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Academic Competence among Secondary School Students in Relation to Self-Regulated Learning

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Abstract

The present study is descriptive one and it has been conducted in Ludhiana District of Punjab (India). The sample comprised 600 students of 9th class (300 boys and 300 girls) of government secondary schools. The data were obtained by using Academic Competence Scale by Kaur (2020) and Self-Regulated Learning Scale by Gupta and Mehtni (2017). The obtained data were analyzed by using Pearson's correlation and t-test. The major findings are (i) There exists significant positive correlation between Academic Competence and Self-Regulated Learning among Secondary school students and (ii) There exists no significant difference between Academic Competence among male and female Secondary school students.

Key-words*:* Academic competence, *Self-Regulated Learning* etc.

Introduction

Academic competence is the belief that children can perform the necessary actions for an academic task or activity (Duchesne and Larose, 2018; Niemiec and Ryan, 2009). The concept of competence, which plays a key role in achieving academic success, forms the basis of personal and environmental factors (Anderman and Patrick, 2012). The concept of academic competence consists of academic skills and academic enablers. Academic skills include numeracy, early literacy, thinking, and comprehension skills. Acquiring academic skills from the preschool period is important because it increases children's readiness for school and academic achievement in the following years (Reid et al., 2014). In addition, considering children constantly need such skills in their daily lives, they should be supported from the preschool period.

The students should be encouraged toward academic competence so that they can build strong scientific foundations for future training. The elements like verbal reasoning, quantitative reasoning, critical thinking and ability to analyze symbolic information can be included in general academic competence. The best way is to develop the habit of Self-Regulated Learning.

Self-Regulation is a process by which one can control his thoughts, emotions and behaviour, and plan his goals (Zimmerman, 2000). It is the ability that helps the individuals to adapt as per the changing environment and how individual thinks, feel, and behave in circumstances (Rothbaum, Weisz and Snyder, 1982; Carver and Scheier, 1998; Vohs and Baumeister, 2004). Self-regulation is defined as the suppressing individual's internal reactions to prevent undesired behaviours (Tangney, Baumeister and Boone, 2004). It has been seen that self-regulation is also used synonymously with the terms 'self-arrangement, self-discipline, and willpower' (Duckworth, Gendler and Gross, 2014). According to Rothbart and Posner (2005) self-regulation involves task persistence, goal setting, planning, environmental management, as well as modulation of emotional, behavioural and attentional reactivity. A person's ability to self-regulate is determined by his/her response to adjustment to changing requirements of environmental conditions (Kitsantas, Winsler and Huie, 2008).

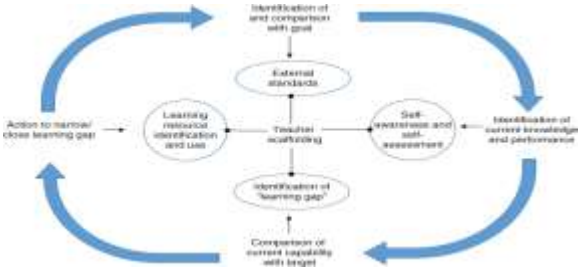
Self-regulated learning is the self-directive process through which learners transform their mental and physical abilities into task-related skills. This form of learning involves metacognitive, motivational, and behavioral subprocesses that are personally initiated to acquire knowledge and skill, such as goal setting, planning, learning strategies, self-reinforcement, self-recording, and self-instruction. Students self-regulate their learning not only through covert cognitive means but also through overt behavioral means, such as selecting, modifying, or constructing advantageous personal environments or seeking social support. Self-regulation extends beyond individualized forms of learning to include

self-coordinated collective forms of learning in which personal outcomes are achieved through the actions of others.

Self-regulated learning processes are implemented during three cyclical phases. Forethought phase processes anticipate efforts to learn and include self-motivational beliefs as well as task analysis skills, such as goal setting and planning. Performance phase processes seek to optimize learning efforts and include learning strategies, self-instruction, and self-recording processes. Self-reflection phase processes, such as self-judgment and self-reactions, follow efforts to learn and provide understanding of the personal implication of outcomes. Self-reflection phase processes, in turn, influence forethought regarding further efforts to learn. Through these cyclical phases, students self-regulate their learning metacognitively, motivationally, and behaviorally.

According to Zimmerman and Schunk (1989), "being master of one's own learning" is the definition of self-regulated learning.

Self-regulated learning is a cyclical process, wherein the student plans for a task, monitors their performance, and then reflects on the outcome. The cycle then repeats as the student uses the reflection to adjust and prepare for the next task. The concept of self-regulated learning puts forward the idea that having a wealth of knowledge and learning strategies is not enough to learn; one must also be able to mobilize these resources in an active and sustainable manner using motivational levers. Self-regulated learning is a core conceptual framework to understand the cognitive, motivational, and emotional aspects of learning. The cycle can be shown as under:



Emergence of the Problem

In the study of learning psychology, self-regulated learning is a key idea, particularly in the area of learning strategy research. It serves as a fundamental conceptual framework for comprehending the emotional, cognitive, and motivational components of learning. Scholars have examined Self-Regulated Learning from various angles. In order to accomplish learning objectives, Zimmerman (1989) defined Self-Regulated Learning as a process in which students actively engage in their own learning activities from metacognitive, motivational, and behavioural dimensions. Language acquisition, according to Winne (1995), is a process of learners' internal creation and self-orientation. More precisely, Pintrich (2000) described Self-Regulated Learning as an active and methodical learning process in which students first identify their learning objectives and then modify their behaviour, motivation, and cognitive processes in accordance with predetermined goals. Success requires efficient learning regulation, as several studies have demonstrated (Lawson et al., 2019). The process by which students convert their mental aptitudes into academic capabilities is known as self-directed learning (Self-Regulated Learning). To put it another way, Self-Regulated Learning is the process of assisting students in controlling their feelings, ideas, and actions so they may effectively guide their educational experience (An et al., 2021).

