SELF REGULATED LEARNING OF HIGH ACHIEVERS

By

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ABSTRACT

The study was conducted on high achievers of Senior Secondary school. Main objectives were to identify the self regulated learners among the high achievers, to find out dominant components and characteristics operative in self regulated learners and to compare self regulated learning of learners with respect to their subject (science and non science) and gender (girls and boys).To achieve these objectives 480 high achievers of senior secondary classes were selected conveniently as a sample. Check list of self regulated learning was administered on them, like this the self regulated learners were identified. Further, the study was conducted on identified self- regulated learners. Descriptive and comparative study methods were used. Data were analysed through mean percentage score, and t-test. The analysis revealed that sustained motivation is the most dominating dimension operative in self regulated learners. These learners are deficient in use of strategies. They feel their own responsibility for learning. They share and discuss difficult points with their learned friends. They are internally motivated for success and keen to get higher success. They select appropriate goals for learning. Science group girls are most self-regulated among the entire group.

Keywords: Self-regulated Learning, Metacognition, Sustained Motivation.

INTRODUCTION

The term self-regulated learning (SRL) became popular in the 1980's because it emphasized the emerging autonomy and responsibility of students to take charge of their own learning. As a general term, it subsumed research on cognitive strategies, metacognition, and motivation in one coherent construct that emphasized the interplay among these forces. It was regarded as a valuable term because it emphasized how the "self" was the agent in establishing learning goals and tactics and how each individual's perceptions of the self and task influenced the quality of learning that ensued. In the past ten years, a great deal of research has focused on a constructivist perspective on SRL (e.g., Paris & Byrnes, 1989), on social foundations of SRL (e.g., Pressley, 1995; Zimmerman, 1989), on developmental changes in SRL (e.g., Paris & Newman, 1990), and on instructional tactics for promoting SRL (e.g., Butler & Winne, 1995). The integrative nature of SRL stimulated researchers to study broader and more contextualized issues of teaching and learning while also showing the value of SRL as an educational objective at all grade levels. Interested readers can trace the history and various theoretical orientations to SRL in a volume by Schunk and Zimmerman (1989). What is important for teacher educators is that SRL can help describe the ways that people approach problems, apply strategies, monitor their performance, and interpret the outcomes of their efforts. Paris and Winograd (1990) focused on three central characteristics of SRL; awareness of thinking, use of strategies, and sustained motivation.

Awareness of Thinking

Part of becoming self-regulated involves awareness of effective thinking and analyses of one's own thinking habits. This is metacognition, or thinking about thinking, that Flavell (1978) and Brown (1983) first described. They showed that children from 5-16 years of age become increasingly aware of their own personal knowledge states, the characteristics of tasks that influence learning, and their own strategies for monitoring learning. Paris and Winograd (1990) summarized these aspects of metacognition as self-appraisal and self-management. They discussed how these aspects of knowledge help to direct students' efforts. They argued, our educational goal is not simply to make children think about their own thinking but, instead, to use metacognitive knowledge to guide the plans they make, the strategies they select, and the interpretations of their performance so that awareness

leads to effective problem-solving. Understanding these processes and using them deliberately is the metacognitive part of SRL.

Use of strategies

A second part of SRL involves a person's growing repertoire of strategies—for learning, studying, controlling emotions, pursuing goals, and so forth. Paris & Winograd (1990) emphasized that teachers should concern for "being strategic" rather than "having" a strategy. It is one thing to know what a strategy is and quite a different thing inclined to use, to modify it as task conditions change, and to be able to discuss it and teach it. There are three important metacognitive aspects of strategies, often referred to as declarative knowledge (what the strategy is), procedural knowledge (how the strategy operates), and conditional knowledge (when and why a strategy should be applied) (Paris, Lipson, & Wixson, 1983). Knowing these characteristics of strategies can help students to discriminate productive from counterproductive tactics and then to apply appropriate strategies. When students are strategic, they consider options before choosing tactics to solve problems and then they invest effort in using the strategy. These choices embody SRL because they are the result of cognitive analyses of alternative routes to problem solving.

