

# Applying Integrated Content Approach as Teaching Pedagogy in Preparatory Stage at PGKM School

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**Abstract**— *Integrated learning approach is usually executed in the foundational years. The researcher found out, using the same approach in the preparatory phase can develop deeper content understanding, with relevance and its applications in the real world. The researcher suggested an educator can accommodate a variety of learning styles thus making learning a real experience for every child. The researcher observed the learning environment is active, skilled based and also provides opportunity for collaborative work amongst teachers and students.*

*This research opens doors for such types of learning pedagogies which enables holistic development catering to social, emotional and intellectual needs of every child. It is experiential learning that fosters curiosity with progressive learning.*

**Index Terms**— *Collaborative work, holistic development, learning styles, progressive learning, relevance.*

## I. INTRODUCTION

### Need

Curriculum shows a path of how a particular subject can seek varied learning experience.

The syllabus that is specific to every subject further details how an educator can cascade the content to students. Often every subject syllabus has a flow in which a particular subject content is arranged in specific chronology. Majority of the times an educator follows the sequence given in the textbooks which are based on syllabus for that grade.

This pedagogy becomes subject centric. The core content can be elaborated taking help of other subjects. This is missed by educators while following the chronological sequence of lessons given in the textbook. Knowledge thus imparted has less scope of providing relevance of concept and its application in real life situations.

## II. IMPORTANCE

The researcher believes that the learning objectives can be achieved when all subjects come together with their respective syllabus and bridge the learning gaps. This in turn will help us achieve the learning objectives as stated in the curriculum and enhance learning experience in children with proper relevance.

Researcher finds this method to be effective when core content can be imparted across multiple subjects like Math, Science, Languages, Social science, Visual and performing arts can be imparted at the same time.

## III. OBJECTIVES

The researcher identified the following research objectives.

1. Students are able to understand and explore core content at their own pace
2. Students can visualise relevance of content in real life
3. Students can deal with practical issues with interdisciplinary knowledge
4. Teacher can link learning outcomes with skills associated across all subjects
5. Teacher can use varied tools to assess core content

## IV. LITERATURE REVIEW

The education system is textbook centric for every subject where the chronological sequence is pre decided and mostly followed as printed in the text books for every subject. There is no thought given or executed to realign the sequence, categorise it to the core concept focused and explore the core concept through multiple subjects at the same time. This is basically an integrated approach to learning the core concept.

Research indicates integrated approach of content learning enhances multidisciplinary expertise and helps students to study and experience interconnections in the real world.

This method also fosters creative and critical thinking. It proves to be a connection between subject and skills that together help to nurture attitude in a child. This accommodates the needs of students who belong to different learning styles and have a variety of multiple intelligences. It provides deeper understanding of core subjects with higher retention ability.

It provides an extensive open-minded outlook as it helps to collaborate while learning the content coming from different cultural, customs and beliefs backgrounds. It also develops students' interpersonal skills and sense of community. It gives a more practical approach of learning and applying the concepts imbibed in real life situations by knowing the relevance of why to study them.

Research also indicates students stay focused on one topic for an extended period and are proved to be more productive. This method is not multidisciplinary rather is interdisciplinary thus more than one core subjects can be learnt at the same time through varied explorations. (Varthana 2023)

Another research done in Vietnam, suggests similar development at university level. It was found that integrated teaching encouraged university students to develop the ability to employ interdisciplinary knowledge and skills to effectively solve problems arising in studies and in life; and is implemented in the process of knowledge acquisition and training skills. (Le Thi Nguyet<sup>1</sup>, Hoang Thi Tra Mi<sup>1</sup>, Nguyen Duc Thang<sup>1</sup>, Cao Thị Thu Hoài<sup>1</sup> 2022)

One more finding shows the impact of art integrated learning to enhance cognitive development in students.

A research article by Alida Anderson (2017) on 'How and why the arts support language learning and cognition' explored the possibilities of teaching linguistic concepts via visual, auditory and kinaesthetic cues; important elements of Art Integrated Learning.

Another research study titled 'Learning to think critically: A visual art experiment', suggested that students who had exposure to visual arts had significantly stronger critical thinking skills when analysing a painting and the effect was found larger for disadvantaged groups of students (Bowen, Greene and Kisida, 2014).

A study titled 'The arts and cognitive development' concluded that an education that introduces Chapter 5 Art- A Brain Developer uses various art forms and art materials gives the students a space to exercise the skills of imagery and deepen their conceptual understandings (Ives and Pond, 1980).

In another study titled 'Teaching cognitive skill through dance: Evidence for near but not far transfer', by Keinanen, Hetland and Winner (2000), a meta analysis of collected research studies concluded a positive correlation between dance experiences and non-verbal reasoning skills. In the Indian context, Benegal (2010) in his work stated that arts lead to dramatic changes in the brain such as strengthening the 'attention network'. Brain areas involved in music are also active in processing language, auditory perception, attention, memory and motor control suggesting that art education is a much-needed way of promoting balanced mental development in today's knowledge-based world.

