

SELF EFFICACY OF SENIOR SECONDARY SCHOOL STUDENTS IN RELATION TO THEIR SELF REGULATED LEARNING

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Abstract: Learning to learn and learning to cooperate are two important goals for individuals. Moreover, self-regulation has been identified as fundamental for self-efficacy. The goal of the present study was to assess the interactions between self-regulated learning, and self-efficacy in secondary education students, 12–17 years old ($M = 13.85$, $SD = 1.29$), enrolled in 10 different schools. Self-regulated learning was found more influential learning on students' self-efficacy. Further self-awareness, planning and goal setting, self-motivation, self-evaluation different dimensions of self-regulated learning was found to be significant. Educators should be aware of these interactions, symmetrical or asymmetrical, because they determine the quality and quantity of the students' participation and achievements, and they are key elements to prevent school failure.

KEY-WORDS: Self Efficacy, Senior Secondary School Students, Self-Regulated Learning,

People make causal contributions to their own psychosocial functioning through mechanisms of personal agency. Among the mechanisms of agency, none is more central or pervasive than beliefs of personal efficacy. Unless people believe they can produce desired effects by their actions, they have little incentive to act. Efficacy belief, therefore, is a major basis of action. People guide their lives by their beliefs of personal efficacy.

Gist and Mitchell (1992) defined that self-efficacy "as a one's ability to orchestrate performance through successfully executing the behaviors that are required to produce demanded outcomes."

Evers, Brouwers and Tomic (2002) defined that self-efficacy "as faith that one is able to do certain things. So, self-efficacy includes both ones' competencies and beliefs in terms with oneself being able to operate successfully."

The effects of self-efficacy beliefs on cognitive processes take a variety of forms. Much human behavior, being purposive, is regulated by forethought embodying valued goals. Personal goal setting is influenced by self-appraisal of capabilities. The stronger the perceived self-efficacy, the higher the goal challenges people set for themselves and the firmer is their commitment to them.

Self-beliefs of efficacy play a key role in the self-regulation of motivation.

Larkin and Brown's research (1986) supported that self-efficacy was a reliable predictor of one's educational performance. The results indicated that self-efficacy was a significant predictor of one's academic achievement.

Torres and Solberg (2001) found a positive association between academic self-efficacy and the number of hours students spent studying. Pellerey (2006) found metacognition and self-efficacy are closely related to those of «self-determination» and «self-regulation». Pajares and Kranzler (1995) examined that the causal effects of self-efficacy beliefs and cognitive ability on students' math achievement and found that not only did both variables have a direct influence on students' performance but the effect of self-efficacy was similar to that of general cognitive ability.

Behavior regulation, sometimes also known as "self-regulation", refers to our ability to use self-control to behave in appropriate ways – this may mean controlling our impulses so that we stop doing something (such as drinking alcohol) or it may mean doing something, even if we don't want to (being polite to our manager, even though s/he has been really unfair to us) manage our energy, emotions, attention and behavior in ways that are socially acceptable and help us to achieve our goals stay calm, focused, and alert deal with things that stress our system, like too much noise, fatigue, challenging situations or tasks, or distractions

Self-regulated learning suggests that students engage in their own learning processes on metacognitive, behavioral, and motivational levels. Within self-regulated learning, students are empowered with a common set of self-regulating strategies in which they couple those strategies with a set of individually developed skills they have constructed over the course of their academic careers and personal experiences

Winne (1995), Staley (1997), Pintrich (1995), Valleet.al. (2003), Zimmerman (1994) studied self-regulated learning is viewed as a process in which individual students actively and constructively monitor and control their own motivation, cognition and behavior toward the successful completion of academic tasks.

Zimmerman, B.J. (2000) defined that Self-regulation refers to 'thoughts, feelings and actions that are planned and adapted to the attainment of personal goals'

Zimmerman (2002) defined that Self-regulation not a mental ability or an academic performance skill. Rather it is the self-directive process by which learners transform their mental abilities into academic skills. Chyung (2007) defined that effective learners are often self-regulated or self-directed

Students assess their achievements or failures, adjust their self-efficacy, make informal attributions, and, during the self-reflection phase, adapt to potential learning. Students need to ask themselves if they have accomplished what they planned to in the forethought

phase, how they coped with distractions during the performance phase, and evaluate what conditions facilitated their productive work environments

Zimmerman, Bandura, and Martinez-Pons, 1992; Zimmerman, Kitsantas, and Campillo, (2005) noted that the student's self-efficacy beliefs concerning the capacity to self-regulate learning, predicts the self-efficacy beliefs in performance within a specific learning area.

