



ORIGINAL RESEARCH PAPER

Education

A STUDY OF THE IMPACT OF DEBATE ON DIVERGENT THINKING AMONG STUDENT TEACHERS OF COLLEGES OF EDUCATION.

KEY WORDS: Debate, Divergent Thinking, Student teachers, Experimental study

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ABSTRACT

Active teaching strategies like Debates can teach students to research a topic thoroughly, analyze the information critically and construct knowledge from it. It also enables them to examine different perspectives to an issue, take a stand and find ways of defending it. While presenting their arguments before an audience, they do it logically with clarity and confidence and improve their communication skills. With these multi fold benefits if debate is used as a strategy of teaching it transforms their roles as learners, so instead of passively receiving they construct their own knowledge. Divergent thinking is essential for creativity and imagination and helps individuals address situations and problems through innovative perspectives and possibilities. A question arose in the researcher's mind, will the accelerated thinking ignited by an active strategy like academic debate in classroom teaching, impact Divergent Thinking of students? An experimental study was carried out where a module of debate was used to teach topics of the course Educational Management in the one-year B.Ed. course and the researcher made tool on Divergent Thinking was administered to the students. The pre-test and post test scores were compared to see if the debates had an impact on Divergent Thinking of the students' teachers. The post test of the experimental group showed an increase in the scores of Divergent Thinking. The researcher desires to motivate through the finding of this study faculty of B.Ed. and other higher education courses to use debate as a strategy and focus on increasing the Divergent Thinking, as in a dynamic world with ever new challenges coming up it will enable the young generation to improve the quality of their decision making.

INTRODUCTION

Globalization has opened the world markets and changed drastically the manner in which countries communicate with one another in the areas of economics, trade, business and politics. Globalization has impacted even education and as a result today we need to produce global citizens, thus increasing the responsibility of the education system manifold. Education should equip the students with global competencies to be at par with others in the world.

One very essential global competency is acquiring thinking skills that include logical, critical and divergent thinking, enhanced creativity and innovation. Westby (1995) suggests that educators often emphasize learning through direct instruction and acceptance of information and fact instead of questioning, which results in stifling ideas by a teacher's direct or indirect disapproval or avoidance.

In a changing and dynamic world, one encounters complex problems that do not have any precedence for solving them. At such times, the quality of our creativity and imagination, helps us come with solutions that will address these problems and make life better and easier. Divergent Thinking is very essential in this respect as it enables individuals to examine the various perspectives of a problem, and come up with innovative possibilities and solutions for it. Hence, the significance of Divergent thinking cannot be underestimated. Longitudinal research has revealed that 98% of children while in kindergarten are capable of divergent thinking, but this faculty starts declining; by the time they enter the eight to ten age group only 32% are capable of divergent thinking and from 13 to 145 age group only 10% could think divergently. There are many factors responsible for this, but exam-oriented education system and traditional methods of teaching can also be the contributing factors for a decline in Divergent Thinking.

There is a compelling need for the future student teachers to be fully aware of the significance of developing Divergent Thinking among the students and equipping themselves to teach in class in such a way that fosters student's imagination, creativity and Divergent Thinking.

At higher education level the traditional methods of teaching like lectures do not provide much scope for exploring and constructing students own learning experiences as well as knowledge. On the other hand, when Debates are organized

for the students in the classroom, it helps them develop multi-perspective thinking. It teaches them to research a topic thoroughly, analyse information critically, clarify the concepts and construct knowledge from it, examine different perspectives to an issue, take a stand and find ways of defending it, articulate this constructed knowledge before an audience, present the thoughts logically with clarity and confidence, understand and appreciate varied viewpoints, hone communication skills, and thus expand their horizon. It develops their critical thinking skills, leadership qualities, communication, inter personal skills, emotional, social intelligence and activism. It equips them with the skills necessary to survive in the real world.

Besides it stimulates the classroom learning environment and provides students participatory and active learning experiences. Handled deftly, it can be a very potent and powerful strategy of learning. Academic debate is a tool of empowerment for the learners. In the course of teaching and interacting with fellow colleagues and students, certain questions arose in the mind of the researcher, will using an active learning method like Debates at the B.Ed. course impact the thinking skills, especially Divergent Thinking of the student teachers?

Significance Of The Study

The findings of the study are going to be useful to different stakeholders.

For Student Teachers-If Divergent Thinking of student teachers is developed, they will be able to confront problems of classroom instruction and management with confidence, find creative and innovative solutions. It will help them make their classroom teaching vibrant, energised, interesting and find innovative ways to reach out to all kinds of learners in the class.

For Teacher Educators- If Teacher Educators used Debate as an instructional module for the B.Ed. course it will help build multi-faceted teachers who will be able to use Debates in real life as well as effective instructional tools.

For Curriculum Planners-Every five years with revision of the B.Ed syllabus and introduction of new ideas in the practicum the instructional module of Debate can be introduced as a teaching module for class room teaching which can be effectively implemented at the secondary, higher secondary

and graduate level

Statement OfThe Problem

A Study of the Impact of Debate on Divergent Thinking among Student Teachers of Colleges of Education.

Operational Definitions

- **Debate**-In the present study, debate was taken as an activity carried out on the following guidelines

Division of a group of students into the proposing and opposing teams. The groups will defend and oppose the debate statement/question over three rounds, where each speaker speaks for not more than three minutes. The decision of the winning team, best answers and best oppositions will be decided by the moderator and the Debate will be summed up.

- **Divergent thinking**-In the present study Divergent thinking is taken as producing diverse and appropriate responses to an open-ended question or task.

It includes the following component-

a) Fluency of ideas for the present study means maximum number of ideas generated in response to a stimulus in a short period of time.

Objectives OfThe Study

- 1) To compare the pre and post test scores of student teachers of Experimental group on Divergent Thinking on the basis of type of institution
- 2) To compare the post test scores of student teachers of Control and Experimental groups on Divergent Thinking on the basis of type of institution

Hypotheses OfThe Study

Null hypotheses are formulated for the present study.

They are as follows:

- 1) There is no significant difference in the pre and post test scores of student teachers of Experimental group on Divergent Thinking on the basis of type of institution.
- 2) There is no significant difference in the post test scores of student teachers of Control and Experimental groups on Divergent Thinking on the basis of type of institution.

RESEARCH METHODOLOGY

In the present study, the researcher aimed at collecting data by finding the effectiveness of Debate on Divergent Thinking and therefore, the two group Pre-test -Post-test Quasi-Experimental design was used.

Population And Sample

The population of the present study comprised of student teachers of English medium aided and unaided Colleges of Education affiliated to University of Mumbai (One Year B.Ed. course), situated in the city of Mumbai. From the population the sample was selected randomly by the **Simple Random Probability Sampling technique**, through a three-stage selection process. The total sample size was 192 student teachers studying in English medium, aided and unaided Colleges of Education affiliated to University of Mumbai.

Sample Size:

Table 1: Sample size and its distribution in the Control and Experimental groups

	Control	Experimental	Total
Unaided	50	46	96
Aided	48	48	96
Total	98	94	192

Tools Used ForThe Present Study:

The following tools were prepared by the researcher:

- i) Personal Data Sheet
- ii) Questionnaire with Open Ended questions for Divergent Thinking
- iii) Six Debate Modules for three topics from Educational Management

Tool For Divergent Thinking

i) Three sets of Open-ended questions were formed to test Divergent Thinking. Each set had 8 questions. Thus, there were 24 questions in all.

The topics on which the questions were based are as follows:

- 1) Stress Management: Concept and Strategies,
- 2) Democratic Institutional Climate,
- 3) Indian and International Systems of Education.

