics, children develop critical abilities because they become more aware of what they hear and see and feel (Galda & Cullinan, 1993, pp. 308-309) and being an astute observer is a precursor to being a capable problem-solver.

Read (1967), like Dewey, supported the arts in education. He believed the arts permeate every aspect of our environment. He gave three major reasons for this theory: (a) Children have an innate need to communicate and express feelings, (b) through observation children need to record their sense of expression, and (c) children will learn to appreciate and interpret other expressions in their environment (Read, 1967, p. 21).

According to Galda and Cullinan (1993), creating an artistic environment that supports divergent thinking and problem solving also plays a role in cultivating children's ability to reflect and think through their world (p. 226). For example, using clay to create an art object and critiquing it to explain how and why it was made, enables children to focus on a problem-solving process through manipulation. This hand-building process enables the child to make stylistic choices as well as aesthetic ones. "When children use play, art, or music to articulate their understanding, they are exploring opportunities to think about subject matter in an exciting way" (p. 226). Arts education facilitates thinking in a critical way during this important developmental

stage of a child's life and creates a foundation upon which the child continually builds, one which generalizes to other academic and social areas.

If arts education accomplishes these aims, arts education should be made fundamental in the primary and upper-primary level curriculum to instill higher-order thinking skills early in a child's development.

### **1.2.2 Art-Integrated Learning / Art-Integrated Education**

To begin this dissertation, it is crucial to define what arts integration is, explain how it differs from other types of art programs within schools, and highlight how it relates to teacher beliefs and philosophies about how children learn. Arts integration is "an approach to teaching in which students construct and demonstrate understanding through an art form. Students engage in a creative process which connects an art form and another subject area and meets evolving objectives in both" (Silverstein & Layne, 2010, p. 1). Essentially, arts integration connects art with another subject area for each subject to enhance the learning of the other.

The dictionary meaning of integration is, 'the act of combining or adding parts to make a unified whole'. Thus, art integration means 'combining arts with the teaching of different curricular areas.' Subjects such as the languages, social studies, sciences, and mathematics can be made to correlate with art. Sometimes, arts can clarify science concepts with ease. Thus, the abstract concepts of science subject can be concretized using different art forms. Learning in this way helps to increase knowledge and understanding of the subject area and fosters a greater appreciation of arts. This is what is called holistic or complete learning. Art provides a language for expression. This expression can be visual or in the form of a performance (NCERT Module 3: Art-Integrated Learning).

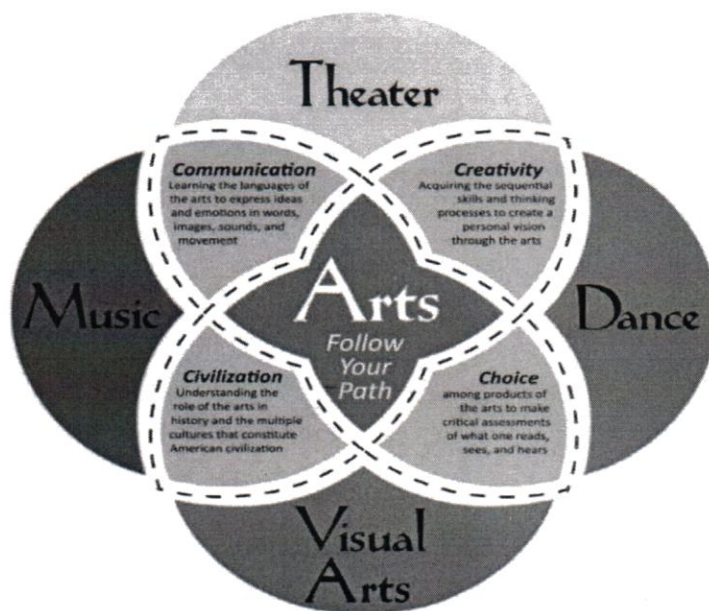
Art Integrated Learning is an NCERT initiative based on the recommendations of NCF 2005 of which the Position Paper on Music, Arts, Dance and Theatre clearly mentions "education through the arts, where learning takes place using different arts forms as tools in the teaching-learning process". The model is designed to promote experiential learning where every learner is provided opportunities to go through the art experience (in visual and performing arts) to understand and learn different subjects.