Sustained motivation

The third aspect of SRL is motivation because learning requires effort and choices. Paris and Cross (1983) argued that ordinary learning fuses skill and will together in self-directed actions. SRL involves motivational decisions about the goal of an activity, the perceived difficulty, and value of the task, the self-perceptions of the learner's ability to accomplish the task, and the potential benefit of success or liability of failure. Awareness and reflection can lead to a variety of actions depending on the motivation of the person. Researchers and educators have characterized SRL as a positive set of attitudes, strategies, and motivations for enhancing thoughtful engagement with tasks but students can be self-directed to avoid learning or to minimize challenges. When students act to avoid failure instead of pursue success, attribute their performance to external or uncontrollable forces, use self-handicapping strategies, or set inappropriate goals, they are undermining their own learning. These behaviors are self-regulated but may lead to diminished effort, task avoidance, and other actions that decrease engagement and learning. Learned helplessness, apathy, and defiance may also be counterproductive motivational responses to learning that can be overcome with better understanding of SRL. In our view, teachers need to understand students' motivation in order to understand how they learn, what tasks they choose, and why they may display persistence and effort or, conversely, avoidance and apathy. Self-regulation thus implies "personalized cognition and motivation" (Hickey, 1997) that exemplifies behaviors that may or may not be consistent with the teachers agenda for learning.

The above concept of self-regulated learning and background stimulated the investigator's interest in the area and while going through the related literature some questions that arouse in the mind are:

- Do the high achieving students possess the requisite components of self -regulated learning?
- Is their any difference in self- regulated learning of science and non- science students?
- Does gender make any difference?
- What are the implications of the study in Indian context?

Objectives of The Study

- To identify the self regulated learners among the high achievers of senior secondary classes.
- To find out the dominant components and characteristics of self regulated Learning of the learners.
- To compare self-regulated learning of learners with reference to their subject (Science and Non-science) and gender (Girls and Boys).

Hypotheses

- There is no significant difference in the self-regulated learning of science and non-science students.
- There is no significant difference in the self-regulated

learning of girls and boys.

Sample

The total sample consisted of 480 high achievers of senior secondary classes; students selected on the basis of subject and gender. Further, the study was conducted on self-regulated learners.

Process of Sample Selection

For the identification of self-regulated learners, first, checklist was administered on 480 high achievers (Students whom had secured more than 60 percent marks in Board Exam). Mean and S.D. of total sample was calculated and students who scored +1SD = 17.98 were classified as high self- regulated learners, students who scored -1SD=13.8 were kept in category of low self-regulated learners and students who scored between 17.98 and 18.3 were counted as average self -regulated learners. Following the above-mentioned criteria, deliberate sample of 360 self-regulated learners was drawn out.

Method

Since the purpose of the study was to find out self-regulated learners among high achievers and compare the components of self-regulated learning with reference to their subject and gender, descriptive & comparative survey methods were used.

Tool

Self made tool "Check list of self regulated learning" was used by the researcher.

Statistics

Mean Percentage scores, SD, 't'-value, and correlation were calculated for the study.

Results and Discussion

Following the above-mentioned criteria, deliberate sample of 360 self-regulated learners was drawn out. The identified self-regulated learners were as tabulated in Table 1.

Item Wise and Dimension Wise Analysis

Among the above groups, 80 students from each group were selected. The process adopted for selection was- first the answer sheets were arranged in descending order and the slice of above 80 students was taken out and selected deliberately for the further study.

Table 2 shows that 'sustained motivation' is the most dominating dimension operative in high achievers, second dominating dimension is 'metacognition' and 'use of strategies' is the dimension in which students scored least.