Moshman, (1982) focused that self-regulated learning claims that students are active in their learning processes. Through experience, they construct meaning, objectives, self-efficacy beliefs, and learning strategies.

Zimmerman and Schunk (2008) have demonstrated, a reciprocal relationship exists between the capacity of self-regulation and the self-efficacy beliefs. As students increase their self-regulation capacity, they increase their self-efficacy beliefs, and vice versa: these self-efficacy beliefs allow the student to face new, self-regulated learning.

METHODOLOGY

OBJECTIVES

The present study was designed to attain the following objectives:

- 1) To study the Self-efficacy of senior secondary school students in relation to their Self-Regulated learning.
- 2) To study the Self-efficacy of senior secondary school students in relation to various dimensions of self-Regulated learning

HYPOTHESES:

The present study was designed to attain the following hypotheses:

H1: There exists no significant difference in self-efficacy of secondary school students in relation to their High, Averages and Low self-Regulated Learning and its dimensions.

RESEARCH DESIGN:

The investigator was used survey method for studying the problem. Quantitative approach is applied in this study. Furthermore, quantitative research is about identifying relationships between variables through the use of data collection and analysis.

SAMPLE:

In order to conduct the present study, 10 private schools from Jalandhar district were selected. For their selection sample random technique was employed. Out of the selected schools, investigation was carried out on 300 students of Private and Government schools.

DESIGN OF THE STUDY:

To test the proposed hypothesis the design of the present study is as follow:

Two way analysis of variance (ANNOVA) was employed on the score of Self- sfficacy. Self-efficacy is dependent variable. Self-regulated learning and its dimensions was for classifying the Student's viz- a -viz, High, Average and Low(SRL), D-I -High, Average and Low Self-Awareness (SA), D-II-High, Average and Low Planning & Goal-Setting (PGS), D-III- High, Average and Low Self-Motivation (SM), D-IV -High, Average and Low Self-Control (SC), D-V- High, Average and Low Self-Evaluation (SE), D-VI -High, Average and Low Self-Modification (SMd)

MEASURES

The two instruments were used to collect data from the respondents. They include

Self-efficacy scale: by Dr. Arun Kumar Singh (2012) was used. This self-efficacy Scale has been designed for use with 12 years and above age of individuals.it has 20 items with four dimensions The scoring of positive items of SE Scale was done by giving a score 5, 4, 3, 2 or 1 for Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree respectively and negative items were scored as 1, 2, 3, 4, and 5 respectively. The test re-test reliability was calculated and was found to be 0.82 and the split-half reliability was found to be 0.74. All reliability coefficients were significant at .01 level. The concurrent validity was found to be 0.92 which was significant

Self-Regulated Learning: By Dr. Madhu Gupta And Ms. Dimple Mehtani it has 65 items with six dimensions The scoring of positive items of SE Scale was done by giving a score 5, 4, 3, 2 or 1 for Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree respectively and negative items were scored as 1, 2, 3, 4, and 5 respectively. The reliability of the Self-regulated learning scale were ascertained by 'Split-Half Method' After applying Spearman-Brown Prophecy, formulae the reliability coefficient (r) for whole self-regulated learning scale came out to be 0.88 which is significant at 0.1 level of significance Construct validity of the scale has also been measured The correlation coefficient between the dimensions of SRLS ranged from .503 to .596.

PROCEDURE:

In order to conduct the study, 10 secondary schools of Jalandhar city was selected. A sample of about 300 students from 12th class was selected. Self-regulated learning scale by Dr. Madhu Gupta & Dr. Mehtani was administered and students were segregated in High, Average and Low(SRL), High, Average and Low (SA), High, Average and Low (PGS), High, Average and Low (SM), High, Average and Low (SC), High, Average and Low (SE), High, Average and Low (SMD) . The self-efficacy of these groups was taken and scored. Further the data was given statistical treatment.