C. Modules based on Debate

The topics in the course of Educational Management that could be taught through Debates were identified. The debate question/statement were formulated from them. They are given in the table below:

Table Debate question/statement based on the topics from the Syllabus

Sr. No.	Topics	Debate question/statement
1)	Stress Management: Concept and Strategies	Teacher burn out is the norm today
2)	Democratic Institutional Climate	Democratic Climate-A Myth or Reality
3)	Indian and International Systems of Education	Are students from International Boards smarter than those studying in Indian boards?

Format of Debates

1. By referring to various formats of debate that are followed for competitive or academic purpose the format for debate was adapted from **Global Youth Debates**, a global collaborative project provided through 'Connections'. It was modified to include more participants in the debate.

Table Format of Debate Used for the Study

1)First Proposition speaker (3 mins) a) States the topic b) States several Arguments with Reasoning and Evidences. (A-R-E)	2)First Opposition Speaker (3 mins) a)Rebuts first proposition's points b)States her own points using Argument with Reasoning and Evidences.(A-R-E)
3)Second Proposition speaker(3 mins) a) Rebuts first opposition's points b) Brings up new points	4) Second Opposition Speaker(3 mins) a) Rebuts any points not rebutted by the first opposition. b) States any new points using A-R-E
5)Third Proposition speaker(3 mins) a) Rebuts second opposition's points b) Brings up new points	6)Third Opposition Speaker(3 mins) a) Rebuts any points not rebutted by the second opposition. b) States any new points using A-R-E
8)Proposition Rebuttal Speaker(2 min) As the final speaker proposition rebuttal speaker must summarize and weigh the debate and demonstrate why the proposition side has prevailed. No A-R-E to be brought up here. <i>4 members in the proposition team</i>	7)Opposition Rebuttal Speaker (2 min) Rebuttal speaker's duty is to summarize and weigh the debate, to tell why the proposition has failed to carry the motion and why opposition should win. No new arguments should be brought up. Only summarizing <i>4 members in the opposition team</i>

Scoring for Divergent Thinking

The students were to respond to each set of questions briefly.

The responses were to be judged for fluency that is maximum number of responses under different categories.

For Example

Question 1- Suggest ways indiscipline can be tackled.

The responses for this question fall under the following categories:

- i) Innovative ways of handling discipline
- ii) Innovative teaching methods
- iii) Teacher's personality
- iv) Teacher's updated knowledge
- v) Any other

Logically the answers were under the heads from (i) to (iv). If there were relevant points not coming under these headings then they were put under the category (v)-Any other.

In this manner all the responses to the 24 questions were classified under the different categories and were accordingly quantified. The score for each category was 1 point. Hence the minimum score for a question on Divergent Thinking was 1 and maximum score was 5 while for a set the minimum score could be 24 and maximum 96.

Data Collection

The pre-test on Divergent Thinking were administered to both the Experimental and Control groups. The Control groups were taught the three topics through Lecture cum Discussion method, while Debate was used as the strategy for teaching the Experimental group.

From the three selected topics one debate question or statement was formulated, thus three debate questions or statements were formulated in all. Two debate sessions with the same topic were conducted, since the points to be covered under each topic were many. Hence, 6 debates for three topics were conducted in all. After each Debate the researcher summarised the topic and focused on the essential aspects.

The post test on Divergent Thinking was administered at the end of every lecture cum discussion to the Control group, while at the end of the second debate on each topic, to the Experimental group. The tool was scored, tabulated, and analyzed.

Data Analysis And Interpretation

The data was analyzed in two ways descriptive and inferential.

The significant findings of inferential analysis is as follows:

1)Testing Hypothesis 1- There is a significant difference in the pre-test and post-test scores of student teachers of Experimental group on Divergent Thinking of the aided and unaided institution.

The computed t value of the aided institution is 3.56 which is greater than 2.01 at 0.05 level and 2.69 at 0.01 level and hence it is significant at 0.05 and 0.01 levels.

The computed t value of the unaided institution is 11.04, which is greater than the table value 2.01 at 0.05 level and 2.69 at 0.01 level, therefore it is significant at 0.05 and 0.01 levels.

