

Integrated Approach Towards Teaching

Vijaya Roy*

Integration is defined as organization of teaching matter to interrelate or unify subjects frequently taught in separate academic courses or departments. It views learning and teaching in a holistic way and reflects the real world, which is interactive (Shoemaker, 1989). Using an integrated curriculum to teach is a strategy based on the premise that learning is a series of connections. The integrated curriculum can be beneficial to teachers and students, using theme teaching, projects, and units to cover a variety of material and effectively teach many concepts and skills. This approach allows children to learn in a way that is most natural to them. Teachers can create a good deal of their curriculum by building webs made up of themes of interest to the children, with benefits for all. These benefits include more adequate coverage of curriculum, use of natural learning, building on children's interests, teaching skills in meaningful contexts, more flexibility, and an organized planning device (Krogh, 1990). Our own nervous system gives us a good example of integration and its effectiveness. There are approximately ten million afferent (input or sensory) neurons, fifty billions integrating neurons and only half million efferent (output or motor) neurons. This provides a ratio of about 20:1 between the aggregate input and output channels. Thus by integration vast amount of information can be presented to the students in a concise and comprehensive manner. Of course, a lot of effort is required to process and organize the information. This is only possible if departmental (both intradepartmental and inter-departmental) barriers are completely broken down and the curriculum is revamped.

Why Integration?

“Any subject learnt in isolation is rapidly forgotten”. The present system of education follows a building block principle. In this, each subject has its own block of time, usually restricted to one part of the course. The early curriculum is expected to lay foundation for the other subjects to follow. It is left to the students to solve the jigsaw puzzle. But, there exists a high degree of inter-connectivity among various disciplines. So, an inter-disciplinary and multi-disciplinary approach should be followed while teaching these subjects at Secondary level.

Flaws within the present system of Education:

- Unnecessary Repetition
- Disjointed Approach to Teaching

* Research Scholar, Faculty of Education, Mahatma Gandhi Kashi Vidyapith, Varanasi

- Confusion in student's mind due to difference in opinion
- Confusion leads to Disunity

And hence the subject as a whole is never grasped. It discourages the students from learning and they get disinterested in applying the knowledge achieved into practice.

The Aim of Integration:

- To provide a holistic outlook of the subject matter.
- To present the topic in a more meaningful way.
- To avoid the state of confusion in student's mind.
- To develop better understanding of the concept in a student.
- To enable the students to apply and synthesize the concept learnt.
- To enable the student to make his own decisions.

How to Integrate?

There can be various ways of integration and each teacher can evolve his/her own way of integration but it should not be done forcibly. Basically, integration has two forms.

- 1) **Mode integration** is the combination of listening, speaking, reading, and writing in classroom activities. By asking students to use two or more modes, instructors create activities that imitate real world language use.
- 2) **Content integration** is bringing content from students' fields of study into the curriculum. University students often find it instructive to read, discuss, and write about material whose content they already know, because their knowledge of the topic helps them understand and use the language. They are able to scaffold: to build on existing knowledge as they increase their language proficiency. For students who plan to study and/or work in a field that will require them to use the language they are learning, integration of content can be a powerful motivator. Content integration can be done in the following ways:
 - a) **Horizontal Integration**-It refers to integration between various disciplines at a particular grade level. For eg: If a lesson in language at 6th grade correlates to some other lesson in social science or science at the same grade then these chapters should be taught in unison and not separately to bring about better understanding of the concept learnt by the child.