Different sectors are involved in the formation and growth of Self-Regulated Learning. Researchers in educational psychology use Self-Regulated Learning to analyse a variety of environments, including network environments (Azevedo and Cromley, 2004; Gravill and Compeau, 2008; Puntularb et al., 2021; Gambo and Shakir, 2022), classroom learning (Pionera et al., 2020; Robbins et al., 2020), and higher education (Wolters, 1998; Lee, 2002; Fukuda, 2019; Yüce, 2019). Researches by Weinstein and Meyer (1988), Joseph and Russell (2007), Banarjee and Kumar (2014) and Nodeh (2021) showed that Self-Regulated Learning positively affects the academic achievement and academic competence of the students.

Objectives of the Study

The present study is intended to fulfill the following objectives:

1. To study the relationship between academic competence and self-regulated learning among Secondary school students.
2. To find the difference between academic competence among male and female Secondary school students.

Hypotheses

Ho1 There exists significant relationship between academic competence and self-regulated learning among Secondary school students.

Ho2 There exists no significant difference between academic competence among male and female Secondary school students.

Sample

A sample of 600 students of class IX have been selected randomly from government schools of Ludhiana district in Punjab. All the schools were affiliated to Punjab School Education Board. The method of random sampling was used to select this sample. Out of total sample of 600 students, 300 students were boys and 300 students were girls.

Tools Used

The tools used in the present study has been enlisted below:

1. Academic Competence Scale by Kaur, Sandeep (2020).
2. Self-Regulated Learning Scale by Gupta and Mehtani (2017)

Statistical Techniques Used

To find that relationship between the variables, Pearson's coefficient of Correlation was used. To find the difference between groups t-test was employed. Regression analysis was also done.

Results

Table 1.

Showing coefficient of correlation between Academic Competence and Self-Regulated Learning among secondary school students of the Total sample

Respondents	N	R
Total sample	600	0.575*

***Significant at 0.01 level of confidence**

Table 1 represents coefficient of correlation between Academic Competence and Self-Regulated Learning among Secondary school students of the total sample. The value of

coefficient of correlation came out to be 0.575 which is significant at 0.01 level of confidence. Thus we can say that there exists average positive correlation between Academic Competence and Self-Regulated Learning among Secondary school students. Hence, the hypothesis H1 stating that "there exists significant relationship between Academic Competence and Self-Regulated Learning among Secondary school students" is accepted.

Table 2

t-ratios for the Difference between Mean Scores on Academic Competence among male and female secondary school students

Variable	Male	Female	t-ratio
Academic Competence	Mean = 42.25 SD = 20.47 N = 300	Mean = 142.33 SD = 20.76 N = 300	0.04^{NS}

^{NS} **Not Significant at 0.01 level of confidence**

Table 2 reveals that the t-ratio for the difference in mean scores on Academic Competence among male and female secondary school students came out to be 0.04 which is not significant at 0.05 level of confidence. It leads to the conclusion that male and female secondary school students have equal mean scores on Academic Competence. Hence the hypothesis H2 stating that "there exists no significant difference between Academic Competence among male and female Secondary school students" is accepted.

The prediction of Academic Competence on the basis of effect of Self-Regulated Learning:

Table 3

Showing the values of different Coefficients Calculated for Regression Equation of Academic Competence on Self-Regulated Learning of the Total Sample

Model	Non standardized Coefficients		Standardized Coefficients
	B	**Std. Error**	**Beta**
Constant	16.39	7.35	0.575
Self-Regulated Learning	0.667	0.039	

Table 4

Showing Regression Equation of Academic Competence on Self-Regulated Learning of the Total Sample

Variable	Degree of Freedom	R^2	R	F	Step-up Regression
Model I					
Self-Regulated Learning (X)	599	0.331	0.575	295.98*	Y = 16.39 + 0.667 X

***Significant at 0.01 level of confidence**

Model I of table 4 reveals that for the total sample value of R^2 for Self-Regulated Learning is 0.331 thus 33.1 % of Academic Competence is predicted by Self-Regulated Learning. The remaining 66.9% of Academic Competence is predicted by the variables not included in the present study. The value of F for Self-Regulated Learning is 295.98 which is significant at 0.01 level of significance. Thus, Self-Regulated Learning predicts Academic Competence significantly among Secondary school students.

Conclusion

Average significant positive correlation were found between Academic competence and self-regulated learning among Secondary school students. The results of the study are in line with the results of the studies conducted by Weinstein and Meyer (1988), Joseph and Russell (2007), Banarjee and Kumar (2014) and Nodeh (2021). Also, no significant difference was found between male and female Secondary school students on the variable of academic competence. It may be due to the reason that in the present day scenario girls are provided with equal opportunities forgetting education and developing all their potentials.

References

An Z., Wang C., Li S., Gan Z., Li H. (2021). Technology-assisted self-regulated English language learning: associations with English language self-efficacy, English enjoyment, and learning outcomes. *Front. Psychol.* 11:3763. doi: 10.3389/fpsyg.2020.558466,

Anderman, E., & Patrick, H. (2012). *Achievement Goal Theory, Conceptualization of Ability/ Intelligence, and Classroom Climate.* In S. Christenson, A. Reschly, & C. