



METACOGNITIVE STRATEGY FOR BASICS OF RESEARCH

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ABSTRACT

Understanding of concepts and having knowledge about when and how to use particular strategies for learning or for problem solving is essential for a learner. It was observed by the researcher that student ownership increases if students are given opportunities to plan, organize and monitor their own work, direct their own learning and self-reflect along the way. The purpose of the study was to determine the effectiveness of systematic direct instruction of metacognitive strategy designed to assist students in comprehending text and its application. An attempt was made to see whether instruction that incorporated metacognitive strategy led to an increase in the comprehension of basic concepts of research at B.Ed. level.

Keywords: Metacognitive strategy, Basics of Research.



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Introduction:

In the B.Ed. syllabus of SavitribaiPhule Pune Vidyapeeth, B.Ed. students have to study Basics of Research as one of the component of internal assessment. In B.Ed. batch of 2015-17, from H.G.M. Azam College of Education, Pune, a mixed group of students was observed in terms of stream of graduation, prior teaching experience, experience of research either at graduation or post-graduation level and medium of instruction. To cater for individual needs of B.Ed. students to understand the basic concepts of educational research, researcher thought of adoption of metacognitive strategy for teaching concepts of B.Ed. 210: Basics of Research.

Review of related literature:

Theoretical Review -

Related to the present study, following *theoretical review* was taken.

Metacognition –

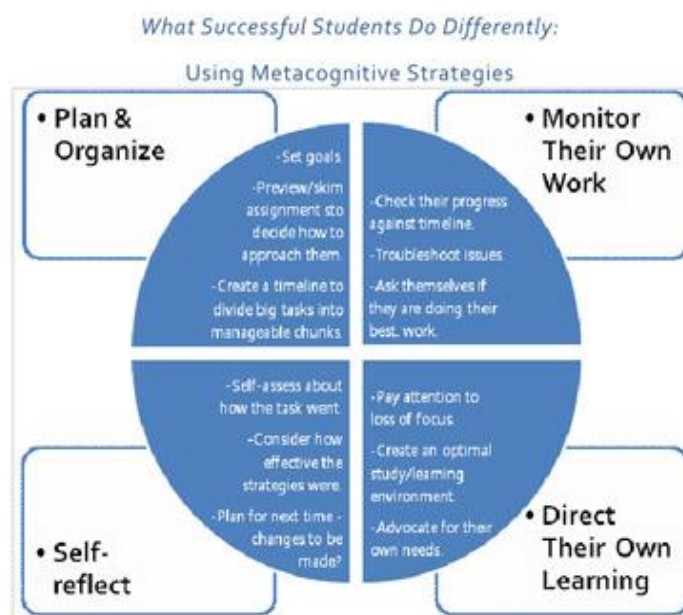
Metacognition literally means 'big thinking', 'thinking about thinking'. During this process a learner examines his/her brain's processing. Learners can examine their thinking process. Through scaffolding and reciprocal teaching, students become able to practice the skills that lead to acts like – questioning, visualizing, application, etc. (Fountas and Pinnell, 2000)

Cognition refers to construction of knowledge through a variety of ways and venues whereas *metacognition* refers to thinking about one's thinking, identifying what exactly not understood and what one can do about it. Therefore, construction of understanding requires both cognitive and metacognitive elements.

Metacognitive Strategy-

Metacognitive Strategy used to make students to think about their thinking, i.e. to make them to examine their thinking process, have conceptual understanding and its application. There are three reasons to teach using metacognitive strategy – 1. To develop in students a deeper understanding of concepts, 2. To take student's thinking to higher level and 3. To make use of learnt skills from learning situations to their personal lives and will continue to apply them as they mature. (Fogarty, 1994)

Following schematic diagram summaries metacognitive strategy used -



Source: <http://study.com/academy/lesson/metacognitive-strategies-definition-examples-quiz.html>

Research Review –

Researcher could not get any significant research conducted earlier in the field of making use of metacognitive strategy in teaching Basics of Research.

Need of the Study:

Understanding of concepts and having knowledge about when and how to use particular strategy for learning or for problem solving is essential for a learner. It was observed by the researcher that if students are given opportunities to plan, organize and monitor their own work, direct their own learning and self-reflect along the way then their

ownership increases. For the completion of 2 credits internal component of B.Ed. course, viz., B.Ed. 210: Basics of Research, researcher decided to use metacognitive strategy.

Statement of the Problem:

To study effectiveness of metacognitive strategy to teach Basics of Research.

Operational definitions:

Metacognitive Strategy – strategy used to guide students to become more strategic thinkers by helping them understand the way they are processing information. Questioning, visualizing, linking, synthesizing and applying information are all different ways through which students can examine their thinking process.

Basics of Research - An internal course of two credits to study at B.Ed. level named, B.Ed.210: Basics of Research.

Research Question:

- 1) What strategy will work well to teach the B.Ed. students Basics of Research?

Objectives:

Following objectives were stated for the study –

- 1) To decide sequence of research concepts for research proposal and report writing.
- 2) To design metacognitive strategy to teach effectively Basics of Research to B.Ed. students.
- 3) To check the effectiveness of metacognitive strategy developed for teaching Basics of Research.

