



EXPERIENTIAL LEARNING: ORGANIZING THE EXPERIMENTAL LEARNING ACTIVITIES IN MATHEMATICS

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ABSTRACT

Experiential Learning in Group is more experience to improve knowledge and skills in Mathematics. Experiential Learning is 21st century learning method with practical application for gaining knowledge , skills, values and positive attitude in joyful way of learning.. In the present paper attempt is made to design outdoor activity in Mathematics for grade four students. The objective of Experiential Learning activity was reassessing the knowledge of writing, comparing, ordering, rounding numbers less than or equal to 1 000000. Result of the result reveals that students enjoy the outdoor activities design to learn by pay method. Experiential Learning activities also contribute towards development of ability to communicate and team building .

KEYWORDS: Activity, Mathematics ,Team building and communication .

INTRODUCTION :

Tell me and I forget ,teach me and I remember , Involve me and I will learn” Benjamin Franklin

Experiential Learning based on practical aspects and in educational and learning is key success. It help the students to develop action , skills, reflection, critical and creative thinking, initiative , motivation, curiosity and trust I own action. Experiential Learning is based on activity based learning and experience gain constructionist. Students actively participated in Experiential Learning activities. And basis of previous experience present learning is build. Learning co-operation and collaboration with other students become more efficient. .Experience have fundamental role in learning and learning by doing is important key to respect the success in education. In the progressive approach of education students get freedom of experimentation to attain objectives of learning .In Experiential Learning students have to observed the event and by remembering a similar previous experience reflection on new situation . It is organizing and structuring new knowledge into connected concepts network new knowledge is based on the previous knowledge.

The learning involves the constructive mental model in which information get recognized , rich relationship between new information and old information , get engraved and applied in new situation . According to David Kolb’s Experiential Learning follows four stages of cycle (i) concrete experience (ii) reflective observation (iii) abstract conceptualization (iv) active experimentation.

First sag of cycle is concrete experience , then observation and reflecting on previous experience which leads to formation of abstract concepts (analysis) and conclusion (generalization) which are then used to test hypothesis in future situation the resulting concertized in a new situation .In daily life learning by experience take place. It relies on our understanding acquired by the aware or unaware interrogation of one’s own experience observed in closed connection with existing knowledge/experience. Learning is process in which individual is involved in directing in activities ,in

deliberate manner , in order to reflect , analyzed , transform gaining personal meaning, integrate knowledge constantly discovering possibilities. .The process of acquisition of knowledge is much easy because students able to make connection between theoretical concepts and its practical application .Retention of knowledge is much longer .The motivation and positive attribute is much greater than traditional method. In Experiential Learning students are not only provide an opportunities for practical but also proper feedback also.

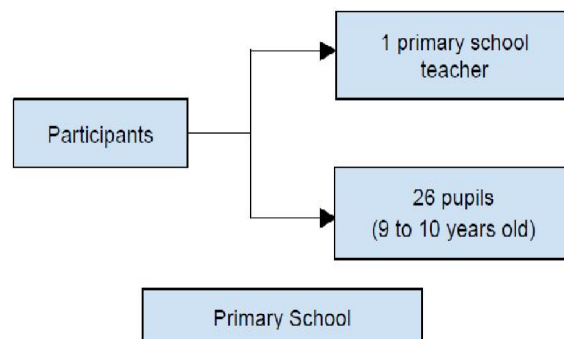
In Experiential Learning full autonomy to students with accountability .Students faces unknown situation /task of real life. In solving problem, students, need to realize do’s and don’ts .This is based on previous experience and knowledge and deeper refection .This is transfer of previous learning into new situation .

ROLE OF TEACHER :

In traditional teaching methodology teacher is authoiesed in transforming knowledge but in Experiential Learning role of teacher is quite different. Role of teacher as counsellor to provide to provide counseling is selecting teaching –learning experiences, provide adequate resources , creative environment for physical and emotional safety and acts as a facilitates in learning process. Teacher must encourages , motivate students for spontaneous learning process involves students in difficult real life situation and discovery to observe the connection between one contest to together, thereby and in application and motivate students to initiate action and response to situation .In Experiential Learning observation heuristic conversation , brainstorming , case studies, role playing, educational games , stimulation ,presentation and group –work catalyzes students. Teachers must carefully select the learning experience with greater carrying potential , situation /problem must provide students an opportunities of practice go dipper emerging,gain new skills challenging new unpredictable problem /situation learning , generating new learning from natural consequences from mistakes and success .Role of teacher is as guide, facilitators, philosopher and friend Teacher should provide positive learning environment .

ROLE OF STUDENTS :

The central point in Experiential Learning is child/students it is child centered learning. Students actively participation, encourage to present question , to investigate , to experiments show curiosity , to be creative , to initiative should responsibility responses to stimuli , make decision and responsible for results . New learning must based on reflections it is essentials and necessary elements of Experiential Learning . Reflection based on analysis turn to good values , nurture critical thinking and synthesis ability. In Experiential Learning students experiments must be based to applied practically in new real life situation. Emotional , intellectual , social , physical , involvement of student trigger significant change in level of cognitive , affective and social acquisition .The relation between students are more serried and become stronger .On the basis of previous knowledge new experience is build. During Experiential Learning students is major beneficiary of Experiential Learning activities which make students responsible and motivated .



