EFFICACY OF META COGNITIVE ORIENTATION AND ATTENTION ACTIVATION STRATEGIES ON DEVELOPING WRITING COMPETENCE

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Abstract

The researcher investigated the use of metacognitive strategy and attention activating strategies on developing writing comprehension over a four-week period with 30 fifth grade students. It is a quasi-experimental pre-test - post-test research study. Metacognitive strategies and attention activation strategies were incorporated in classroom teaching on developing writing comprehension. The results indicated that there is an increase of ninety-one percentage variance in the post-test scores of the experimental group students in writing comprehension.

Key words: *Metacognition, Attention Activation strategies, cognitive components, linguistic components*

Introduction:

The "consciousness of being conscious", the awareness of "the how of my action" is the defining features of metacognitive knowledge. The cognitive activity is the object of a higher (Meta) process and the result of this reflection becomes part of the individual's knowledge base. Execution in metacognition is central to information.

Metacognition is the art and science of knowing or cognition of cognition. It is the process of thinking and also regulation of one's own thinking process and learning process. It is always identified in terms of thinking, knowing, learning, and in interrelation and integration of these components. The whole structure of Metacognition is centered on concept, knowledge about any phenomena, and fulfillment of an action on the basis of knowledge, with appropriate and applicable strategy. All Metacognitive experiences, orientation and regulation are centered on the phenomena knowledge, task and strategy variables.

Metacognition cannot act in isolation. It works on, around and beyond thought process. Metacognition acts as a constructivist on the thought process. It makes one to be aware of his thinking process, regulates and evaluates one's thinking process. These thoughts can be of any level of what one is aware of his knowledge (metacognition),of what one is aware of doing currently(Metacognition Strategies),and what one is aware of his experience (Metacognitive experience).   In other words it is concerned with one's own thoughts, awareness of one's own thoughts, and regulation of thinking experiences.

Metacognition in action:

At higher levels of research and education, writing is not merely a means of communicating information, but it is also the means by which one expands one's knowledge through reflection. IN 'Educating the Reflective Practitioner', Donald A. Schon(1985) argues that education has traditionally relied on "rigorous professional knowledge, based on technical rationality" rather than the "awareness of indeterminate, swampy zones of practice that lie beyond its canons"; instead of asking students to think about and write about specific situations, dealing with real situations, and reflecting on how they solved them, traditional education has simply asked students to memorize cores of knowledge and theory.

Schon (1985) argues that real life situations are never so neat as 'textbook examples' but are richly problematic with "indeterminate zones of practice uncertainty, uniqueness, and value conflict". Therefore students are better served with practice and reflection upon that practice than they are with learning information and even systematic rules.

For "writing competency development" students must be able to analyze specific writing situations and determine what needs to be done. Reflection on their writing (metacognition) seems to be the key for students to learn, as they practice writing. Schon breaks reflection into two brands of action: reflection-in-action and reflection-on-action. Reflection-in-action refers to the immediately recursive thought a person puts toward the action at hand - during which we can still make a difference to the situation at hand-our thinking serves to reshape what we are doing while we are doing it. For example, while a student writes, her thinking about what she is writing, her concurrent revision, her stopping to think and re-read illustrates reflection-in-action. Schon names reflection-on-action "thinking back on what we have done in order to discover how our knowing – in – action may have contributed to an unexpected outcome", or, post-activity reflection on the activity. When a

student thinks or writes about the process of writing a project after she has finished, for example, she is taking part in reflection-on-action.

In directing students' composition in writing and conversation on their subjects, we nurture their concurrent reflection on their writing and speaking abilities (reflection-in-action). And by asking them to return to their discourses to re-think what happened there and why (reflection-on-action), we help them enter into meaning-making conversation, we allow them to understand their own writing and learning processes and we prepare them for success in a multiplicity of real-life writing situations. Marjorie concurs, "it appears that metacognitive ability is the determining factor that enables writers to adjust accordingly to varying task demands and contexts. Not only is metacognitive ability a requisite for upward movement into more abstract levels and modes, it is also a condition for operating at lower response levels. In other words, metacognition facilitates the selection and allocation of techniques and strategies for successful task completion".