Table 2 reveals that learners feel that learning is their own responsibility, they know the value of learning in their life. They share and discuss difficult points with their learned

	Science boys	Science girls	Non Science boys	Non Science Girls
Total Sample	120	120	120	120
Identified self regulated learners	104	118	85	113
Percentage	86.66	98.33	70.83	94.16

Table 1. Identified Self-Regulated Learners

Dimensions	Code no.of items	Items of self regulated learning	Item wise Mean percentage scores	Dimension wise Mean Percentage Scores
Meta Cognition	1	Responsi bility for learning	97. 81*1	74.44
	2	Set realistic goals	90.31*6	
	3	Challenging work for learning	77.81	
	4	Proper way for learning	77.81	
	5	Planning for learning	71.56	
	6	Learning with comprehension	90.94*5	
	7	Additional Study	65.00	
	8	Monitoring Progress	58.13	
	9	Evaluate performance	41.88	
	10	Know own weakness in learning	71.13	
Use of Strategies	11	Preparing list of topics	59.69	60.25
	12	Task analysis	50.63	
	13	Seeking help from different resources	49.38	
	14	Time management	40.31	
	15	Task completion in time	50.31	
	16	Proper attention	63.44	
	17	Control emotions	64.69	
	18	Studying instead of other work	54.38	
Sustained Motivation	19	Allocate time for learning	80.94	77.84
	20	Revising the learned material	88.75*7	
	21	Keep eye on goal	84.96*9	
	22	Perceive difficulty	78.44	
	23	Persistent efforts	60.94	
	24	Sharing with learned friends	95.00*3	
	25	Value the learning task	95.31*2	
	26	Believe in self help	84.06*10	
	27	Ability perception	88.13*8	
	28	Internal motivation for success	93.44*4	
	29	Feeling of stress	36.56	
	30	Latest information collection	61.88	
		TOTAL		70.84

Table 2. Mean Percentage Scores of Self -Regulated Learning of the Sample

friends, which help them to keep their motivation level high. They are internally motivated for success and keen to get higher success. They learn with comprehension. They select appropriate goals for learning. They do not wait for others help, they do their own efforts for learning. Thus, the dominant characteristics of self- regulated learners found from the analysis are:

- Feel own responsibility for learning.
- Value the learning task.
- Share with learned friends.
- Have learning motivation.
- Learn with comprehension.
- Set realistic goals.
- Revise the learned material.
- Perceive their ability.
- Keep eye on goals.
- Self help.

An Overview

Table 3 presents an over view of mean percentage scores of all the groups which seem to suggest that science girls have scored the highest mean percentage among all the groups. It reveals that science girls are most self-regulated learners among all the groups. Non-science boys have scored the lowest percentage among all the groups, which reveal that non-science boys are least self-regulated learners among all the groups.

Components of self-regulated learning	Science		Non Science		Total Science	Total Non Science	Total Boys	Total Girls
	Boys	Girls	Boys	Girls				
Meta Cognition	73.50	▲ 84.38	67.00 ▼	72.88	78.94	69.94	70.25	78.63
Use of Strategies	55.75	▲ 70.38	53.75 ▼	61.13	63.08	57.75	54.75	65.75
Sustained Motivation	79.00	▲ 85.88	72.13 ▼	74.38	82.44	73.25	75.56	80.13
Total	69.42	▲ 80.21	64.29 ▼	69.46	74.81	66.88	66.85	74.83

▲ Highest MPS

▼ Lowest MPS

Table 3. Mean Percentage Scores of all the Groups

Comparative Analysis

Table 4 shows that there is a significant difference between science and non- science student in respect to 'metacognition'. It implies that science students are more metacognitive than non-science students as science students like challenging works, plan more for learning, learn with comprehension, and use to do more additional study.

Table 4 shows that there is a significant difference between science and non-science students in respect to 'use of strategies'. It implies that science students are more strategic than non-science students as science students are more aware about their own weakness, active in completing task in time, do better time management and study more instead of doing other works.

It also shows that there is a significant difference between science and non-science students in respect to 'sustained motivation'. It implies that science students have more 'sustained motivation' for learning than non-science students as science students are more skillful in allocating time, do persistent efforts for learning, feel some extent of stress which keep their motivation high and collect latest information.

Finally the results, concluded that there is a significant difference between science and non-science students. It implies that science students are more self regulated than non science students as they have more tendency of 'metacognition' that is thinking about thinking, using strategies and have more sustained motivation for learning.