In a blog published by John Maresca, 2022 suggested Positive Outcomes of Integrating Multiple Subjects into Single Lessons.

Multi-subject lessons also allow for enhanced collaboration opportunities between teachers, as we can share our expertise and resources with one another. Student involvement was increased and learning was enhanced. Addition of real-life situations proved to be an effective motivational tool to learn core concepts. It also reduced teacher preparation time.

A comparative study on multidisciplinary and interdisciplinary suggested integrated curriculum to be more effective. Students tend to be more engaged through holistic, authentic learning, resulting in more flexible and critical thinking. (Alexandrea Dillon 2023)

An article on K-12 education suggests different ways in which we can connect multiple subjects while teaching. Using this method we can also have different teaching pedagogies to cater multiple learning styles.

Another research in integrated curriculum suggested an increase in teachers enthusiasm and interest in teaching learning process. "The brain learns best in real-life, immersion-style multi-path learning...fragmented, piecemeal presenting can forever kill the joy and love of learning" (Jensen, 1996). The more connections made by the brain, the greater the opportunity for making high level inferences.

Research also suggests a long range of assessment tools while the core content is delivered through varied subjects and learning styles.

Another research suggested rote learning does not foster deeper content understanding. To inculcate better core concept understanding an educator needs to deploy non rote approaches in education. Thus integrated learning which offers experiential learning across various subjects can be beneficial for core content understanding. The research suggests students use a mixed study pattern with cross linkages across multiple subjects to understand concepts and its relevance. (Chander Shekhar 2018)

## **V. GAP IDENTIFIED BASED ON LITERATURE REVIEW**

Above findings from the literature review suggest integrated learning approaches can provide more core content knowledge. It also indicates, current knowledge delivery is purely based on the sequence provided in each text book based on the syllabus. This sequence is not at par with other subjects and often the linkages are ignored. This can lead to learning gaps while understanding a particular concept at its core.

Following a particular sequence, often ends in handling concepts half-heartedly without providing relevance and application in the real world.

It also suggests one or two subjects are connected with each other however does not specify if we can bridge all concepts and the way they are delivered through an integrated approach. Literature review also suggests content delivery is more focused on the concepts given in the textbooks and syllabus. It provides very less scope for an educator to think beyond textbooks to apply knowledge in real life scenarios.

Knowledge thus gained is more theoretical and is only looked at as content to be reproduced to obtain exam scores and does not have scope for applying it in real life.

Researcher tends to explore how we can bridge this gap by imparting the core content at the same time for all subjects and seek scope for gaining more knowledge beyond textbooks.

#### VI. WORKING HYPOTHESES

1. Integrated learning of a core topic fosters better knowledge retention and understanding
2. Learning happens at a self-pace
3. Teacher can explore content beyond textbook with active learning environment
4. Student engagement is increased as they are able to relate core content in real life scenarios

#### VII. METHODOLOGY

##### Population

The research was conducted in a school on students of class 3<sup>rd</sup>, where the student strength was 80.

#### VIII. SAMPLE

This experiment was conducted with two classes, where the strength of students was 80.

#### IX. SCOPE OF RESEARCH

1. Students of standard 3<sup>rd</sup> of PGKM School, Pune
2. Subject: Multi-disciplinary
3. Topic: Food

#### X. THE EXPERIMENT: CASELET

Normal teaching: Each subject topic has its own sequence which happens to be marked as the index page of every textbook. Each teacher handles the content for their own subject without altering the sequence. There is no interlinking of one subject with another even if the core content is similar. The learning objectives are often related to specific subjects and lessons which are taught at different times in an academic year.

In a regular time table, students are made to sit in one place where only the lectures and teachers change after every 35-40 mins.

Learning gap in normal teaching -

1. The subject teacher and their content can be contradictory and often can be disengaging for children to connect.
2. Child cannot dodge between two consecutive subjects which may be dealing with two different core content equally challenging to be understood.
3. Multiple attempts to acquire desired learning objectives across various subjects are not explored.

#### XI. EXPERIMENT DONE AT PGKM

Topics are aligned to see interlinkages to effective understanding.