Hypothesis:

Following were the hypotheses stated for the study –

Research Hypothesis-

There will be a significant difference in the pre-test and post-test scores.

Null Hypothesis-

There will be no significant difference in the pre-test and post-test scores.

Assumption:

Following assumption was stated for the study –

- 1) Use of metacognitive strategies help students to "think about their thinking" before, during, and after they apply. (Gooden et.al., 2000)

Limitations:

Factors which may affect responses of the sample like Intelligence Quotient, area of interest, motivation, family and social background were beyond the control of the researcher.

Delimitations:

The study was delimited to B.Ed. students from H.G.M. Azam College of Education. Responses given by fifty-one female B.Ed. students were only considered in the present study.

Research Methodology:

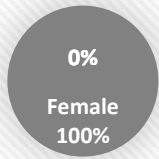
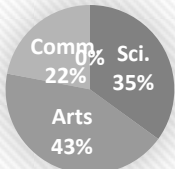
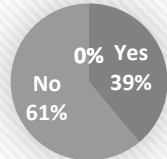
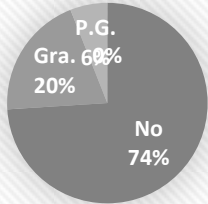
<i>Method of Research</i>	Experimental method
<i>Research Design</i>	Single group pre-test post-test design
<i>Population</i>	All B.Ed. students from Pune city formed the population for the study.
<i>Sampling Procedure</i>	Convenient Sampling Technique

Sample:

The sample consisted of fifty-one B.Ed. students from H.G.M. Azam College of Education. The sample was from a current batch of B.Ed. course, 2015-17.

Following table gives information about the sample.

Table: Description of the Sample

Sr. No.	Category	Sub-category	Percentage of Respondents	Pie-Chart	
1.	Gender	Female	100		
2.	Stream of Graduation	Science	35		
		Arts	43		
		Commerce	22		
3.	Teaching Experience	Yes	39		
		No	61		
4.	Prior Research Experience	Yes	At Graduation	20	
			At Post-graduation	06	
		No	74		
		English	94		

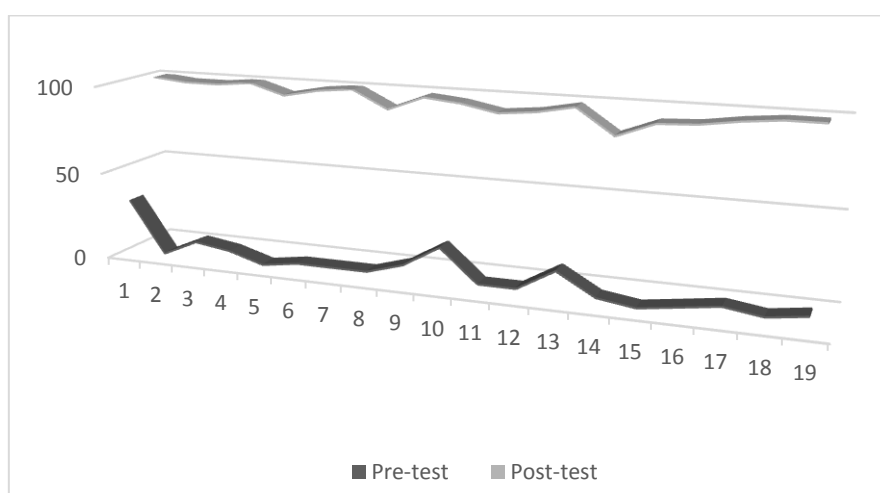
5.	Medium of Instruction	Marathi	06	
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Tools for Data Collection:

Pre-test and post-test were used to check the effectiveness of metacognitive strategy for teaching Basics of Research.

The constituents of the tests were nineteen basic concepts related to B.Ed. 210: Basics of Research.

Responses obtained for pre-test and post-test scores are as shown in the following graph-



Graph 1: Pre-test and Post-test Scores

Procedure:

Sequence of research concepts for the preparation of research proposal and report writing was decided by referring syllabus prescribed by SPPU for B.Ed. 210: Basics of Research as well as considering the inputs received during orientation for the same at university level.

(Objective 1)



Sample was pretested based on preliminary orientation



Metacognitive strategy was designed to teach effectively Basics of Research to B.Ed. students (Objective 2)



Metacognitive strategy was implemented



Sample was post-tested at the end of the study



Effectiveness of metacognitive strategy developed for teaching Basics of Research was checked (Objective 3)

Finding:

- 1) t-value obtained (3.16) for the sample is more than the table value (2.01) at 0.05 level, hence null hypothesis was rejected and research hypothesis was accepted. Same can be depicted from graph 1 which shows significant difference between pre-test and post-test scores.

Observations:

- 1) Students graduated from Science and Commerce streams had more prior knowledge of Basics of Research.
- 2) Post-graduate students exhibited better understanding of research concepts. 33% of the sample was aware about certain terms related to research like – meaning of research, types of research methods, meaning of population and sample, etc.
- 3) 94% of the sample opined that metacognitive strategy was more effective compared to traditional teaching.

References

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