“Art Integrated Learning (AIL) is a teaching-learning model which is based on learning ‘through the arts’ and ‘with the arts’. It is a process where art becomes the medium of teaching-learning, a key to understanding concepts within any subject of the curriculum,” the NCERT noted in its 84-page guideline.

As per the NISTHA Art Integrated Learning module, AIL utilizes the possibilities of Visual (painting, photography, printmaking, stage-art, clay-modelling, sculpture, applied art and craft) as well as Performing arts (dance, vocal music, instrumental music, theatre, puppetry, mime, storytelling, martial arts, magic performance, cinema etc. It has been diagrammatically represented below:

**Figure 1.1**

**Various Forms of Arts**



It has been emphasized in NCF 2005 from the earlier literature related to Indian education that many commissions have focused on art education to be included in the school curriculum but in accordance with aims of education as mentioned in NCF 2005 there is need for such an education system in which children will learn only in an atmosphere where they feel they are valued. Our schools still do not convey this to all children. The association of learning with fear, discipline, and stress rather than enjoyment and satisfaction are detrimental to learning. At the same time, the problems of curriculum load and examination related stress require urgent attention in all their dimensions. Lee and Larson (2000) reports, if students feel intense stress before and

after examination, it has consequences for mental health and somatic symptoms. Stress interfered with the ability of students to perform at their potential. Supporting this view, Raina (1983) reports, “the ability to perform in term lead to greater sense of distress. Physical and emotional security is the cornerstone for all learning, right from the primary to the secondary school years and even afterwards.

NCF 2005 says “Art, both visual and performing need to become an important component of learning in the curriculum especially at primary level. Children must develop skills and abilities in this area and not treat these as mere entertaining fringes. Art must become an important tool in the teaching learning process”.

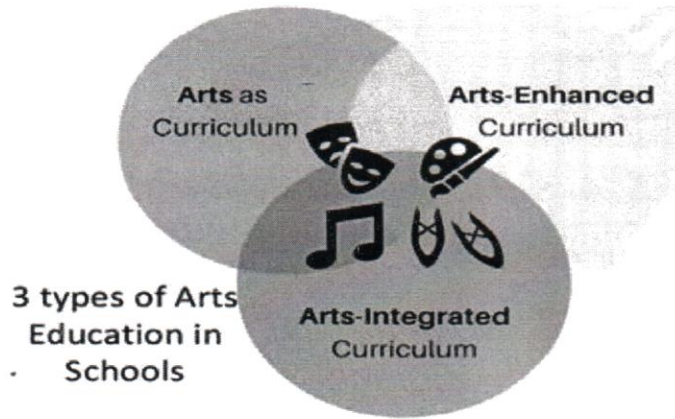
NCFs (National Commission on Focus Groups) recommended that AEPs (Art Education Programs) should concentrate on exposing the learners to folk art, local specific art and other cultural correspondence leading to an awareness and appreciation of our national heritage.

The arts find their way into elementary, middle, and high school classrooms every day in a variety of ways. The variations can be distilled into three main categories.

- **Arts as curriculum:** this is what happens in special area classes (music, art, band, drama).
- **Arts Enhanced curriculum:** “When the arts are used as a device or strategy to support other curriculum areas, but no objectives in the art form are explicit, then the approach is called Arts-Enhanced Curriculum. For example, students sing the ABCs as a means to other ends—remembering the letters and sequence of the alphabet. However, students are not usually expected to learn about melody, song structure, or develop specific singing skills.” (Arts Edge).
- **Arts Integrated Curriculum:** This is when the arts become the approach to teaching and learning is enhanced in the Arts and the Core subjects.