Need for the study:

Research studies across the country state that language is being learnt less as something integral and useful and more as a subject for a test. Students appear to be learning mechanically rather than truly understanding the concepts. They perform exceedingly well only where the answers could be mugged up from text books shows a disproportionate and unhealthy bias towards rote learning. Their performance on questions testing comprehension or applications is far below from acceptable levels. The students started learning into artificial compartments and their ability to apply what they learnt in real life situations essential for competence building was extremely poor (Educational Initiatives Wipro, 2006).

Writing in one's native language requires in depth knowledge and cognitive activities. If it is the second language, other than the knowledge and strategies required for composing, one needs to have both linguistic knowledge and knowledge about rhetorical conventions of the target knowledge. English being the second language, and students being restricted by their linguistic competencies, lack appropriate English lexical expressions and do struggle with mechanics, grammar, sentence structure, paragraph coherence, and neglect self-regulation in writing.

Hayes&Flower (1980) found out that less skilled writers tend to start writing immediately after a task is assigned and to turn in the assignment without further review or

revision as soon as they finish writing. And it is also observed, novice writers are frustrated by their lack of appropriate lexical expressions of English and their written products are often found incoherent. Therefore it is essential for language teachers to focus on helping students how to monitor and evaluate their writing processes and written products.

Present study:

After the perusal of the methods adopted for inculcation of metacognition and develops writing comprehension, this study focuses on metacognitive orientation and attention activating strategies on developing writing comprehension. The programme covers linguistic components instruction, metacognitive awareness building, activating attention and practice on journal writing and think-aloud protocol.

In particular the study seeks answers for the following research questions:

1) Is there any relationship between awareness on metacognition and writing competence?

2) Is there any relationship between awareness on metacognition and attention?

3) Can metacognition be partialled out from the combined effect of writing competence and attention activation?

4) How far attention activation is essential for development of writing competence, other than metacognitive orientation?

Methodology:

Design:

A quasi-experimental single group pretest-treatment and posttest design was adopted. The independent variables were metacognition and attention activation strategies. And the dependent variable was writing comprehension.

Participants:

The participants of the study were of 30 fifth grade students in a Government Higher Secondary School. The school has six sections having forty per section. All the two hundred and forty were given a written test on the recently learned English lesson. Based on the performance, 30 lower scorers in the bottom line were selected for the experimental study. Their scores were taken as pretest score.

Pre-test mean and standard deviation scores of experimental group students

(Maximum score-100)

Test	Sample Size	Mean	Standard Deviation
Pre-test	N=30	36	4.5

The mean and standard deviation of the pre-test scores on writing comprehension in English of the experimental group students were 36 and 4.5 respectively.

Attempts were made to minimize the threats for ensuring experimental validity. Students from grade V were selected and there were no drop outs. There was no change in the location. In the study actual performance of students was evaluated. Students were given training in comprehension skills and were assessed for the same. The entire variables namely metacognition, attention, perception of writing awareness were all scored uniformly. The validity and the reliability of all the tools were established. Testing refers to a threat to internal validity which arises due to the participant becoming "test wise". The pretest given to students sensitized them to the components of writing comprehension. More over the feedback received every day from the follow up work was given due consideration. Post test was administered to students on a different aspect on the same pattern there by the effect of testing was balanced out.

Development of tools:

Providing effective writing instruction to their children from the start should help ameliorate their writing problems. Anticipated literacy problems should be dealt right from early years of education. It was observed that the poor writer was bound to the text at the expense of ideas whereas the good writer had never learned how to compose and this general lack of competence in composing, rather than a specific lack in L2 linguistic competence, was the source of her difficulty in writing.

Bell and Burnaby (1984) point out that writing is an extremely complex cognitive activity in which the writer is required to demonstrate contract of a number of variables simultaneously. At the sentence level these include control of content format, sentence

structure, vocabulary, punctuation, spelling and letter formation. After that, the writer must be able to structure and integrate information into coherent paragraphs and texts. Keeping the above findings in focus, the 'Writer's Guide to style and usage', the New York Public Library Publications (1994) was used as the source of reference for developing a tool on writing comprehension. Attention had been given to language usage on punctuation, capitalization, and vocabulary and sentence structure.