STATISTICAL TECHNIQUE: The data was analyzed using two ways analysis of variance to find out the significant differences between groups. Mean and standard deviation of various subgroups will be computed to understand the nature of data

The Data Obtained has been analyzed under the following headings:

RESULTS AND CONCLUSIONS

The data Obtained has been analysed under the following headings:

The means of sub groups of one way analysis of variance on the score of self-efficacy have been Calculated and Presented Below in table 1.

TABLE 1:

Summary of Means and SD's Of Sub Groups of One Way Analysis Of Variance on the Score of Self-Efficacy

SRL		LOW	AVERAGE	HIGH	TOTAL
SA	N	94	155	101	350
	Mean	72.53	72.23	72.78	72.47
	SD's	26.235	7.725	7.829	15.079
PGS	N	97	125	128	350
	Mean	74.36	70.93	72.55	72.47
	SD's	25.430	8.446	7.826	15.079
	N	129	98	123	350
	Mean	70.40	75.74	72.03	72.47
	Std. Deviation	8.068	25.372	7.549	15.079
SC	N	95	155	100	350
	Mean	72.76	72.19	72.63	72.47
	Std. Deviation	25.969	8.082	7.702	15.079
SE	N	100	144	106	350
	Mean	71.60	74.25	70.88	72.47
	Std. D	8.657	21.081	8.495	15.079
SMD	N	104	142	104	350
	M	73.35	71.70	72.65	72.47
	Std. D	25.012	7.579	8.031	15.079
TSRL	N	94	160	96	350
	M	71.56	73.11	72.30	72.47
	Std. D	26.341	7.581	7.635	15.079

In order to analyze the variable, the obtained scores were subjected to One Way Anova. The results are presented below in Table 2

TABLE 2

Summary of One Way Analysis Of Variance on the Score of Self Efficacy In Relation To Their Self Regulate Learning and Its Dimensions

SRL AND DIMENSIONS		Sum of Squares	df	Mean Square	F	Sig.
SA	Between Groups	1518.963	2	759.481	3.42	significant
	Within Groups	77330.251	347	222.853		
	Total	79349.214	349			
PGS	Between Groups	1644.772	2	822.386	3.67	significant
	Within Groups	77704.442	347	223.932		
	Total	79349.214	349			
SM	Between Groups	1625.683	2	812.842	3.62	Significant.
	Within Groups	77723.531	347	223.987		
	Total	79349.214	349			
SC	Between Groups	22.279	2	11.140	.049	Not significant
	Within Groups	79326.935	347	228.608		
	Total	79349.214	349			
SE	Between Groups	1800.809	2	900.404	4.028	significant
	Within Groups	77548.406	347	223.482		
	Total	79349.215	349			
SMD	Between Groups	168.158	2	84.079	.368	Not

	Within Groups	79181.214	347	228.187		significant.
	Total	79349.214	349			
TSRL	Between Groups	1444.664	2	722.332	3.19	significant
	Within Groups	78204.550	347	225.791		
	Total	79349.214	349			

Self-Efficacy with Self-Regulated Learning and its dimensions

From the results inserted in the table 2 revealed the df between means is 2 and within group is 347. Entering table F with these df's we read that the column 2 and row 347, the value at .05 level is 3.03 and at .01 level is 4.68. It may be observed from the table that F of magnitude 3.42 (df 2/347) for the difference between the means of three groups of students High, Average and Low Self-Awareness (D-I of SRL) on the scores of self-efficacy was found to be significant at 0.5 level of confidence. Next F of magnitude 3.67 (df 2/347) for the difference between the means of three groups of students High, Average and Low Planning & Goal-Setting (D-II OF SRL) on the scores of self-efficacy was found to be significant at 0.5 level of confidence. Then F of magnitude 3.62 (df 2/347) for the difference between the means of three groups of students High, Average and Low Self-Motivation (D-III of SRL) on the scores of self-efficacy was found to be significant at 0.5 level of confidence. Then F of magnitude 4.02 (df 2/347) for the difference between the means of three groups of students High, Average and Low Self-Evaluation (D-V-of SRL) on the scores of self-efficacy was found to be significant at .05 level of confidence.