Dimensions of SRL	Science			Non-Science			Mean Difference	't'- value	Significant at 0.01/ 0.05 level
	Mean	N	SD	Mean	N	SD			
Meta cognition	7 . 89	160	1.32	6.99	160	1.37	0.90	5.98	0.01
Use of Strategies	6.31	160	1.62	5.74	160	1.17	0.56	3.56	0.01
Sustained Motivation	8.24	160	1.08	7.33	160	0.90	0.92	8.26	0.01
Total	22.44	160	2.90	20.06	160	2.10	2.38	8.42	0.01

Table Value at 0.01 = 2.59, 0.05=1.97

Table 4. Comparative Analysis of Self Regulated Learning of Science and Non-science Students

Dimensions of SRL	Boys			Girls			Mean Difference	't'-value	Significant at 0.01/ 0.05 level.
	Mean	N	SD	Mean	N	SD			
Meta cognition	7.03	160	1.44	7.86	160	1.26	0.84	5.52	0.01
Use of Strategies	5.48	160	1.26	6.58	160	1.39	1.10	7.39	0.01
Sustained Motivation	7.56	160	1.07	8.01	160	1.07	0.46	3.81	0.01
Total	20.06	160	2.08	22.45	160	2.91	2.39	8.47	0.01

Table Value at 0.01 = 2.59, 0.05=1.97

Table 5. Comparative Analysis of Self Regulated Learning of Total Boys and Total Girls

Thus, the null hypothesis No. 1is rejected and it may be concluded that science students have more tendency of self -regulated learning than non- science students.

Table 5 shows that there is a significant difference between boys and girls in respect to 'metacognition'. It implies that girls are more metacognitive than boys are, as girls like challenging work for learning, use proper way of learning, plan better, learn which comprehension and monitor their progress more.

It shows that there is a significant difference between boys and girls, in respect to 'use of strategies'. It implies that girls are high strategic than boys are, as girls analyze the learning task, prepare list of topics to be studied, seek help from different resources, complete the learning task in time and study more in spite of doing other works.

It shows that there is a significant difference between boys and girls in respect to more 'sustained motivation'. It implies that girls have more 'sustained motivation' for learning than boys as girls share more with their learned friends, know the value of learning task, believe in self help and have more internal motivation for learning.

Finally the result of Table 5 shows that there is a significant difference between boys and girls. It implies that girls are more self-regulated than boys as girls have more tendency of 'metacognition' that is thinking about thinking, using strategies and have more sustained motivation for learning.

Thus, the null hypothesis No.2 is rejected and it may be concluded that girls have more tendency of self-regulated learning than boys do.

Implications of The Study

- Teachers need to become aware of SRL, to become models of effective strategies, to analyze their own students' learning, and to implement classroom activities that contextualize learning. We can do no less than enthusiastically practice what we preach.
- There is need of reinventing teacher preparation and professional development programmes; recruiting and retaining qualified teachers; and creating schools that are organized for student and teacher success.
- Students are deficient in use of strategies thus there is great need of promoting such skills in students.
- Courses on pedagogy need to be designed and taught that focus on teaching and learning strategies that promote SRL for both teacher and students.
- Educators need to do a better job of communicating with the public, policy-makers, and other stakeholders about the nature of teaching and learning. We need to build a solid base of support among parents, legislators, the media, community, and other influential citizens for the importance of teacher preparation and the profession of teaching.

Conclusion

The result of the present study discloses that high achievers of Govt. school posses most of the characteristics of self regulated learning still they are deficient in 'use of strategies' and in 'metacognition', it shows that high achievers should keep following points in mind while learning:

- Preparing list of topics to be learnt
- Task analysis
- Time management
- Proper attention towards study
- Controlling emotions
- Seeking help from different resources
- Monitoring progress
- Evaluating performance

Comparative analysis shows that non-science students and boys lack the tendency of self-regulated learning so

more attention should be given on developing deficient characteristics of learners.

For all these it is essential that we develop our temper, our enthusiasm for professional teaching which promotes SRL among students. Our ability to make progress depends on our ability to think clearly about the challenges, to imagine a better world for our children, and to stand firm for those things we value.

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