Figure No 1.2

According to the Kennedy Center: ARTSEEDGE the National Arts and Education Network, 2008; The Arts in Schools: Three Variations



### 1.2.3 Integration of Arts in Science Teaching-Learning Process

According to David Booth, in his article Implementing an Arts-based Curriculum (p. 9), art is important for children to learn. This concept is well known by both teachers [IT1] and parents, and additionally, through our own memories of childhood. From my personal experience of internship program, there is little art integration in the science classroom to help students better understand the ideas they are learning. However, if we consider the advice of David Booth, we can see how it is important for instructors to include the arts in our general curriculum. In the article, he stated art helps students have a deeper and better understanding of the curriculum students are learning (p. 10). In an article written by Shosh Brenner entitled, The Theory of Multiple Intelligences, we are reminded of different manners of intelligences [IT2] students possess (p. 16). This is not a new or novel perception, but one that has not been utilized fully in the classroom environment. For example, visual and kinesthetic learners would receive great benefit from integrating the arts into their classes. Barbara Soren compiled relevant information in her article entitled, Research and Resources in Arts Education (p. 138). In this article, Soren mentions a group of studies completed in 1999, which found the arts have a great impact on learning. These studies showed the arts are able to reach students and teach material not typically easily understood, transforms the learning environment for students, provides different challenges for those students who need them, and makes connections to real world applications.

The arts are described as dance, drama, music, visual arts, and literature in *The Creative Arts*, by Linda Carol Edwards (p. 11). Dance is “body awareness, fundamentals of movement, creative expression, and multisensory integration”; drama is “creative dramatics, pantomime, improvisation, characterization, and play production”; music is “sound, pitch, rhythm, singing, playing, musical games, listening, and creative movement”; visual arts are “self-expression, visual and tactile art, print and craft media, analysis, and interpretation”; and literature is “poetry, illustrations, writing, award-winning books, storytelling, reading, and speaking” (p. 11). With so many different forms of art to choose from, inclusion in the science classroom should be relatively accomplishable for most topics.

Referencing the previous sources, I feel this is an important topic to research because art integration is something not done often, or consistently, enough in many schools, and, according to research, clearly poses benefits for nearly every student.

“While planning activities for this stage, focus should be on using locally available, age-appropriate materials such as pebbles, seeds and beads, leaves, flowers, sand, clay, seashells, feathers, wood sticks, tree barks, natural colors, etc.” the guideline suggest.

At the upper primary stage, arts should be integrated with all the subjects and used in schools as an approach for teaching and learning of different concepts.

“The art-integration in classes 1-3 and 4-5 should be 80 and 70 % respectively,” the guidelines states. At the upper primary stage, emphasis should be laid on the use of students’ own imagination and the development of their creative expressions.

#### **1.2.4 Art-Integrated Learning on Students’ Academic Achievement**

Here, in this dissertation work the researcher will study the effect of art-integrated learning on the academic achievement of the students.

Art Integrated Learning involves working on all the three domains (Cognitive, Psycho-motor, and Affective domain) simultaneously, which fulfills the pedagogical need of competency-based learning and competence-based learning outcomes.

According to NCERT module Visual Arts Education, when students engage in visual arts education, they can experience achievements in other facets of their

education that they may not have otherwise experienced. Research indicates that visual arts education can impact other areas of achievement in the following ways:

- Enhances writing quality and early reading skills - In one study drawing before writing helped students formulate ideas and led to better quality of writing and storytelling. Researchers also found a correlation between visual arts training and awareness of spoken language in young readers.
- Contributes to post-secondary success - Arts students are more likely than their non-arts peers to graduate, attend a post-secondary school and earn a four-year college degree. In college, engagement with virtual arts can have a range of positive impacts, from better performance on geometry tasks to increased observational accuracy for medical students.
- Improves test scores - In one study of fourth grade students in four Ohio elementary schools, researchers found that students participating in an arts-rich curriculum performed better on proficiency tests in math, science and social studies than students with less access to the arts.

### **1.2.5 Learning Objectives of AIL at Upper Primary Stage**

During this stage children are ready to comprehend more complex interconnections between concepts and the environment. AIL can allow children build on simple concepts as well as relate them with academic content meaningfully. Children also enhance the skill to work in groups and explore ideas together. The objectives of AIL at the upper primary level are to help children:

- Explore multiple perspectives of concept.
- Construct knowledge of themes, subjects and concepts and be aware of the inter-disciplinary connections.
- Develop a pluralistic approach and appreciate different possibilities.
- Promote teamwork and mutual appreciation.
- Enhance communication skills, language skills and problem-solving skills.
- Build sensitivity towards environmental and societal concerns.
- Create art and apply their artistic skills in day-to-day activities.
- Learn inclusive practices of respect, care, empathy, and compassion.
- Foster socio-emotional competencies and cognitive competence.