Again F of magnitude 3.19 (df 2/347) for the difference between the means of three groups of students High, Average and Low Self-Regulated Learning on the scores of self-efficacy (Total SRL) was found to be significant at .05 level of confidence. This indicates that self-efficacy are significantly different in relation to High, Average and Low (SRL), High Average and Low Self-Awareness, High, Average and Low Planning & Goal-Setting, High Average and Low Self-Motivation, & High, Average and Low Self-Evaluation (SE). Thus the data provide sufficient evidence to reject the hypothesis in case of SRL, D-I, D-II, D (III) & D V namely H₁ ' There exists no significant difference in self-efficacy of secondary school students in relation to their High, Averages and Low self-Regulated Learning and its dimension.

Whereas, F of magnitude .049 (df 2/347) for the difference between the means of three groups of students High, Average and Low Self-Control (D-IV of SRL) on the scores of self-efficacy was not found to be significant at 0.1 and even at .05 level of confidence. Next F of magnitude .368 (df 2/347) for the difference between the means of three groups of students High, Average and Low Self-Modification (D-VI of SRL) on the scores of self-efficacy (SMD) was not found to be significant at 0.1 and even at .05 level of confidence. The hypothesis is not rejected in case of these two Dimensions.

so students who have the ability to accurately perceive the aspects of our personality, behaviour, emotions, and motivations, who are able to decide what they want to accomplish and devising a plan to achieve the result they desire, able to force himself to do things, able to assess oneself and weighing up one's achievements has more self-efficacy. Further the examination of mean table revealed that the students with high self-awareness, & high planning and goal setting is required for self-efficacy. But only average self-motivation, average self-evaluation Average self-regulation is enough for self-efficacy

The same has been depicted through graph in Fig. 1

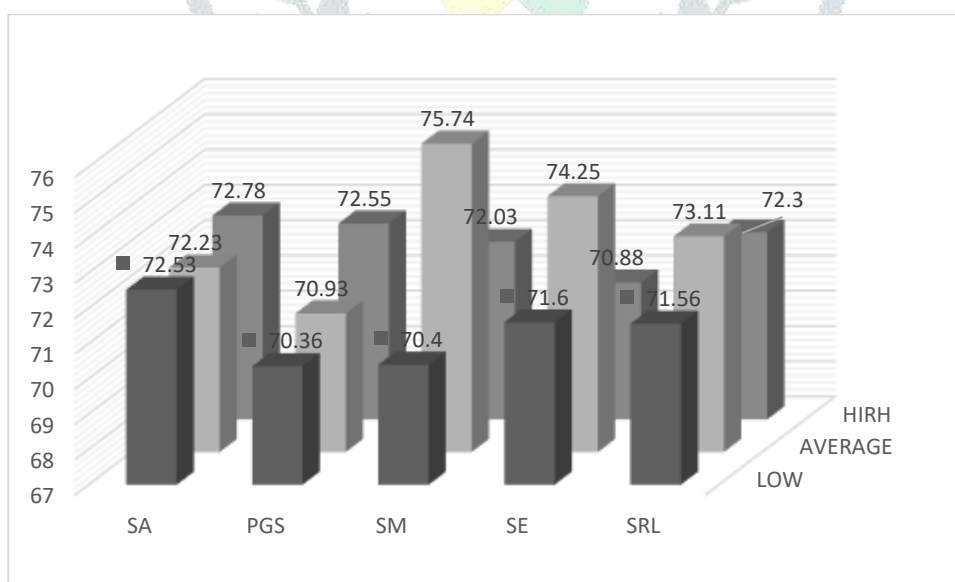


Fig: Bar Graph Showing the Comparison of Mean Values of Self Efficacy In Relation To Their Self Regulate Learning and Its significant Dimensions

The results are in tune with the findings of:

Engin E, Cam O. (2009) found a statistically significant difference in the psychiatric unit nurses' mean SES and SAS scores before and after receiving the education for increasing their self-awareness. On the basis of these findings, it is recommended that an education program for increasing self-awareness be implemented because it affects increasing the personal characteristics of self-efficacy and sociotropy–autonomy.

Hatami, F., Ghahremani, L., Kaveh, M. H., & Keshavarzi, S. (2016) showed that self-awareness training directly increased self-awareness skills and self-efficacy. Thus, self-awareness skills training with painting approach is effective in promoting self-awareness and self-efficacy among adolescents.

Ernesto Panadero (2017) studied the meta-analytic explores the effects of self-assessment on students' self-regulated learning (SRL) and self-efficacy.. These results point to the importance of self-assessment interventions to promote students' use of learning strategies and its effects on motivational variables such as self-efficacy.