- b) **Vertical Integration**- It attempts to integrate concepts of the same topic learnt at various grades. For eg: While teaching a chapter on **India's Location and Size** (Grade-IX, Geography) we can integrate it to the concepts about **Latitude and Longitude** learnt in grade VI of the same subject.
- c) **Systematic Integration**- Every aspect of a single concept is dealt in detail in a systematic way before beginning the next topic. This brings about holistic study of the concept learnt. For eg: While dealing with water as a topic in class VII (Science, Social Science) every aspect of it can be discussed in detail. We can start with chemical composition of water, different states of matter in which it exists, properties of water, importance of water on earth, the places where we find it, names of various water bodies, three types of movement of ocean water, water cycle, how is it important for life, water pollution and its scarcity, water as described by poets, water as a matter of dispute between states and countries, water in arts (paintings), and so on. Some of these concepts can be dealt by means of activities, others through discussion, presentation, poster making activity, poem recital, musical importance of water and various other methods can be incorporated to deal with this topic in a holistic manner.
- d) **Integration with real life examples** – Illustrating a concept by quoting relevant examples from immediate surrounding or recent developments.

What to Integrate?

It is also necessary to understand that each and every chapter cannot be integrated. So, while choosing the subject matter of integration one has to be careful. There is a wide scope of incorporating life skills, learning competencies, four pillars of learning, the concept of multiple intelligence, Greening of textbooks, value enhancement in the teaching of different subjects. Here emphasis has been laid on four pillars of learning, multiple intelligences and greening of text books.

The four pillars of learning should be an integral part of teaching-learning process. The idea of these four pillars of learning has been derived from '**Learning the Treasure Within**' a report published by UNESCO which highlights the form of Education in the 21st Century.

The first pillar '**Learning to know**' aims at developing the capacity to absorb new knowledge in a child. We must train young minds to develop a love for knowledge, the spirit of inquiry, openness to new ideas and the capacity to discriminate between what is really significant and what is simply an information overloaded. Emphasis should be laid on 'knowing more and more about less and less'. It must be kept in mind that learning is not only confined in a classroom but it continues through life.

The second pillar '**Learning to do**' emphasizes that knowledge imparted to young minds should also make them capable of gainful employment so that they become productive members of the society. The children should be trained to respect each and every job and maintain its dignity.

Learning to live together- involves transmission of values in an individual. The five values important in this context are- Family values, (respect for elders, cooperativeness, solidarity etc.) Societal values, (cleanliness, teamwork, punctuality etc.) Environmental value, (respect and care for the environment) Interfaith Value, (to respect every religion) and Value for Global Society which relates to the feeling of International brotherhood (Vasudhaiv Kutumbakam).

The fourth pillar '**Learning to be**' emphasizes on all round development of an individual which includes development of intelligence, sensitivity, aesthetic sense, personal responsibility and spiritual values in the child.

The **theory of multiple intelligence** was propounded by Prof. Howard Gardener in 1983. According to Gardner,

- All human beings possess all nine intelligences in varying amounts.
- Each person has a different intellectual composition.
- We can improve education by addressing the multiple intelligence of our students.
- These intelligences are located in different areas of the brain and can either work independently or together.

The eight important intelligences given by him are as follows:

1. **Verbal-Linguistic Intelligence**- Linguistic-verbal intelligence is that ability to use words effectively either orally or in writing, that is, the ability to exhibit language development in its fullest form.
2. **Visual-Spatial Intelligence**- Visual-spatial intelligence represents the

- knowing that occurs through the shapes, images, patterns, designs, and textures we see with our external eyes, but it also includes the images we are able to conjure inside our heads.
3. **Logical-Mathematical Intelligence-** Logical mathematical intelligence is all about using numbers effectively, improving inductive and deductive reasoning skills, and being able to appreciate, recognize, and use abstract patterns in problem solving situations.
 4. **Bodily-Kinesthetic Intelligence-** Bodily-Kinesthetic Intelligence is the ability to use physical movement and performance to understand things. People with this intelligence believe in learning by doing.
 5. **Musical-Rhythmic Intelligence-** Musical-Rhythmic intelligence is the ability to produce and appreciate rhythm, pitch and timber. It is the capacity to think in music, to be able to hear patterns, recognize them, and perhaps manipulate them.
 6. **Inter-personal Intelligence-** Interpersonal intelligence is the capacity to value, understand, and respond appropriately to the motivations, moods, and feelings of others. Or more simply put, these people learn best through person-to-person interaction.
 7. **Intra-personal Intelligence-** Intra-personal intelligence deals with the development and understanding of the self and using this knowledge to live well; it includes personal goals, feelings, anxieties and strengths and subsequently drawing from that awareness to guide personal behavior.
 8. **Naturalistic Intelligence-** Naturalistic Intelligence is the ability to recognize and classify elements of the natural world. That is, this intelligence enables us to classify, understand, and explain the elements of nature.

