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Learning Achievement**

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*International Seminar on
Researches in School Effectiveness at Primary Stage
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CREATIVE ACTIVITIES : A STRATEGY TOWARDS LEARNING ACHIEVEMENT

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INTRODUCTION

There has been extensive and intensive experimentation, development and intervention programmes tried through out the world in the recent times to make teaching-learning process effective in the primary classes. In India, a large number of educationists, teachers and researchers have attempted to uplift the quality of classroom processes. Still they are under attack as they are away to get a definite answer. The country has placed tremendous faith in the education system for development of the individual. In the recent years, the primary schools has multiplied itself in number but the quality of teaching learning in the classroom has gone down and realisation of the school objectives has become remote. Obviously a large gap has arisen between what happens in the classroom and what should happen.

The existing state of classroom interventions is well known. The entire curriculum transaction is built around the textbook. Our primary teachers are mostly rule bound, rigid and stereotyped. They emphasise on single correct unimaginary solution to problems and expect responses in prescribed manner. They forbid spontaneity and crush joyful inquisitiveness and imaginary responses of young children. They ask for structured and closed-type answers written in the book. In short, the existing teaching-learning is text-bound and teacher-bound that results development of narrow range of abilities in our children.

A RATIONAL APPROACH

In order to improve the achievement of the learners in school subjects and to develop finer abilities in our children, a rational approach in classroom teaching is essential. The theory of creativity that has emerged during the last few decades offers a realistic approach in the classroom that appears natural for development of wide range of abilities and subject competencies among the children. Development of creativity in children has long been a prime purpose of education. Perhaps, what is new is the growing realisation that creativity is not the advantage of the chosen few, but a basic human endowment present among all in different measures. The importance of creativity in the education of the child has long been felt by educationists of the country. Reports of Education Commission (1964 -66), National Policy on Education and Programme of Action (1986,1992), NCERT Curriculum Framework (1987) have all along emphasised the need to develop in the child spontaneity, curiosity, independence in thinking, originality, courage to ask questions, scientific temper and, in short, creative thinking skills and abilities. The child-centred approach to education, as articulated by the National Policy on Education, implies creative approaches to teaching and learning, which are natural ways of learning for young children. Creative teaching-learning provides opportunities for children to think, feel, imagine, inquire, play around with numerous possibilities, test ideas against the facts, and so on. A creative teaching learning process is friendly, informal, non-threatening, accepting, motivating. Studies have shown that creative thinking-learning contributes to students' involvement and participation in creative activities and liking for the school. These make the teaching-learning process more responsive to children's potentialities and thus may enhance among other things 'learning to learn'.

This greatest asset of human being is grossly neglected in our classrooms. The creative talents are not nurtured in our schools especially in large-sized classes and multigrade settings. The apathy for creative teaching may be due to ignorance of an average primary teacher, rigidity in the education

system, lack of adequate research in developing teaching technique and failure in the administration in diffusing new methods (Kothari Commission. 1966). Experts in the field opine that subject related creative activities ensure learning joyful, self-motivating, effective and develop divergent thinking abilities among the children. To prove this view, numerous intervention programmes have been developed to make learning meaningful but creative teaching-learning has edge over others in many respects. In this process of learning, the thinker is led to restructuring of the ideas. It improves imaginative power, problem-solving ability and self-expression.

In view of the above, the investigator has attempted this study as described below.

OBJECTIVES

The major objectives of the study were to

1. Organise subject related concepts in blended form for creative activities
2. Develop divergent thinking in the learners through these activities
3. Help the learners to learn the concepts through these activities
4. Train the learners for carrying out self-learning activities

METHODOLOGY OF THE STUDY

Design

In this study subject-related creative activities are the independent variables and the learning achievement, divergent thinking and extent of self-learning ability are the dependent variables.

Single group post-test design is used in the study.

Sample

Forty-six learners (28 boys and 18 girls) of class II studying in a rural school in DPEP district of Dhenkanal, Orissa constituted sample of the study.

Procedure Followed

1. Creative activities could be developed in each subject area separately for achievement in learning and divergent thinking. In the present study, fitting to the multigrade situation, economising time and energy of the teacher, blended concepts of different subjects of class II were identified. On the basis of these contents, different concepts of creativity emerge such as verbal creativity, figural or non-verbal creativity, scientific creativity, literary creativity, artistic creativity etc. The concepts, subjects and the aims of each creative activity are shown in table 1.