Coronado-Aliegro, Javier (2007) found that Spanish undergraduate students' self-efficacy seemed to be heightened significantly more with continuous self-assessment than without it

H. Schunk, PhD Schunk, D. H. (1985) tested the hypothesis that participation in goal setting enhances self-efficacy and skills. Subjects were sixth-grade children who previously had been classified as learning disabled in mathematics. And found that , participation in goal setting led to the highest self-efficacy and subtraction skill. Implications for teaching are discussed

Masoud Gholamali Lavasani Fatemeh Sada tMirhosseini Elahe Hejazi Maryam Davoodi (2011) investigated the effects of self-regulation learning strategies training on the academic motivation and self-efficacy of students. The results of the study indicated that the teaching of self-regulation learning strategies has had a significant effect on the academic motivation and self-efficacy of the students.

FINDINGS OF THE STUDY

- It was found that there exists significant difference in self-efficacy of secondary school students in relation to their Self-Regulated Learning.
- It was found that there exists significant difference in self-efficacy of secondary school students in relation to their Self-Awareness.
- It was found that there exists significant difference in self-efficacy of secondary school students in relation to their Planning and goal Settings
- It was found that there exists significant difference in self-efficacy of secondary school students in relation to their Self-motivation.
- It was found that there exists significant difference in self-efficacy of secondary school students in relation to their Self-Evaluation

CONCLUSION AND SUGGESTIONS

Empirical research has supported the long held assumption that individual differences exist in how students learn. Recent methodological advancements have allowed educational research to examine not only what students learn, but also how they learn. Research has found that active involvement in learning, including setting meaningful goals, selecting appropriate and task-specific strategies, monitoring motivational levels, and adapting based on feedback are all positively related to learning outcomes. How can teachers support students' development and use of these learning processes? The goal of this paper is to examine research that has used the Self-Regulated Learning (SRL) theory to consider this broad question.

Examples of good self-regulation skills include good time management, the ability to rapidly select the most efficient problem-solving strategies and the ability to actively monitor emotional states such as frustration. SRL is an important interdisciplinary competence that leads to improved learning and helps individuals cope with the challenges of life-long learning in a knowledge society. It is widely accepted that SRL has a crucial role in self-efficacy. Children and young people with higher levels of SRL are more likely to succeed academically than students with low SRL

SRL is something that is vital over the entire lifespan in the current era. Learning how to learn is very critical. It is under the influence of intuitions and belief, which may rather impair the process and increase efficacy. Becoming a sophisticated learner requires basic understanding of the learning process, identification and interpretation of errors, and avoiding the mind-set that one's learning ability is fixed, thereby encouraging the mind to think freely and appreciate the incredible capacity of humans. A self-regulated learner is someone who takes charge of their own learning. Self-regulated learning takes a lot of dedication and willingness to apply yourself to the task at hand. Which improve self-efficacy However, it also typically has the best results.

Self-regulation helps adolescents deal with the major changes that happen when they enter middle school, high school and ultimately college. These changes include more teachers and less consistency between expectations of these teachers, more independent work with less guidance from teachers, more movement within the school that requires organization and management of your materials, more homework and harder assignments and projects and many other changes including changes in your social life and body (Cleary & Chen, 2009). Having the strategies to help you manage these changes in your academic world can help you be more independent, self-efficient and successful in school, at home and in the future.

Students are in control of their learning process and can manage time as they see fit.

Students feel a sense of achievement and fulfilment when they have accomplished goals they have set for themselves and therefore are more likely to set more challenging goals in the future.

Self-regulation can be taught with explicit instruction, directed reflection, and metacognitive discussions. Cognitive research has shown that expertise can develop in many ways and explicit instruction is not always necessary. Research, and studies that empirically examined self-regulation with both preservice and inservice teachers are discussed. The paper concludes with the theoretical, methodological, and practical implications of the reviewed studies.

So far, the research supports a few general conclusions: SRL is teachable in the classroom, SRL must be explicitly taught and intensively practiced, and interactive learning environments are effective to make self-efficient. The activities required to promote SRL strategies (including planning, monitoring, and evaluation) are naming the strategy, explaining the what, why, and how, and modelling the strategy's application. Finally, the teacher's role must include being able to cultivate self-regulated learners.

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