

A STUDY OF DEDUCTIVE & INDUCTIVE THINKING OF TEACHERS IN RELATION TO THEIR CLASSROOM BEHAVIOURS AT SECONDARY LEVEL

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Abstract:

Thinking and classroom behavior of the teachers are two areas that are getting attention. This interest has been fed by the new knowledge that thinking skills and classroom behavior of the teachers are two most important aspects that enhance the quality of teaching. Thinking of teachers plays a significant role to make the teaching effective. During teaching the teacher uses different teaching methods and strategies, thinking skills and do certain classroom behavior and all these actions affect their teaching behavior. Thinking determines how a teacher will behave in the classroom. Deductive & inductive thinking are the two forms of thinking that help the teachers to present the content in a unique way. This unique way of content presentation affects the classroom behavior of teachers and enhance the teaching effectiveness. The present study finds the relationship between deductive and inductive thinking of teachers and their classroom behaviors. The result showed that the teachers whose classroom behavior is effective are using deductive & inductive thinking skills in the class.

Thinking and classroom behaviors of the teachers are two areas that are getting attention. This interest has been fed by the new knowledge that thinking skills and classroom behaviors of the teachers are two most important aspects that enhance the quality of teaching. Thinking of teachers is a key to effective teaching. Teaching does not conform to the methods that are described in the books but teaching is one of the various ways of imparting knowledge. During teaching the teacher uses different teaching methods and strategies, thinking skills and do certain classroom behaviors and all these actions affect their teaching behaviors. Thinking determines how a teacher will behave in the classroom. Teacher's planning of the lesson, presentation of lesson, classroom management, etc determines the effectiveness of the teaching.

It would seem reasonable to assume that the way teachers thinking influence their classroom behavior. However, recently the teachers' thoughts and actions have given wide attention. All the teaching behaviours reflect the images of teachers' thinking pattern. Thinking is a mental process that analyses and synthesizes the phenomena that further help in the process of formulating of problems that aims at solving problems or helps in the process of solving a problem. Thinking facilitates us in the process of decision making in order to fulfill a desire, searches for the meaning of the word and generate ideas or helps us in the process of generating ideas.

Teachers' way of using thinking skills helps them to present the content in an effective way. Some teachers present the content proceeding the way of general conclusion to the particular. And some

teachers present proceeding particular (specific) to general. These two different methods help the students to think into two different ways. Broadly speaking sometimes teacher use the deductive thinking and sometimes inductive thinking to present content in the classroom. These two ways of thinking skills enhance the teaching effectiveness of teachers. Singh (1978);

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(Chaudhary (1982) concluded that creative thinking was found to influence classroom verbal behavior of teachers.

Need and Significance of the Study

The greatest challenge that the education system is facing is the expertise of teachers. When we talk about the quality of education, we keep in mind the teacher and his/ her teaching effectiveness. Teachers' cognitive map and his classroom behavior are two component of effective teaching. Teacher's thinking effects the teachers' perception, classroom behavior, teaching effectiveness, classroom performance, skills of content presentation, classroom management etc. The development and influence of teachers' thinking has increase interest of research as teacher has the pivotal position in any education system. Education Commission Report (1964-66) rightly said, "even the best curriculum and the most perfect syllabus remain dead unless quickened into life by the right methods of teaching and the right kind of teachers". It is the time to produce the empowered teachers who think invariably to enhance the teaching effectiveness. Sometimes the teacher presents the content inductively, presenting the examples first and then establish the rules, sometimes deductively presenting the rules and then establish the rules with the follow on examples. These thinking strategies help the teachers to enhance the effectiveness of their teaching. Most of the researches on teachers' classroom behaviours focused on self efficacy, academic achievement, attitude, interest, personality traits etc. (Flynt(2008); Rebocca et all (2003); Roy(1980). There are very few researches that focused on thinking and classroom behavior of teachers. Therefore teachers' thinking is one of the indispensable need to enhance the teaching effectiveness that includes the various classroom behaviours to be present. The present study is an attempt to see the relationship between deductive and inductive thinking and classroom behavior of teachers.

Objectives

The following objectives have been framed for the study:

1. To study the deductive & inductive thinking of teachers at secondary level.

2. To study the classroom behaviours of teachers at secondary level.
3. To find out relation between deductive and inductive thinking of teachers and their classroom behaviours at secondary level.

Hypotheses

To achieve the above objectives the following hypotheses were formulated.

1. There is no significant relationship between deductive& inductive thinking of teachers and their classroom behaviour on 'skill of planning' at secondary level.
2. There is no significant relationship between deductive& inductive thinking of teachers and their classroom behaviour on 'skill of presentation' at secondary level.
3. There is no significant relationship between deductive & inductive thinking of teachers and their classroom behaviour on 'skill of closing' at secondary level.
4. There is no significant relationship between deductive& inductive thinking of teachers and their classroom behaviour on 'skill of evaluation' at secondary level.
5. There is no significant relationship between deductive& inductive thinking of teachers and their classroom behaviour on 'skill of managerial' at secondary level.

Methodology

For the present investigation, the researcher used the Normative Research Survey Method followed by observation.

Population and Sampling:

For this research study a simple random sampling technique was used. Ten secondary schools were selected randomly from the list of secondary schools of UP Board and CBSE Board of District Ghaziabad. Around 100 secondary school teachers were selected by simple random sampling technique.

Tools

General Teaching Competency Scale (GTC) constructed by Pro. B.K. Passi and M.S. Lalitha was used to assess the classroom behavior of the teachers. To assess the deductive & inductive thinking of the teachers, the researcher developed a tool Deductive and Inductive Thinking Inventory. It has 30 items with 'Yes' and 'No' answer type. This tool has the content validity. To test the reliability, the researcher used the test retest method of reliability coefficient and the computed reliability was 87.

Interpretation of Result

Hypothesis 1

Table-1

Correlation Between Deductive& Inductive Thinking and Classroom Behaviour on Skill of Planning

Variables	N	Df	r	Significant
Deductive& Inductive Thinking	100	98	0.420	*
Skill of Planning	100			Significant

*Significant at 0.01 level, ** significant at 0.05 level

Hypothesis 2

Table-2

Correlation Between Deductive& Inductive Thinking and Classroom Behaviour on Skill of Presentation

Variables	N	Df	r	Significant
Deductive& Inductive Thinking	100	98	0.577	*
Skill of Presentation	100			Significant

*Significant at 0.01 level, ** significant at 0.05 level

Hypothesis 3**Table-3****Correlation Between Deductive& Inductive Thinking and Classroom Behaviour on Skill of Closing**

Variables	N	Df	r	Significant
Deductive& Inductive Thinking	100	98	0.320	*
Skill of Closing	100			Significant

*Significant at 0.01 level, ** significant at 0.05 level

Hypothesis 4**Table-4****Correlation Between Deductive& Inductive Thinking and Classroom Behaviour on Skill of Evaluation**

Variables	N	Df	r	Significant
Deductive& Inductive Thinking	100	98	0.354	*
Skill of Evaluation	100			Significant

*Significant at 0.01 level, ** significant at 0.05 level

Hypothesis 5**Table-5****Correlation between Deductive& Inductive Thinking and Classroom Behaviour on Managerial Skill**

Variables	N	Df	r	Significant
Deductive& Inductive Thinking	100	98	0.320	*
Skill of Closing	100			Significant

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*Significant at 0.01 level, ** significant at 0.05 level

Findings of the Study:

The following conclusions were drawn on the basis of all hypotheses which were formulated for the study:

1. The table 1 indicates the correlation value between variables. It shows that there is a significant relationship in Deductive & Inductive Thinking and Classroom Behaviour on 'Skill of Planning.' The teachers whose content planning is effective are using deductive & inductive thinking.
2. The table 2 indicates that there is a significant relationship in Deductive & Inductive Thinking and Classroom Behaviour on 'Skill of Presentation.' The correlation value shows that the teachers who present the content effectively are using deductive & inductive thinking in the classroom teaching
3. Table 3 shows a significant relationship in Deductive & Inductive Thinking and Classroom Behaviour on 'Skill of Closing.' This result proves that the teachers who are closing their lesson effectively are using deductive & inductive thinking.
4. Table 4 shows that there is a significant relationship in Deductive & Inductive Thinking and Classroom Behaviour on 'Skill of Evaluation.' It shows that the teachers who use deductive & inductive thinking in the class use evaluation skill effectively.
5. Table 5 shows that there is a significant relationship in Deductive & Inductive Thinking and Classroom Behaviour on 'Skill of Managerial.' This skill includes recognizing attending behavior and maintaining of classroom discipline. The result proves that managerial skill is effective of those teachers who are using deductive & inductive thinking in the class.

Implications and Suggestions

The present study has found that deductive & inductive thinking of teachers can be estimated on the basis of teacher's' classroom behaviours as well as the two variables which are significantly correlated. Training of the prospective teachers can be modify on the basis of the result as they should train to use deductive & inductive thinking in their lesson plans for effective classroom behavior. To see the international trends the focus should be on the research areas 'how teacher think' and 'teacher thinking affects teaching'. The result is also important for teachers, teacher educators and researchers as they can enrich their understanding that how certain thinking skills enhance the teaching effectiveness

Teacher education programme in India also need to be given a serious thought both in theory and practice and more attention should need to be pay on teachers' thinking and its relationship for effective teaching in order to improve classroom practices and to improve retention of the students.

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