- Understand and regulate their emotions.
- Create awareness of rich heritage and cultural diversity

### **1.2.6 Planning of AIL Activities at Upper Primary Stage**

At the upper primary stage, emphasis should be laid on the use of learner's own imagination and development of their creative expressions. It is suggested that children of this stage work together in teams for their socio-emotional development and enhancement of life skills (inter-personal communication, collaboration and cooperation, respect for diversity and appreciation for each other's perspective, developing leadership skills, problem solving abilities etc.). As this age group is the beginning of adolescence, their growing up concerns are also addressed naturally and effectively through integration of arts.

While planning activities for this stage, the teacher needs to see that:

- The focus is on the process and not on the product.
- Needs of inclusive classrooms are taken care.
- While making the groups they should follow a heterogeneous approach to ensure no discrimination on the lines of social prejudice and gender stereotypes.
- Periodic re-grouping of children is done for better exchange of ideas and accommodating different learning levels.
- Children are allowed to use diverse art forms and material to avoid monotony.
- ICT as an exploratory tool is encouraged.
- Children are provided with opportunities to interact with local/ regional artisans to enhance their sensitivity and awareness towards indigenous cultural heritage.
- Field visits to places like museums, galleries, historical monuments, melas, bazaars, haat etc. are incorporated.
- The extent to which the art experience can be taken to connect it with the concept/subject content.
- Art experience is utilized as an assessment tool also.

### **1.3 Statement of the Problem**

Keeping in need of the study, the present study is entitled as, **“A study on effect of art-integrated learning on academic achievement of the learners in science at upper primary level”**.

## **1.4 Rationale of the Study**

Previous studies have shown a positive relationship between arts and academic achievement. This study will explore the possible reasons that art-integration positively affect academic achievement. The findings of this study will provide additional evidence that an arts-integrated learning approach can benefit students of upper-primary level in their academic achievement. As such, educators and curriculum developers may want to include the arts in their instructional units. Many researches in foreign has been done in this field but in India, there are no such researches conducted on the variables related specifically to AIL approach and academic achievement of students of upper primary level. Referencing the previous sources, I feel this is an important topic to research because art integration is something not done often, or consistently, enough in many schools, and, according to research, clearly poses benefits for nearly every student. In the backdrop of the above theoretical content and evidence, the researcher has proposed to undertake the study, “A study on effect of art-integrated learning on academic achievement of the learners in science at upper primary level”.

## **1.5 Purpose of the Study**

The purpose of this study is to determine the effect of art-integrated method of teaching to the academic achievement of the students of Class VIII (Upper Primary Level) at Saint Xavier’s School in Jajpur District, Odisha. This will allow me to track the growth of my students as they experience arts integration as well as allowing me to track how well I am able to integrate arts in an effective and impactful way. Through the findings of this study, the researcher would be able to demonstrate whether art-integrated learning affects the academic achievement of the students or not.

If this research yields positive impact of art-integrated learning on academic achievement of the students, then it would also provide a framework for educators on the ways in which an art-integrated based educational program in science can be created and implemented in the classroom. Additionally, this research strives to provide educators with the tools and an introductory framework for implementing an arts-based approach to science in their classrooms.

## 1.6 Objectives of the Study

The present study was undertaken with the following objective:

- To compare the mean scores of achievements of students using AIL and traditional approach of teaching-learning in science.

## 1.7 Hypothesis of the Study

The Present study is an experimental study. As per the objectives of the study following null hypothesis (H<sub>0</sub>) had been formulated for the testing in the present study.

- (H<sub>0</sub>) 1: There is no significant difference between the pre-test mean scores of achievements of students using AIL and traditional approach of teaching-learning in science.
- (H<sub>0</sub>) 2: There is no significant difference between the pre-test mean scores of achievements of students using AIL and traditional approach of teaching-learning in science.

