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A critical review of the content of the Maharashtra State Board (SSC) science text book of 7th grade using Dale`s Cone theory and how can the curriculum can be improved. IntroductionThe Maharashtra State Board of Secondary & Higher Secondary Education, Pune 411004 is an Autonomous Body established under the provisions of the Maharashtra Act No. 41 of 1965. The Maharashtra State Board of Secondary & Higher Secondary Education, conducts the HSC and SSC Examinations in the state of Maharashtra through its nine Divisional Boards located at Pune, Mumbai, Aurangabad, Nasik, Kolhapur, Amravati, Latur, Nagpur and Ratnagiri.

Under the Board there are many schools that conducts examination the number of students appearing for the main examsination is around 17 Lac’s. There are about 21000 schools in the entire state. I had been studying this curriculum during my childhood and I intend to examine the programme and its efficiency according to the Dales cone theory specifically the science 7th grade class. Starting with, I will focus on his ideas about classification and framing in relation to the science textbook and its limitation according to the dales cone theory. I will then explore his ideas and then use the framework to analyse the text. And also suggest where can the improvemnts be made.

The CurriculumAccording to John Dewey progressive education is essentially a view of education that emphasizes the need to learn by doing. Dewey believed that human beings learn through a hands- on’ approach. Also as said by Uchicago “ Students who physically experience scientific concepts understand them more deeply and score better on science tests”. (see folder bath all details for ref.)For my study I will use Edgar Dales cone of Experience and will suggest the various ways in which the science

curriculum can be delivered in a better and experience (hands on) based learning. The Science curriculum The general science textbook that I would be referring in based on a new syllabus. The children have gained some knowledge about science from the Environmental Science in Standard 3 to 5.

The science curriculum as a separate book is introduced to the children from 6th std. this is a second year in which the children learn about science as a separate General Science Textbook. The purpose of the textbook is said to Understand and explain to others. The curriculum consists of many activities such as observe and Discuss Use your brain power Find out, Think about it, etc.

The activities Can you recall? and Can you tell? Are ment to revise the science that has already been learnt. The textbook also includes many activities and experiments under the titles Try this and Let’s try this. The students are expected to carry out these activities, experiments and observations with the help of your teachers, parents or classmates.

On some occasions the students have to look for some information on their own by using the library or technology like the Internet. A number of activities that explain the science behind everyday events, has also been given. The students are expected to take their own efforts to use science in everyday life. The learning from the lessons in this textbook not only aims to help children with the studies of higher classes, but will also enable them to do many new things and equip them with many new skills. The aim is also to Understand Science and learn to use it.

The children are also requested to carry out activities related to plants and animals with care in order to avoid doing them any harm or causing them injury. The Maharashtra State Board The board was founded on 1st January 1966 to manage certain events concerning the secondary education in Maharashtra as “ Maharashtra State Secondary Education Boards”. In the year 1976, this Act was revised and the name of Maharashtra Board was changed to its current name, which is “ Maharashtra State Board Of Secondary And Higher Secondary Education”. (ref: https://byjus. com/msbshse/)A student studies eight subjects out of which there are three languages that is English, Marathi and Hindi out of these three Hindi is optional to other languages like French, Sanskrit, etc. and the other two are compulsory. Except of these three subjects the children also study General Science, History & Civics, Geography and Mathematics.

Also the student has subjects like Computer education and Physical education. At the primary level, for classes 1-8, the Maharashtra State Council of Research and Training (MSCERT) is responsible for the development and modification of curriculum. . (ref: http://ccs. in/internship_papers/2005/11.

%20CET%20Policy%20in%20Maharashtra. pdf) The Government of Maharashtra introduced the 10+2+3 system in providing for a uniform pattern of structure all across the state. The break up of the ten year school education is: primary stage – classes I-IV, upper-primary stage – classes V-VIII, and secondary stage – classes IX-X.

After passing the secondary examination, conducted by the Maharashtra State Board of Secondary and Higher Secondary Education at the end of class X, a student is eligible for admission to a general education secondary school, an Industrial Training Institute (ITI), or even a technical school. The +2 stage comprising class XI and XII was introduced in 1975-76. This stage is popularly known as Junior college and is either attached to a secondary school at the higher secondary stage, or in most cases is under a degree college as the +2 stage. At the end of 12 years, a student is eligible to join a bachelor’s degree course of three years for a graduation degree. (ref: http://ccs.

in/internship_papers/2005/11.%20CET%20Policy%20in%20Maharashtra. pdf)http://ebalbharati. in/main/PublicHome. aspx Edgar DaleDale’s Cone of Experience is a model that incorporates several theories related to instructional design and learning processes. During the 1960s, Edgar Dale theorized that learners retain more information by what they “ do” as opposed to what is “ heard”, “ read” or “ observed”. His research led to the development of the Cone of Experience.

Today, this “ learning by doing” has become known as “ experiential learning” or “ action learning”. (ref: Heidi Milia Anderson, Ph. D., Assistant Dean for Education Innovation, University of Kentucky)Dales cone of experience consists of 10 stages from top to bottom ad from abstraction to concrete are as follows: verbal symbols, visual symbols, radio recordings; still pictures, motion pictures, exhibits, field trips, demonstrations, dramatic presentations, contrived experience, direct purposeful experience. 1.

Direct Purposeful Experience: this is at the base of the cone which comprises of real life experience such as taking the students to a bank, taking them on a trip or performing a laboratory experiment. But we cannot always have a direct, concrete experience. It has to be combined with some degree of abstraction. 2. Contrived Experience: this is the second stage while going to towards abstraction. In this a teacher can use working models.

It can differ in size or complexity from that of an original one. In case of teaching purpose its like " editing" the real thing, editing inorder to make the reality grasp easily. For example a gasoline refinery spread over many acres may be very puzzling to a student. It is too much for the eye to take in. But a working model of that refinery can make the processes far simpler to understand. The teacher can also use mock-up, a mock-up is a device which changes and simplifies the details of the real object in order to make it more teachable.

It simplifies by eliminating un necessary detail. It emphasizes the key points. Undoubtedly this relatively new teaching device will be increasingly used both in schools. 3.

Dramatic Presentations: There are many things we cannot possibly experience. Restrictions of time and place make it impossible for us as teachers. Also we cannot experience something that has already happened. some ideas must be somewhat abstract and symbolic. Dramatic participation can help us get as close as possible to certain realities that we cannot reach at first-hand.

The students can be made to participate in a reconstructed experience, not the original one. 4. Demonstrations: A demonstration is another way in which the students can see how certain things are done. For example a science teacher demonstrates the splitting of hyderogen and oxygen using electrolysis.

In this a student mostly watches the demonstration and sometimes he may be asked to do what he has seen