The blue print of the tools was designed on the components knowledge, understanding, application and skills. Items were developed to assess students' writing comprehension on understanding of the lexical items learnt, and formation of appropriate sentences. Two instruments (pretest and posttest) were used in the study. Each consists of five divisions with twenty one items. The vocabulary items in the test were mainly selected for the new lexical items taught and exposed to during the course. Experts in the field of Education were consulted for establishing content validity. For establishment of reliability, it was administered to the same forty students. Test- retest method was adopted. The coefficient alpha was 0.73 and 0.75 respectively indicating satisfactory level of reliability.

Metacognitive and attention activating strategy intervention programme:

The intervention programme went both in the forenoon and afternoon sessions, for forty five minutes each. Morning sessions had self-selected writing by students followed by a micro-lesson by the investigator. The afternoon sessions were on practicing of what they have learnt in the morning.

The micro-lessons were on:

- The comma
- Semi colon
- Colon
- The Apostrophe
- Quotation marks
- End marks
- Dashes, Brackets and Parentheses
- The Hyphen – Numbers – capitalization

The study was aimed at building awareness among students on what is expected, what they know and what they are doing. The awareness on what is expected includes linguistic competence and cognitive competence. Attention activating strategies were incorporated in the process of developing their writing comprehension. The intervention programme proceeded in five phases,viz. Preparation, Presentation, Practice, Elaboration and Results and discussion.

Preparation: Goal setting & Planning

Presentation: Activating attention & Practicing Metacognition

Practice: Practicing writing comprehension

Elaboration: Application- Writing comprehension

Results and discussion

Preparation:

Students were helped in identifying the strategies they were already using and strengthened them in effective writing. Every day began with their 'self-regulated writing'. This ignited planning and self-management among them. Initially, students were not aware of their strengths and were hesitant to write. They were tuned towards journal writing. (Students were in the beginning encouraged to enter their everyday learning experiences).In due course, they took pleasure in expressing their innovative thoughts and ideas. Students with the help and guidance of the teacher see specific goals and accomplished their writing task within the time framework.

Presentation:

This is the second phase focused on modeling attention activation and building metacognitive awareness. Every session had a micro-lesson on a linguistic component whose characteristics and usage were highlighted. The instructional programme had brain storming and interaction. During this process students were made aware of 'what they know' and 'what they do not know'. They did orchestrate and monitored their language usage. Parallel to this awareness building, care had been given to activate their attention. The attention activation strategies such as activating interest, tuning the mood, realization of the need, showing contrast, supporting novelty, regulating change, adopting intensity, organizing mental set,

maintaining repetition, monitoring movement, orchestrating size and scaffolding systematic form enhances the listening power of the students and participation. Quite frequently, they were questioned to recall. It helped the teacher to monitor their comprehension. Reward of the teacher for appropriate responses inculcated motivation and competitiveness. Then the teacher gave model reading of a passage which again reflects the meaning of the linguistic component they have learnt. The teacher interaction facilitated planning, orchestration, monitoring and evaluation of their thinking process. The 'think-aloud' protocol was used for every statement they have made. Thus in the second phase, students had their attention activated and metacognitive awareness built within.

Practice:

In the afternoon sessions, students had the opportunity to practice writing comprehension. They were given another model piece of writing based on the same topic they had learnt in the morning. They were given a frame of self-regulation questions, ie., Think-aloud protocol to respond. It is to orchestrate, monitor and regulate their thinking process on writing. Their individual task was then discussed in groups. The group leaders then present their responses to the class. Consolidation of their responses was written on the black board. Then the micro-lesson learnt in the morning was reviewed. Thus the students, by the teacher's assistance practiced monitoring while using multiple strategies available to them.

Metacognitive awareness of their own learning processes i.e., the Think-aloud protocol enables them to see the process of task completion (rather than only its product). Other than the frame of think-aloud protocol, the entire programme was designed for their responses to questions tuned up the attention for comprehension. The programmed activities were such as self-questioning, peer group discussions after strategy practice, journal writing (record of their strategy application and thoughts) and responses to open-ended questions both in reflection-in-action and reflection-on-action.

Elaboration:

In the final phase students were encouraged to do 'write-ups' of their choice (poem writing, story writing, letters to their friends and cousin, descriptive and narratives) where they applied the learnt language components. It was followed by self-talk on their strategy applications.

