

Nai Talim: An Application of Experiential Learning Activity to enhance Attitude of School Students towards Science

Prashant Thote and S. Gowri

Gyanodaya Vidya Mandir

Abstract:

Nai Talim is the ultimate way of learning with skill acquisition, gaining knowledge and learning with practical application. Nai Talim based activity is used to improve the attitude of students towards science. The aim of the present paper is to study the attitude of secondary school students attitude towards science. Research design applied is quasi-experiment. The non-equivalent pre-test, post-test control designs are applied for the present study. The two section of class 8th participated in the present study. Control group consists of 40 students while experimental group consists of 41 students. Data is collected by using attitude scale consisting 18 questions. Result of the study reveals that experiential learning based activity on curriculum may develop positive attitude towards science.

Key Words: Experiential Learning, doing, achievement and colour.

Introduction:

The foundation of Nai Talim is on the theory that work and knowledge are integrated. Nai Talim is a holistic approach for nurturing mind, body and soul by making creative craft, art, community participation activities as the centre of learning. In the present century education must be innovative and it should help students to flourish, participate and demonstrate process to improve the global economy. In present situation “success” means to access, synthesize and to cooperate across differences to solve company problem and to create new knowledge through the use of eco-friendly modern technology.

Experiential learning is acquired through action i.e., by doing, experience, discovery and exploration. Education must be progressive and must have experiential component in lesson. Traditional teaching focus on content and teachers eliminate the opportunities for students to develop their own perception of concept based interaction with information. In progressive educational system quality of experiment is essential.

The progressive educational system has strong foundation of philosophy that privilege experiences that are fruitful and creative.

Experiential learning activities is an approach which provides an opportunity to acquire skills and knowledge through hands on activities, reflect on teaching experience and able to transform knowledge into functional experience in day to day life situation.

Experiential learning method promotes different activities where students can reflect, develop knowledge, skills and attitude and apply to new situations in daily life. Learning must be based on skills. It should transform the learning into useful products and performance that constitutes skills and knowledge.

Learning takes place as a result of experiences in day to day life. Students do not gain knowledge in a similar approach. To enhance quality education, learning climate must be appropriate to meet individual differences. Learning is a continuous process and every individual need to learn and be able to interpret situation by experience under various conditions. Scientific process skills are very same for significant and outcome based learning. The experiential learning activities integrated with scientific skills will have significant impact on social and personal life of an individual.

The most important factor of our educational system is teachers. The effective monitoring and mentoring of teachers on students is stronger than other factors. Individual experiences in class-room are prominent in experiential learning.

Material Required: The following material required for activity.

1. Fabric
2. Pre-stuff
3. Anti-bacterial agent
4. Chemicals

Apparatus: Beaker 2. Sticker 3. PH- meter 4. Electrical Balance 5. Scissor 6. Thermometer 7. Dye tray 8. Electrical Balance 9. Drying Machine 10. Curing

Dye preparation: Dry and fresh raisons of turmeric are considered for extraction. Powder is mixed with de-ionized water. Turmeric solution is obtained in yellowish colour.

Dying Material: Most of the natural dye without mordant has no sustainability. Most of the natural dyes require modernizing chemicals to create affinity between fibers and clothes. In this activity aluminum sulphate is used.

Process of Dying: Cotton fabric is soaked in the mixture of turmeric and alum (mordant) at 1000°C for an hour. Dying is carried out in stainless steel container. Cotton fabric is immersed in dying solution water safe at 40°C . After the completion of dying, rinsing is done with warm and cold de-ionized water by using acetic acid as soft/mild detergent for 10 minutes at 40°C . The sample is dried at room temperature.

Experiential Learning Activities:



Method:

Design: The descriptive and quasi experimental design is used.

Tool: The attitude scale tool comprising of 18 questions on five point likert scale is used.

Sample: Total 81 students participated. Control Group consists of 40 students and Experimental group consists of 41 students. Experimental Group is exposed to experiential learning activities.

Table 1: Likert Scale

Response	Scale Value
Very agree	5
Agree	4
Less Agree	3
Disagree	2
Very disagree	1

Result:

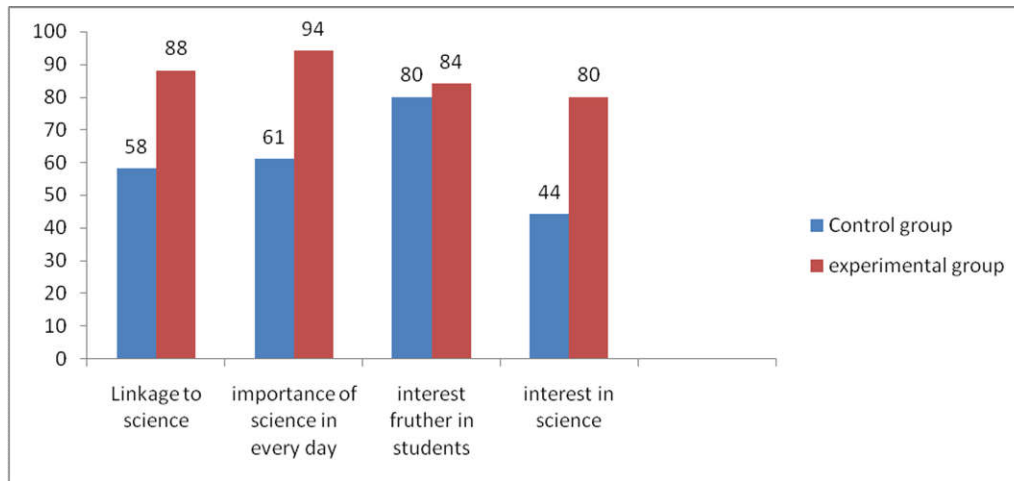


Fig 1: Comparing increased attitude of students on science between control group and experimental group

Result of the present study reveals that attitude towards science by grade 8th students with Nai Talim learning model using hands on activity is significantly high with an average score of 84.6%. It indicates that in all students there is improvement in learning science. The application of Nai Talim /experiential learning based activity improves student’s attitude towards science and is more effective when they learn using the experiential learning of dying fabrics.

The student's attitude towards science has an impact on students' achievement in science, interest and motivation. The student's interest toward science is influenced by parental influence, self-concept, learning environmental and teachers. Result of the study reveals that students' interest in science is shaped by the success of students, motivation, inquisitiveness, active participation and interest. In absence of experiential learning the student feels that science is difficult subject, boring and not much interesting.

Conclusion:

1. Appliance of experiential learning technique in science curriculum can be used effectively.
2. Experiential strategies in teaching science can be effectively used in secondary school. Organizing experiential learning help students to have experience and become interested in science.
3. We have analyzed that Gandhiji's Nai Talim mode have come to the definition of Experiential Learning Activities. It is the basis for selecting and organizing the type of experiential activities which helps students to have interesting experience and become interested in science.
4. The experiential activity is the basis of selecting and organizing the type of experiential learning activities into learning cycle.
5. Learners are exposed to four stages like: concrete experience, abstract conceptualization reflective observation and active experimentation during the process of experiential learning activities.
6. Well organized learning activities will able to teach students the skills to apply knowledge into practice, motivation, positive learning and students are interested in learning.

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