We did a pilot study at PGKM on students of grade 3 for one month. Topic selected was FOOD. (Exhibit 1)

1. All subjects realigned their lessons to map one core concept which was FOOD
2. The learning objectives in the core concept are explored through multiple ways across all subjects beyond textbook knowledge.
  - a. In English - We read stories of AMUL, did an unseen comprehension passage categorised nouns, pronouns, adjectives and verbs (Exhibit 2)
  - b. In EVS- We discussed fruits and vegetables (Exhibit 3), their shapes, their prices, their nutrient content, parts of plants they belong to (Exhibit 4), native places where they are grown, explored healthy and junk food. We also studied how seeds germinate (Exhibit 5)
  - c. In Maths - We took a survey of how many in a class liked a particular fruit and drew pictograms using tally marks to represent data. We solved sums which talked about comprehending a pictogram drawn using the same fruits and vegetables. (Exhibit 6)
  - d. In Vernacular languages (Marathi, Hindi, Sanskrit and Gujarati)- We learnt poems, vocabulary developed using synonyms of same content in different known languages, heard stories and enacted role plays of what if I was a fruit. (Exhibit 7)
  - e. In Art and culinary - We drew 2D pictures, coloured it using varied shading techniques, (Exhibit 8), origami prepared their cutouts, prepared chef cap (Exhibit 9) and wore it the day we prepared fruit salad for the whole school. (Exhibit 10)
  - f. In Performing arts - We sang songs, shlok related to good eating habits. Leant dining etiquettes and professions that are associated with the food industry.
  - g. We also watched a movie Ratatouille to learn 'anyone can cook' - This gave scope for attitude building.
3. Entire concept revolved around one core topic FOOD for the whole month.
4. Worksheets with topic relevant questions and answers were used as assessment tools. Students were able to solve them without any extended help given by the teacher. The assessments were continuous and comprehensive in nature.

#### XII. FINDINGS

1. Children were able to write scientific answers by themselves without any support / rote teaching.
2. There was a drastic improvement in their vocabulary.
3. They were able to correlate their knowledge to food items they consumed.
4. They were able to read pictographs and do basic statistical analysis by the surveys they had conducted.





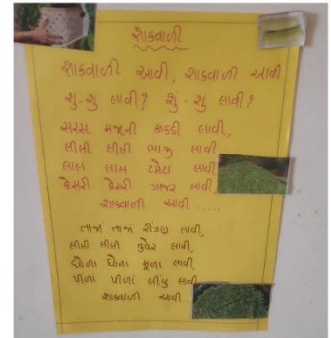
**Exhibit 4: Teacher explaining parts of plant along with Art work**



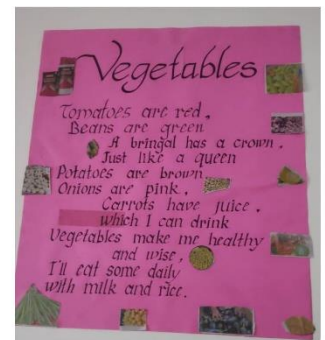
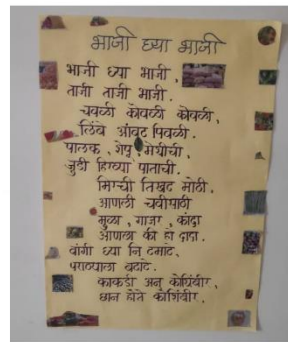
**Exhibit 7: Learn poems in multiple languages**

**POEMS ON FRUITS & VEGETABLES -**

1. GUJARATI
2. MARATHI
3. ENGLISH

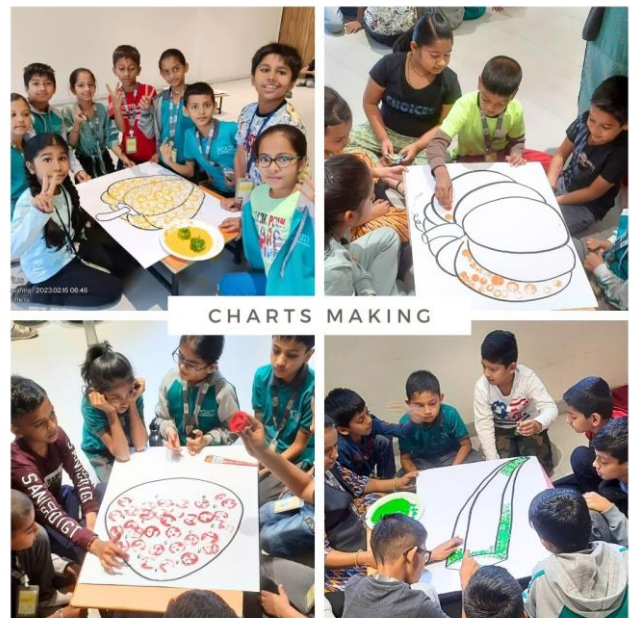


**Exhibit 5: Seed germination in a coconut shell**



**Exhibit 8: Study fruits, vegetables, their shapes and colours. Paint imprint drawing of the same**

**Exhibit 6: Survey of fruits with a pictograph**





**Exhibit 9: Crafting a chef cap**



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**Exhibit 10: Preparing fruit salad**



## XVI. CONCLUSION

A pilot study on integrated learning helped students to create cross linkages across multiple subjects simultaneously. Every learner in the class could explore the content at its own pace. Entire learning environment was active and involved various experimentations. Teachers could assess children at multiple levels in a continuous comprehensive way. Students were able to know the relevance of content in real life. Due to experiential learning environment scope for developing multiple skills was also seen.

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