Table 2

Relevant statistics of Significance of difference of post-test scores of Divergent Thinking of the Control and Experimental groups on the basis of type of institution using the ttest

Type of Institution		N	Mean	S.D.	S.E. M.	df	t-value	Sign level(0.05 and 0.01)
Aided Post test	Control	49	40.00	5.42	0.77	94	2.54	0.05

	Experimental	47	42.91	5.83	0.85			Sig.	N.S
Unaided Post test	Control	42	35.79	3.35	0.52	87	11.17	0.05	0.01
	Experimental	47	49.98	7.60	1.11			Sig.	Sig.

2)testing Hypothesis 2- There is significant difference in the pre-test and post-test scores of student teachers of Experimental group on Divergent Thinking of the aided and unaided institution.

The computed t value of aided institution is 3.56 which is greater than 2.01 at 0.05 level and 2.69 at 0.01 level and hence it is significant at 0.05 and 0.01 levels.

The computed t value of unaided institution is 11.04, which is greater than the table value 2.01 at 0.05 level and 2.69 at 0.01 level, therefore it is significant at 0.05 and 0.01 levels. Hence the null hypothesis is not retained.

TABLE 2: Relevant statistics of Significance of difference of pre and post-test of Divergent Thinking of the Experimental group on the basis of type of institution using the t test

Type of Institution		N	Mean	S.D.	S.E. M.	df	t-value	Sign level(0.05 and 0.01)
Aided	Pre	47	39.19	4.332	0.63	46	3.56	0.05 0.01
	Post	47	42.91	5.830	0.85			Sig Sig
Unaided	Pre	47	37.32	4.212	0.61	46	11.04	0.05 0.01
	post	47	49.98	7.603	1.11			Sig Sig

Discussion Of Educational Implications

This experimental study was undertaken with the objective of finding if a strategy like Debate impacts the Divergent Thinking of the student teachers.

On comparing the pre and post-test of the Experimental group on Divergent Thinking there was an increase in the post test achievement of the aided as well as unaided institutions.

Similarly on comparing the post test scores of the Control and Experimental groups it was found the Post-test of Experimental group on Divergent Thinking was higher than Control of the aided and unaided institutions.

This shows the exposure to debate has a positive effect on the process of Divergent Thinking.

Student teachers have to possess concept clarity and content mastery, good communication skills and imagination for devising creative and innovative methods of teaching for success in practice teaching and as teachers, thereafter. But the method of teaching in higher Education is invariably the traditional chalk and talk or lecture method. Active learning strategies that compel students to come out of their comfort zones and participate in constructing their own knowledge and apply it effectively is essential.

Suggestions For Stakeholders

The B.Ed. course prepares student teachers to be effective, efficient and excellent practitioners. In order to accomplish this the colleges of Education need to enhance the competencies and skills of the student teachers and therefore the suggestions are concretely designed.

Recommendations

Students need to actively participate in discussions during lectures, take up Research Projects, presenting papers at college organized Seminars and Conferences, participate in inter collegiate competitions for innovative teaching methods, in Declamations, Group Discussions, online discussion forums and above all not to feel daunted by

debates but actively participate as it will lead to a lot of intended and incidental learning.

Teachers have to organize active learning strategies while training student teachers through Interactive lectures with open ended questions, cooperative learning activities, One minute evaluation, using popular movie clips and short videos for discussion, Case studies, TV and Game shows, Role play and Dramatization in the classroom and other active engaging strategies,

Principals need to promote active learning strategies by motivating their faculty by appreciating them in open forums such as PTA meetings for their initiatives, invite experts from different fields, organize Video Conferences with experts from different parts of the country and world and encourage the student teachers to engage in dialogues with them.

Policy makers should make active learning strategies a mandatory and intrinsic part of a professional course like B.Ed. where such learning experiences not only bring out the best out of the student teachers but also train them to use such strategies with their young students in schools.

Above all the potential of Debate needs to be fully exploited; instead of organizing it as a cocurricular activity it needs to become an intrinsic part of teaching and learning,

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