PEDAGOGICAL APPROACHES :

Teaching natural concepts to students of primary classes are still on the concrete operation phase, Learning mostly takes through intuition and direct manipulation of object. In fourth grade of primary classes, students conceptual understanding from general to abstract took place when teaching -learning based on understanding of reality.

Hence experiential learning activities plane for math's subject of grade fourth on stressing the number sequences by performing experiential learning activities in nature. It provides stimuli to students to read, write big numbers e.g how much is weight of the Earth, distance between the Earth and the Moon and counting trees in school garden.

Description of experiential learning:

Through experiential learning activities in Mathematics, students actively participate in activities. Students can enjoy and have joyful learning in useful context .

Planning of experiential learning

Step One:

- ❖ As students of grade four fails to understand concepts of numbers consisting two or more classes .
- ❖ Hence out door experiential learning activities was developed.

Step One: The following objectives were framed to guide the study

- ❖ **Primary :** Assessing knowledge of writing , comparing, ordering, rounding, numbers equal to or less than 1000000.
- ❖ **Secondary :**
 - To frame an enclosed message converting the numbers written in roman numbers into Arabic numbers.
 - The make confident ability to communicate through on experiential learning in Mathematics .

Concrete work :

Material required : Sticker with numbers, nails, drills, token, sticker, flipchart, markers.

Procedure:

- **Teacher and students participation in** experiential learning activities in Mathematics .
- Teacher given explanation to the students that area, certain numbers are hidden and that there is one number of each of them .
- Once, students find the number students will stick to it their clothing and from that moment they represents the numbers . .
- Teacher continue with experiential learning activities with sequencing . Assessing the students is able to operate with numbers.
- The sequencing of requirement
 - Please sit in ascending order
 - Please sit in descending.
 - Number 24, 500 which is the your predecessor and your successor.
 - Number 500000 which is the your predecessor and your successor.
- Students were requested to sit in circle and ask to follow a different set of requirement
 - Please take one step forward lowest old number written with four digit .
 - Please take one step forwards longest natural number written with digit five . column, one column would represents the even and other color will represents odd numbers. The rules are explained .
 - **Example one :** I am number 27,5000 and I am bigger than you because I have more number , I am numbers 6750 and I am smaller than you because I have less figures.

- **Example Two** : I am number 23,3200 and I am bigger than you, because I have hundred figure bigger. I am number 231000 I am smaller than you because I have hundred figure smaller .

DISCUSSION

Step Fourth : It is been observed that students were very careful when they were asked to sit in ascending and descending order as compared with same kind of activities performed in class-rooms .Result of the reveals that students harmonizing with nature increased the interaction flexibility between students-students and student –teacher.

Step -five: During experiential learning activities students established communication with one other , while explaining the rules of the games on comparing number and decide a message written in roman numbers .

Reflection :

- To have conceptual understanding of numbers , it is important for teachers to design experiential learning activities to put students in concrete situation of learning .
- As a teacher we should provide the students rich and varied learning materials that act as a catalyst for visual, tactile , auditory to provide conceptual understanding number using experiential learning activities .
- The experiential learning activities also contribute development of ability to communicate .
- Outdoor experiential learning activities act as stimulator to students .

Students Opinion :

The following are opinion of some students on the experiential learning activities

- Today's experiential learning activities were very special for me and I like it. We work in groups and act as a team and team members . We learn the mathematics what we suppose to learn in class . We assume that Mathematics can be learned now anywhere .
- We like the chasing clips , conservation between numbers and decipher Roman numbers .Learning Math's for us was fun during experiential learning activities.
- Today, I like Math's never before. Experiential learning activities were joyful for me .I worked today it was sometimes else and sometimes new .
- Today's outdoor experiential learning activities were fun for learning .I like the activities because we have transformed Mathematics in a fun game in school park .

Future scope:

- This type of outdoor experiential learning activities may be used in Grade I to III also in Pre-Primary Classes where students can operate with lower numbers .'
- Learning materials like leaves, stones , stickers for making crowns so that students can learn in joyful way the notion of numbers

CONCLUSION :

Experiential Learning is the methodology in technique in secondary school for achieving the learning objectives and joyful learning. Our nation is developing nation students not only learn in classrooms but also help parents household activities by Experiential Learning activities .Bringing scientific knowledge into practical application is a highly practical solution .Organization by Experiential and develop interest in Mathematics .

We have analyzed David Kolb's Experiential Learning and clearly define destination of Experiential Learning. The experiential activities model is basic for selecting and organization the type of learning activities , it is important to ensure that students go through four stages of learning

- (i) Concrete experience
- (ii) Reflective observation

(iii) Abstract conceptualization

(iv) Active experimentation

Well organized activities will nurture students the skills to apply knowledge into practice create positive learning motivation increase students interest in learning, create happy classrooms. The example of Experiential Learning in Mathematics will bring high effectiveness to the development of students' abilities.

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