



Pati

A primary learning tool

Pati is a tool that aids in the learning process and values orality and memorization. Pati is actually slate, a grey metamorphic rock which is cut into thin slices along the grain and polished and cut into small pieces and then encased in a frame of wood, plastic, or metal to avoid chipping. A slate pencil made from a shale or chalk is used to write on the slate board and a piece of cloth or slate sponge is used to clean it. The ease with which the written information is erased makes Pati very exclusive. The simple idea of temporary taking down information and erasing it whenever required and making slate reusable again is translated into modern devices such as electronic slate, tablet or i-pad. Education experts believe that writing on a slate helps a child develop motor skills, thanks to the continuous demand on eye-hand coordination.

In the Indian educational history, Pati could be considered as a transition in learning method, from an oral tradition towards a text-based culture. The emergence of Pati for writing and then its decline over a period of time actually reflects the transformations that were brought about in the system of education since the ancient times which is the result of changes and transformations in the social contexts i.e. during the ancient, medieval, early modern and colonial era.

In the olden days, there was no formal education in India. A father passed on knowledge, primarily related to his occupation, to his child. Much later, two systems of education emerged – Vedic and Buddhist. The Vedic system revolved around the Vedas, Vedangas and Upanishads, while the Buddhist system preached the thoughts of the major Buddhist schools. The method of teaching and learning consisted of memorization, critical analysis, introspection, storytelling, question and answer method, hand-on method, seminars etc. Students were taught how to train their mind and body. Evaluation used to take place in the form of debates and discussions. Teaching was largely oral and students remembered and mediated upon what was taught in class. Thus, devices for temporarily storing information were not required. Gurukul, Ashram, Vidyapeetha, Matha, Vihara these were the residential learning centres.

At this time, the common method for teaching the script was to write a letter on board and have the students shout its name as they wrote it on sand / ground with a stick or finger. For more advanced students, the teacher wrote on a palm leaf with iron stylus and the student had to trace the letters with charcoal ink, this could be later rubbed out so that the leaf could be used over and over again, to teach writing letters in proper size and proportion. Later the child practiced his letter writing on plantain leaves until he was ready to learn how to write on more expensive palm leaves. In this system knowledge was acquired through logical thinking and debates and discussions.

In later period, a wooden board, called phalaka, was widely used for writing in ancient India. On it characters were written with ink or chalk (pandu-lekha). Phalaka was used by the students for learning to write alphabets and also for doing elementary calculations. Later on the term pati came to represent a wooden board and the word patiganita, i.e. calculation done on a pati, came into use.. Mathematical calculation was also called dhuli-karma (dust-work), because the figures were written on dust spread on wooden boards or on the ground. A finger of the hand or a piece of reed was used to write on the layer of the dust.

In the 10th century A.D. i.e. medieval period in India, Muslim system of education was predominant. Nearly all the centers of higher learning of the Hindus and Buddhists were destroyed. The Islamic pattern of education, introduced by Arabs and Turks was different to a major extent from the Buddhist and the Brahmanic systems. The students from the elementary level were trained in terms of arithmetic, calculations, weights, measures, shapes and so forth. Therefore, mathematics was regarded as essential. This was also influenced by the Greek traditions inherited by Persia and the Middle East before Islam spread from these regions into India. Their teaching methods included sufficient

use of pati for arithmetic calculation and other learning.

The earliest found reference of pati is , in 11th century Alberuni, the Central Asian savant, writes, “They (Hindus) use black tablets for the children in the schools and write upon them along the long side, not the broad side, writing with a white material from the left to the right”

Around the late 18th century when british rule was established, their prime motive was trading and profit-making. To rule in India, they planned to educate a small section of upper and middle classes to create a middlman between them and the country people. In 19th century most schools taught a curriculum similar to public schools Britain at the time through English as a medium of instruction. Since, at this time, the industrial revolution was at its peak,they needed a workforce. The curriculum was designed in such a way which provided information about these four subjects “STEM” science, technology, engineering and mathematics. After the American Civil War, the cost of paper decreased and it became inexpensive. Slates were used less frequently as students began writing on paper. The note taking allowed students to store, learn and think about information provided by teacher and were able to create ‘stable external memory’ which supplemented their curriculum. As we know when new technologies appear they either supplement or replace those which are already established. The notebook in its various forms allowed students to keep all their work in the same place and continues to be used in the 21st Century because of its versatility. Note taking was very useful in higher classes as it assisted students in expanding information further by connecting them with their prior knowledge.

But, as a primary learning tool, slates are easy for students to use, have low maintenance, and are inexpensive compared to paper. Hence, they are preferred for primary learning i.e. to practise penmanship and drawing. Slates place value on orality and memorization. Slates have the advantage of erasing something easily and rewriting. Whereas, when children use paper, there is lot of wastage as they scribble a lot.

Inspite of pati being the most sustainable means of taking primary education, the sad reality is, today many institutes are making it compulsory for students to use notebooks from nursery level. The irony is on one hand we advocate paper-less work, cashless- digital india to save trees from being felled. On the other, we encourage use of paper for small children and end up wasting paper.

Also even though being an independent nation, the education system and curriculum that we follow for primary and secondary education, is not supplemented by note taking as a learning tool instead it is turning out to be rote learning in most of the cases for the sake of grades and only geating better in theoretical knowledge for the sake of marks. These marks decide one’s fate, eventually leading to further education in generally one of STEM subjects. Such pessimistic attitude towards education does not only inhibit our progress but also holds us back from creativity.

{1}<https://ithihas.wordpress.com/2013/08/28/ancient-indian-education-system-from-the-beginning-to-10th-c-a-d/>

{2} Dr. Radhika Kapur, C. (2018), Research paper on Education in the medieval period

{3} Hartmut Scharfe(2015),Education of Ancient India_ Training in early childhood, Page 80,81.

{4} VPM, Thane (2007), Writing materials in ancient India retrieved from <https://www.vpmthane.org/news/news195.htm>