Table 1. Objectives of each Creative Activity through blending of concepts derived from different subject areas

Concept	Subject Area	Aims of the Creative Activity
1. Clothes	Language	Learn to make words
	Env. Studies	Frame words of EVS and draw pictures
	Mathematics	Guess the cost of the clothes
	Art education	Decoration of pictures of clothes
2. Houses	Language	Learn to make words
	Env. Studies	Draw different types of houses
	Mathematics	Use geometrical figures
	Art Education	Decorate the houses
3. Animals	Language	Writing of words
	Env. Studies	Usefulness of the animals
	Mathematics	Learn shapes and sizes
	Art Education	Draw and colour the pictures

4. Public Places/buildings	Language	Speak and write simple sentences
	Env. Studies	Use of public places
	Mathematics	Learn distance- far and near
	Art Education	Drawing of market place

5. Coins/ Currency notes	Language	Understanding oral instructions for carrying activities
	Env. Studies	Purchase of articles through money
	Mathematics	Mathematical skills using coins and notes
	Art Education	Drawing of coins and currency notes

2. On the basis of above planning, different concept related creative activities such as product improvement, square test, consequences, circles, unusual uses, completion of pictures, asking questions were developed. These activities were conducted in three different conditions. They were 'teacher guided', teacher supervised and without teacher supervision' situations. The creative activities for learning concepts under the above situations are presented in table 2.

Table 2. Details of Creative Activities conducted for learning achievement

<u>Teacher Guided Activity</u>	<u>Creative Activities</u>	
	<u>Teacher Supervised</u> (20 minutes time allowed)	<u>Without Teacher</u> (No time limit)
<u>1. Clothes</u>		
Pupils were asked to tell different types of clothes they wear in different seasons, materials used in the clothes. The Teacher also adds some more words to make pupil to understand the game.	Pupils were asked to write as many clothes that they can purchase by paying Rs. 200/-.	Pupils were asked to draw and colour different types of clothes.

2. Houses

Pupils were asked to write different types of houses that they know.	They were asked to list the possible materials used in those houses.	A sheet of paper containing 20 squares were given to the pupils to draw different types of houses as many as possible keeping square as a part of it.
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3. Animals

Pupils were asked to name the animals and birds that they know.	Think and write the number of ways that the domestic animals are helpful to us.	Draw the pictures of animals and birds keeping the given oval and circles as element.
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4. Public places/Buildings

Pupils were asked to name the public places/buildings that are in their neighborhood and their main activities.	Teacher asked to write what other activities you do at school apart from reading.	Draw pictures of a market place showing different shops.
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5. Coins/ Currency notes

Pupils were asked to write important materials purchased by money.	Pupils were asked to write different combinations of coin/notes to make two rupees.	Draw and label different coins and currency notes.
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3. The teacher initiated the activities for each concept giving directions as follows :

“To-day let us play some interesting games. They will give you a chance to your imagination. Remember, this is not a test. There is no wrong or right answers... So work on your own and let us see how many ideas you can think of Feel free to give as many responses as you can. Give those kinds of responses which nobody of else in your class can think of giving. Make your responses clever and interesting. In case you run out of ideas do not give up. Continue to think and you may have some more ideas that you can add to your list. Try to work as fast as you can.” The environment was joyful, game-like situation for eliciting divergent and newness in thinking for each activity. Emphasis was given to think all the things in the world around them.

4. The pupils were provided sufficient time for learning and carry out their independent activities with novel ideas. It was ensured that each pupil could follow the directions, task to be undertaken and the way responses were to be given. Therefore, for each creative activity, the sequence 'Teacher guided activity -Teacher supervised activity- self learning activity' was followed.

5. During the experiment, the teacher encouraged for self-thinking and free flow for large number of unrepetitive, flexible and uncommon responses of the pupils. Whenever, any new ideas were shown by the pupils, they were reinforced. The pupils were instructed to carry their thinking even after the school hours.

RESULTS

The responses given by the pupils in all the five activities were scored for number of correct responses (fluency) and classes of responses (flexibility). The responses were not scored for originality and elaboration, the other two creative abilities as they were not in the purview of the study. In view of the objectives specified earlier, the data obtained were analysed.

Development of Divergent Thinking

In order to study the above objective, each activity had ten flexibility categories and the responses were given flexibility category numbers according to its belongingness. Mean flexibility score of all the teacher supervised and unsupervised activities were computed. Divergent thinking score is equated to the flexibility score as assumed in the experiment. The mean divergent thinking scores of each concept are presented in table 3.

Table 3. Mean Divergent Scores of the Concepts (N=46)

Concept	Teacher Supervised (Verbal Flexibility)	Self-learning (Non-verbal Flexibility)
1. Clothes	4.38	4.00
2. Houses	4.46	4.50
3. Animals	4.51	4.62
4. Public place/Buildings	5.01	4.65
5. Coins /Currency notes	5.02	5.50

The table 3 reveals that the mean divergent thinking score gradually increases from concept 1 to 5 in both teacher-supervised and self-learning sessions. This means divergent thinking of the pupil increases when the creative activities are conducted in the class during both the sessions. The teacher supervised activities were mostly verbal and self-learning activities were figural in nature. Though the mean divergent thinking scores in verbal and non-verbal activities are numerically similar, the range of verbal divergent thinking is less in comparison to figural thinking. It can be concluded that the learners can improve their divergent thinking ability through subject related creative activities.

Learning Achievement Through Creative Activities

To study the extent of learning concepts through the creative activities, criterion levels of learning for each concept were fixed. They were number of correct responses in both the situations (teacher supervised and unsupervised). The criterion level for each concept was fixed based on of mastery level learning. Responses given by the pupils in both verbal and figural activities were scored for their correctness. Each correct response was allotted 1 mark, termed as fluency score. Judgment of masters and nonmasters were made based on the criterion level learning of the concepts. Percentages of attainment of mastery in both the situations are shown in table 4.

