

ACTIVITY BASED LEARNING FOR THE SCIENCE SUBJECT

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Abstract

There are individual differences among all learners. Suitable learning experiences should be provided to all students as some grasp greater through vision while others through audio. The best way to do this is to have 'Multi Sensory Approach' that can be provided by 'Activity Based Learning'. Activity Based Learning or ABL describes a range of pedagogical approaches to teaching. Its core premise includes the requirement that learning should be based on doing some hands on experiments and activities. The idea of activity based learning is rooted in the common notion that children are active learners rather than passive recipients of information.

Keywords: Activity based learning, Theories of Learning



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○ Introduction

There are individual differences among all learners. Suitable learning experiences should be provided to all students as some grasp greater through vision while others through audio. The best way to do this is to have 'Multi Sensory Approach' that can be provided by 'Activity Based Learning'.

Activity Based Learning or ABL describes a range of pedagogical approaches to teaching. Its core premise includes the requirement that learning should be based on doing some hands on experiments and activities. The idea of activity based learning is rooted in the common notion that children are active learners rather than passive recipients of information.

The activity based learning system has been successfully implemented in several Indian States including Karnataka, Kerala, Uttar Pradesh, Gujarat and Madhya Pradesh. The philosophy of ABL finds its antecedents in the common notion that learning can be best when it is initiated by the surrounding environment and motivated by providing optimum opportunities to learn. A fearless and freedom to express environment always adds to best learning outcomes. The key feature of the ABL method is that it uses child friendly

educational aids to foster self-learning. It allows a child to study according to his / her aptitude scale.

Science offers students, the ability to access a wealth of knowledge and information which will contribute to an overall understanding of how and why things work like they do. Science is able to explain the mechanics and reasons behind the daily functioning of complex systems. Many students find science inspiring and interesting. Science enables the students to develop the knowledge they already have and the insight they wish to gain in the future. Students who excel in science are likely to develop a strong ability to think critically.

The ultimate aim is to make the students understand the concepts that they are learning. So the researcher has picked up the idea to develop activity based learning programme. The ABL will provide various task based activities to the students of I to VI standard to enhance their learning skills.

○ **Need of the study ABL:**

For improvement of our education system we are developing a lot of innovations in teaching. This may be more helpful for today's generation because today's generation believes more in learning by doing. ABL system in teaching is actually the need of the day. Even some of the topic's which cannot be made understood by teaching can be made understand by ABL.

Through activities, a fun based environment is provided to the students to increase their understanding competence through 'Learning by doing', the competence can be built naturally and gradually.

○ **Importance of the ABL :**

ABL system in the classroom can create a more interesting, interactive environment than one that the students are mostly already familiar with. If schools strive to keep current with ABL, then the learning that takes place becomes more relevant and meaningful to students. Along with the rapid development of new methods in education, continuing education innovates constantly and gains tremendous progress on educational concept, process, forms, methods and management.

The present important as it will give many suggestions by which teaching science can be made more interesting by the use of ABL.

○ **Theoretical Base for the Activity based Learning**

a. **Theories on Instructional strategies and Models :**

Jerome Bruner is known with reference to the research carried on in Instructional Methods. He has used them for arithmetic study. The actual work to be done by a learner for research learning material are divided in three stages – performing stage, learning through pictures – stage and symbolic stage. In research learning, the learner is given a research job or some actual examples by which general conclusions can be drawn. It means that the study is carried on as per the inductive process and deductive process. (Vaishampayan , Mali , &Pawar, 2009)

b. Gestalt Theory (1912) :

In the 1912 Max Wertheimer, Kurt Koffka and Wolfgang Kohler had propagated this theory. Wertheimer invented this wholeness as a scientific concept from persistence of vision. Everyone has sensation and perception. The perception depends upon the following points :

1. Quality of wholeness.
2. Principle of proximity.
3. Principle of similarity.
4. Principle of closure.
5. Principle of continuity.
6. Principle of familiarity.
7. Principle of mental state.
8. Psychological field.
9. Insight.

By the use of activity based learning, students attention can be easily caught because of the above factors like continuous mixing of audio and video. Students are familiar with television, computers, etc. (Matthew &Hergenhahn, 2010)

c. Theory of Psychology of Learning and Understanding :

The place of five sensory organs is important in learning and understanding modern educational technology.

- ❖ Everyone can learn –
 - a) 83% through vision
 - b) 11% through audio
 - c) 3.5% through smell
 - d) 1.5 % through touch
 - e) 1% through taste.

So the ABL is a combination of video, audio and other activities, because of this, the students can easily concentrate towards the topic. (Jagtap, 1995)

d. Constructivism as a Theory of Active Learning :

The basic idea about constructivism is that people learn by using what they know to construct new understandings. Teaching any idea or skill a teacher should try to understand the previous experiences and prior knowledge of students and build on this foundation

a) Meaningful Reception Learning- David Ausubel

b) Discovery Learning- Jerome Bruner

c) Social Constructivism- Bandura & Vygotsky

d) Radical constructivism- post modern philosophy.

(<http://www.asa3.org/ASA/education/teach/active.htm> Retrieved on 21st October 2017)

e. Vygotsky- Activity – based Learning :

Vygotsky (1978) and his colleagues, activity theory poses a very essential question about nature of action an individual or a group is practicing in a particular setting. Activity- based learning approach can be viewed according to Anandlakshmy (2007) as an effective system that can work in keeping learners engaged and fully occupied, while they are acquiring the fundamentals. The activity- based learning method and material can successfully be investigated through five basic mirrors: the nature of learning environment, learner's involvement in a process, role of the teacher, clarity of content, and creativity scope.

❖ **Conclusion**

Humans have always been curious about the world around them. The inquiring and imaginative human mind has responded to the wonder and awe of nature in different ways. Science is a dynamic, expanding body of knowledge covering ever new domains of experience. How is this knowledge generated? So activity based learning for science is the very good approach as the various researches done had suggested for primary students through which their base for science will be strong and formed for further development.

❖ **References**

<http://www.asa3.org/ASA/education/teach/active.htm> Retrieved on 21st October 2017 .

http://www.cry.org/resources/pdf/NCRRF/Prabha_Hariharan_2010_Report.pdf, retrieved on 20th OCT 2017

www.informedbynature.org/,<http://en.wikipedia.org/wiki/Concept> retrieved on 22nd OCT 2017

Joshi Anant N., Salunke Kavita S. (2006). **Content Based Methodology**. New Delhi : Prentice Hall of India Private Limited.

Kalra R.M. (2008). **Science Education for Teacher Trainees and Inservice Teachers**. New Delhi : PHI Learning Private Limited.