## 1.8 Definition of Related Terms

**1.8.1 Effectiveness:** The term 'effectiveness' stands for the outcome of the study, when influence of a factor or condition is dependent on the presence or absence of another factor or condition (Good,1973). According to Academic Dictionary of Education (2005), "Effectiveness means to measure the academic achievement of a specific goal". For the present study, effectiveness means the effect of AIL on the academic achievement of the students which is determined based on marks obtained in the achievement test of some chapters selected from class VIII science textbook.

**1.8.2 Art-Integration:** The dictionary meaning of integration is, 'the act of combining or adding parts to make a unified whole'. Thus, art integration means 'combining arts with the teaching of different curricular areas.'

**1.8.3 Arts-Integrated Learning:** In this study the investigator used art-integrated learning as independent variable. AIL is a creative and constructivist teaching-learning approach through which students demonstrate their understanding of a concept through various forms. Arts integration signifies exploration of academic content (ideas, concepts, prior knowledge) and skills set to be acquired by a student through the lens

of various forms of Arts. It is a way of thinking, communicating, and responding that is embedded in one's teaching practice. Arts integration engages students in a creative process which offers a universal pathway to learning. Students

- 1) imagine, examine, and perceive.
- 2) explore, experiment, and develop craft.
- 3) create.
- 4) reflect, assess, and revise, and
- 5) share their products with others.

Through the creative process students build and express their understanding of an area of study and the art form using the wide variety of languages and formats that the arts offer.

**1.8.4 Academic Achievement:** According to Bhargava's Encyclopedic Dictionary of Education and Behavioural Sciences (2009), "The performance of the students measured on an academic achievement test in terms of cognitive, psychomotor and affective objectives through a definite content area". Academic achievement describes academic outcomes that indicate the extent to which a student has achieved their learning goals. Academic achievement is often measured through examinations or continuous assessments. It is the extent to which a student or institution has achieved either short- or long-term educational goals. Achievement may be measured through students' grade point average, whereas for institutions, achievement may be measured through graduation rates.

In the present study, academic achievement means the scores obtained by students on the achievement test after teaching through AIL and traditional method. In this study, the researcher will take the academic achievement in science of class 8 students as dependent variable.

**1.8.5 Science:** The science syllabus prescribed by NCERT for Standard VIII (CBSE Board).

**1.8.6 Upper Primary Level:** The standard vi, vii and viii are usually called as upper primary classes. In this study, the students of class VIII (upper primary level) were taken as population among which 40 of them were chosen for sample because they

come under formal operational stage, where the children tend to think about what it is; and have a direct connection to the process of reading development. When the potential for abstract thinking is developed, students will be able to attain logical, rational, and abstract strategies of symbolic meanings, metaphors and upper primary students can now understand similes. Therefore, the upper primary students can understand abstract concepts of science at this formal operational level.

According to Piaget, formal operational stage of the children between eleven to fourteen years of age forms Upper primary level. Piaget began to find consistent systems within certain broad age ranges. "Each the four major stages sensorimotor, preoperational, concrete operations and formal operations, is the system of thinking that is qualitatively different from proceeding stage. Each stage is a major transformation in thought processes, comparing to the proceeding stage. Each child goes through each stage in a regular sequence. Children cannot overcome a developmental lag or speed up their movement from one stage to the next. They need to have sufficient experience in each stage and sufficient time to internalize that experience before they can move on. Our main concern as educators is to understand the major substance of each stage. Only then, what to teach and how to teach could be established" (Spring Thall (1990), Educational psychology: A developmental approach).

## 1.9 Delimitations of the Study

- The present study was confined to the Jajpur district of Odisha only.
- The learning outcomes were measured in terms of achievement test results.
- The school taken for the purpose of the study is a private school.
- The time period for the data collection procedure is 20 days.
- The present study was carried out during the pandemic situations of Covid-19.
- The present study was delimited to the lessons of std. VIII NCERT Science Textbook.
- **Interest Issues:** Some students may lose interest. Students could become bored with one theme and may not participate due to low motivation or interest.
- **Content Issues:** Students miss a day- may miss the connections, finding enough resources/information to cover every aspect of the topic, intertwining the benchmarks within that one topic may be difficult, missing out on some content that could be covered.