

Development and Evaluation of Creativity Training Programme for Sixth Grade Children

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ONE of the central themes of the research now getting momentum all over the world is to find out the ways for teaching the students how to think creatively rather than what to think. Research studies have shown that almost all children have the potential to think creatively and that this creative potential can be developed through appropriate education and training. The preview of the research review's by Taylor (1959), Parnes and Brunelle (1967), Torrance and Torrance (1973), Mansfield, Busse and Krepelka (1978), Passi and Jarial (1983), and Rose and Lin (1984) reveals that children when trained to think creatively do a much better job in terms of the production of new ideas than those who are not given this kind of training.

A considerable amount of research has been done in recent years to determine ways and means for developing creativity in school children. In this connection, an issue of prime importance is whether or not it is possible to develop some instructional programmes which may help children to take more effective use of their creative potentials. Studies by Covington and Crutchfield (1965), Myers and Torrance (1964, 1965, 1966, 1968), Parnes (1967), Feldhusen, Speedie and Treffinger (1970), Khatena (1970), Callahan and Renjulli (1973, 1974) have found that students can be trained to think more creatively through some sort of instructional programme.

In India, a major problem that has hampered efforts to develop creative thinking in the classroom has been the lack of validated instructional material in the area of creativity training. It is in this context that the present study was designed with the following purposes in mind :

1. To develop a systematic creativity training programme (CTP) for VI grade children.

2. To evaluate the effectiveness of creativity training programme by conducting an experiment.
3. To find out the reactions of students towards the creativity training programme.

SAMPLE

Initially, 357 sixth grade students from two schools constituted the sample. In the final analysis, however, a total of 240 students were studied as the sample was reduced to this figure due to the dropout and omission of subjects during the various stages of the experiment.

TOOLS USED

The following tools were used to collect the data :

1. Jalota's Group Test of General Mental Ability to measure the level of intelligence of the students.
2. Baquer Mehdi's Verbal Test of Creative Thinking to measure verbal fluency, flexibility, originality and composite verbal creativity.
3. Baquer Mehdi's Non-verbal Test of Creative Thinking to measure non-verbal (figural) originality, elaboration and composite non-verbal creativity.
4. Creativity Training Programme (CTP) to provide training to the students in creative thinking. This was developed by the Investigator himself as the part of the study.
5. CTP questionnaire to find out the opinion of the students towards the creativity training programme after they undergo training. This was also prepared by the Investigator.

DEVELOPMENT OF CREATIVITY TRAINING PROGRAMME (CTP)

The Creativity Training Programme was designed to develop various creative thinking abilities (viz. fluency, flexibility, originality and elaboration) in children through various exercises. The programme was developed on the basis of the intellectual activities involved in the divergent production slab of Guilford's Structure of Intellect. The various exercises prepared were classified according to :

- (i) the type of information is involved in each exercise (i.e. Semantic and figural),

- (ii) the ways that information is organized in each exercise (i.e. units, classes, relations, systems, transformations and implications).

The programme was consisted of 12 lessons, six each from sementic and figural content. For each lesson, three or four exercises were prepared. In total, the programme had 42 exercises. Opinion was taken from experts on a rating scale for its face validation. No grading system was developed for the programme as it only intended to develop creative thinking abilities and did not measure any trait.

METHOD

The study employed the experimental method of research. The total sample was divided into two equivalent groups, viz. treatment and non-treatment. The treatment group was given training through the creativity training programme while the non-treatment group had no such training. After administering creativity tests (verbal and non-verbal) before and after the treatment, the effectiveness of the creativity training programme was assessed by analyzing statistically the gain scores on these tests.

EXPERIMENTAL DESIGN AND STATISTICAL ANALYSIS

Three-dimensional factorial design ($2 \times 3 \times 2$) was employed for the analysis of the data. The independent variables were creativity training programme and no programme (CTP vs No Training), the level of intelligence (high vs average vs low), and sex (male vs female). The dependent variables were verbal fluency, verbal flexibility, verbal originality, composite verbal creativity, non-verbal originality, non-verbal elaboration and composite non-verbal creativity. For statistical analysis, three-way analysis of variance of different measures was applied which used the gain score (post-test minus pre-test score) as a unit of analysis. A separate analysis was done for each dependent variable.

FINDINGS AND CONCLUSIONS

The findings of the study lead us to the following conclusions :

1. Creativity training programme (CTP) has been successful in developing various creative thinking abilities in students as the students of the treatment group had significantly greater mean gain score for all the components of verbal creativity (viz. verbal fluency, flexibility, and originality) and non-verbal creativity (viz. non-verbal originality and elaboration) as well as for the

composite verbal and composite non-verbal creativity than did the students of the non-treatment group.

2. As no interaction was found between intelligence level and CTP with respect to various components of creativity, except for verbal originality, it appears that the programme is equally effective for the students of all intelligence level in developing various components of creativity, except for verbal originality.

The presence of interaction in the case of verbal originality reveals that the students of high intelligence level improved their verbal originality more through CTP than the students of average intelligence level, who, in turn, improved more than the students of low intelligence level. Thus, it seems that the creativity training programme developed by the Investigator had been more effective for the students of high and average intelligence level as compared to the students of low intelligence level.

3. The creativity training programme was equally effective for both male and female students as no interaction was found between sex and CTP with respect to any of the components of creativity.
4. As no interaction was found between the level of intelligence, sex and CTP for any of the components of creativity, it appears that CTP is equally effective for both male and female students irrespective of their level of intelligence in developing the various components of creativity. In other words, it can be said that CTP does not have any differential effect for a particular sex having a particular level of intelligence for any of the components of creativity.
5. With regard to the opinion of the students towards the creativity training programme, it seems that CTP had been successful in leaving a favourable impact on the minds of the students as majority of them felt that they had improved their creative thinking abilities after the training.

IMPLICATIONS

The study re-affirms the fact that creative thinking abilities of schools children can be developed by deliberate methods of education and training. One of the common beliefs among teachers and parents has been that the child becomes creative of his own accord. The development of creativity is not a matter of chance, as Torrance somewhere stated. In order to develop creative thinking in children deliberate attempts are necessary. Creativity is not just the by-product of our present educational system, rather a special type of education is needed which gives exclusive attention to its development.

Thus, it is hoped that the study will go a long way to open a new area in the field of education whereby the creative potential of our school children can properly