As we know that each individual has his own way of learning and possesses multiple intelligence, a variety of activities should be included with every lesson which caters to the learning needs of each child in such a manner that no child is left behind. This can be brought by incorporating role play (Bodily-Kinesthetic Intelligence), word puzzles, debate, JAM (Verbal-linguistic intelligence), nature Walk (Naturalistic intelligence) poster making (Visual, Spatial Intelligence) relating a concept with a popular song (Musical- Rhythmic Intelligence), reasoning, differentiating (logical-mathematical intelligence) and so on. In this way we can integrate the principle of multiple intelligence in our class-rooms.

The term **greening of textbooks** refers to generating environmental awareness amongst the children. It is the process of incorporating environmental

perspectives, concepts, information, data etc in our lessons to bring about changes in the skills, attitude and behavior of the learner. The idea of Greening of Textbooks (sensitizing a child towards environmental issues) can be incorporated by means of various activities, linking the subject matter with locale specific examples, providing activities to link concepts with real life situations, through fun and game, experiments and model making, Painting and Drawing, role play, dance drama, puppet show, taking them for nature walk (recording observations and reaching to some conclusions) assigning Projects- Research projects, Action projects, etc., Poetry writing, story writing, posters and slogans, interviews and surveys, advertising, collage making etc. These projects and activities can be very helpful in making them sensitive towards the environment which is the need of the hour.

Advantages of Integration

- Reduces fragmentation of Courses;
- Prevents repetition and waste of time- Integrated instruction helps teachers better utilize instructional time and look deeper into subjects through a variety of content-specific lens.
- Students learn to apply their knowledge to actual practice;
- Promotes Interdepartmental Collaboration;
- Rationalization of teaching resources.
- Another benefit of integrated instruction is that teachers can better differentiate instruction to individual student needs.
- Integrated instruction also allows for authentic assessment (Barton & Smith, 2000).
- A final benefit of interdisciplinary teaching is that students have a chance to work with multiple sources of information, thus ensuring they are receiving a more inclusive perspective than they would from consulting one textbook (Wood, 1997).

Criticism and Shortcomings of Integration

- Curriculum integration may take away the independence of the agencies like the decision-making panels of a school that consist of stakeholders such as teachers, parents, and students, to make curricular choices.
- In addition to issues of local control, truly integrated curricula may or may not prepare students for the high-stakes tests that have become a reality for

most high schools around the world, depending on whether they cover the same material.

- There is also concern that integrated teaching discounts the value of deep subject-specific knowledge, which is essential for specialization in areas such as medicine, law, and engineering (Gatewood, 1998).
- Thematic units can also fall short of teaching in-depth content to students. Often a theme, such as apples, is used to link unrelated subjects, with little deference to students' prior knowledge or interests.
- This superficial coverage of a topic can give students the wrong idea about school, perhaps missing the idea of curriculum integration in the first place (Barton & Smith, 2000). Thematic units can contain pointless busywork and activities created solely to create a link to a theme; for example, the alphabetizing of state capitals in a social studies unit, attempting to integrate it with language arts (Brophy & Alleman, 1991).
- Our methods of assessment and examination systems are not integrated.

However, most of these shortcomings can be overcome through proper planning done by subject experts across the curriculum. It should also be taken care that integration should be done only where it exists in a natural way, forceful integration should be avoided. It should also be kept in mind that each and every topic cannot be integrated. By taking these necessary precautions integration of a topic is possible to the benefit of the students and the teachers alike. Thus we see that the integrated approach can work as an effective tool to make the classrooms more lively and interactive and the subject more meaningful and interesting.

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