Thus students had modeling, practicing sessions along with application and evaluation of their work. At the end of the programme, students were given a post-test tool to assess the effectiveness of the treatment.

Results and discussions:

In order to find out the effectiveness of the intervention, students' pretest and posttest scores on writing comprehension were analyzed to see if there was a statistically significant mean difference. Hence 't' test was applied. Relational analysis was also attempted to find out the significant relationship between variables. The 'r' value was calculated by using Pearson product moment correlation to find out the relation between pre-test and post-test scores, between awareness on writing comprehension and metacognition, and between awareness on attention and writing comprehension and between awareness on metacognition and attention. The values are given below.

'r' value between the pre-test and post-test scores of the experimental group

Test on writing comprehension	'r' value
Pre-test and post-test scores	0.78
Aawareness on writing comprehension and metacognition	0.78*
Awareness on attention and writing comprehension	0.80*
Awareness on metacognition and attention	0.69*

* Significant at 0.05 level

From the relational analysis it is evident that there exists a high relationship between pre-test and post-test scores, a high relationship between awareness on writing comprehension and metacognition, a high relationship between awareness on attention and writing comprehension and a moderate relationship between awareness on metacognition and attention.

Mean and standard deviation of the pre-test& posttest scores of

Experimental group students

Test	Sample Size	Mean	Standard Deviation
PRE-TEST	N=30	36	4.5
POST-TEST	N=30	61	4.7

The mean and standard deviation of the pre-test scores on writing comprehension in English of the experimental group students are 36 and 4.5 respectively. The mean and standard deviation of the post-test scores on writing comprehension in English of the experimental group students are 61 and 4.7 respectively.

't' value between pre-test mean score and post-test mean scores of experimental group students in achievement test on writing comprehension

Sample size	df	Test	't' Value between pre-test and post-test score
N=30	58	Writing comprehension	25*

*Significant at 0.01 level

For df = 58, to be significant at 0.01 level the calculated 't' value should be greater than or equal to 2.66. The calculated t value (t = 25) is far above the table value at 0.01 (99%). Hence, there is significant difference between pre-test and post-test score of the experimental group students at 0.01 levels. The statistically significant t-values mean that some degree of association exists between the independent and dependent variables. The degree of association was measured through omega square analysis. There is 91% variance in the post-test scores of the experimental in writing comprehension in English by the variance in the independent variable that is due to the treatment.

MULTIVARIATE ANALYSIS:

After finding out the 'r' values between the dependent and the independent variable, partial correlation analysis was attempted. It measures the relationship between two variables

partialling out the effect of (attention activating strategies) the third variable. Accordingly $ryx_1.x_2$, i.e., correlation between the writing comprehension and application of metacognition was computed by partialling out the effect of attention activating strategies and found out as 0.47. After that, $ryx_1.x_2$, i.e., correlation between the writing comprehension and application of attention activating strategies was computed by partialling out the effect of metacognitive strategies and found out as 0.56. It was not possible to separate the influence of metacognition from the correlation between writing comprehension and attention activating strategies. The influence of attention is so intense. Multiple correlation analysis indicates that 71% of the variation in dependent variable is contributed by those two variables, application of metacognition and application of attention activating strategies.

Multiple regression analysis also indicated the probability of increase in writing comprehension score from the application of metacognition and application of attention activating strategies. Hence, univariate, bivariate, and multivariate analysis have confirmed the effect of intervention of metacognition and application of attention activating strategies on developing writing comprehension.

The findings of the present study have implications for learners, teachers, and teacher educators in the realm of English language teaching in particular and Education in general. In order to help students to learn to become competent writing practitioners, they must be able to analyze specific writing situations and determine what needs to be done when. Reflection on their writing i.e., metacognition seems to be the key for students to learn as they practice writing. This intervention of metacognition and attention strengthen their process knowledge which in turn helps them to exhibit the right products in writing. It informs that it is not possible to separate the influence of metacogniton from the correlation between writing comprehension and attention activation strategies. There is significant relationship between awareness on metacognition and writing comprehension and it is the same with awareness on metacognition and attention. At the outset it contributes a practical model for improving writing comprehension with the intervention of metacognitive and attention activating strategies. Hardly have we found teachers facilitate writing comprehension rather they drill them on writing. Teachers must understand the difference between the two and help students to become proficient in writing. _

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