Table 4. Percentages of Masters (Concepts Learned)

Concepts	Teacher Supervised (Verbal Learning)	Teacher Unsupervised (Figural Learning)
1. Clothes	80.3	82.1
2. Houses	81.1	92.5
3. Animals	78.2	95.1
4. Public place/Building	85.5	79.3
5. Coins/ Currency notes	60.3	96.4

Table 4 reveals that more than 80% of the learners have achieved the mastery level learning in the concepts ‘Clothes, Houses and Public places/buildings’ in teacher supervised sessions. The learners are below the criterion level achievement in concepts ‘ Animals and Coins /currency notes’. The reason may be the pupils are less exposed to the domestic animals and are not given opportunity to transact money in the market. Their performance may be due to lack of training of such activities. In self-learning sessions, the performances of the learners are tremendous and are above the 80% criterion level in all the concepts. This means most of the learners are masters in their figural creative activities and they are better than verbal activities. The verbal learning is less in comparison to figural learning may be due to lack of self-expression in their language. It can be inferred that the pupils performed better under self-learning situations and figural activities. Through language training their self-expression can be improved.

Pupils Carry out Independent Activities

One of the objective of the study was to train the pupils to carry out their learning activities independently. The pupils become self-motivated, self-expressive, and self-confident by suitably prepared creative activities. It helps to carry their learning activities without help and supervision.

It is found that the pupils were ignorant or not trained to do independent activities and unsupervised activities at the beginning. Thirty-six out of forty six pupils needed initial help and guidance for self-thinking, self-motivation to diversify their thinking in all the directions. When the experiment continued, the pupils were trained gradually what is expected of them. Towards end of the experiment it is found that about six of the pupils who still needed guidance to carry out their learning activities. Other forty pupils were trained to a large extent to respond to these creative activities of their own. It can be inferred that if more creative activities are conducted and become a part of teaching-learning process, almost all the pupils will be trained to carry out their learning activities.

MAJOR OUTCOMES

These are some of the major outcomes of the study:

1. Concepts of various school subjects could be blended and integrated to form conjugate concepts. Appropriate creative activities (verbal and figural) could be planned for attainment of the concepts . The creative activities were meticulously developed, sequenced and conducted.
2. Divergent productive thinking (verbal and figural) in the pupils was developed gradually from activity 1 to 5 through these activities. Development of figural divergent thinking is quicker in comparison to verbal divergent thinking. The increasing trend may continue for some more activities.
3. Pupils have learned the concepts up to the mastery level or approximate to that in both types of activities. The deficit may be due to deficiency in expressive language and exposure.
4. More learners were gradually self-motivated and were engaged silently in their activities even during the unsupervised period.

IMPLICATIONS OF FINDINGS FOR SCHOOL EFFECTIVENESS

The outcomes of the study have the implications for the school effectiveness as following :

1. At the primary level, teaching of both, the facts and as well as thinking processes, is equally important. Therefore, the teacher has to analyse the content of each school subject and decide which topics are more suitable for the development of convergent and critical thinking abilities and which units can be used more effectively for the development of creative thinking abilities. While selecting the topics from different subjects for creative teaching, the teacher will have to consider the age and grade of the students, nature of the subject, abilities to be developed and objectives to be achieved. Further, the teacher becomes resourceful - he develops his abilities and prepares activities for divergent responses, uses wasteful, familiar objects as teaching learning medium and he plays the role expected of him.
2. Pupil gives voluntarily a large number of responses that are flexible and uncommon and may be new to the group. He/she draws a number of pictures and figures of his/her interest. There is continuous flow of ideas to record without wrong or right answers. The process deals with concrete and friendly items developing self-confidence, motivation for self-learning and independent thinking. A 'creative relationship' between the teacher and pupils is established.
3. Learning environment in the class becomes game-like, enjoyable, self-paced and learner-centered. The pupils are self-motivated so that their divergent thinking continues even after school hours.
4. Looking to the problems of large-sized classes, this strategy seems to be more appropriate. Individualisation is taken care and the teacher is less pressed.
5. In multigrade situation, where the teacher runs short of time, unsupervised time for one class can be used for supervision of other classes.

It can be concluded that use of creative activities for learning achievements are more relevant for large-sized classes and multigrade situations. Fluency and flexibility will be automatically included in most of the teaching-learning strategies. Even then some strategies can be devised which particularly aim to promote fluency and flexibility. These will include a) giving uses. (b) suggesting improvement (c) working out consequences, and so on. As a technique *brain storming* is very suitable for promoting fluency and flexibility.

Teachers indeed must be prepared to promote creativity in children. Creativity must find a key place in the regular teacher training programme of our country. However, merely including a topic of creativity in the curriculum of teacher training is not enough. Prospective teachers must also be prepared to use creative approaches in their practice teaching

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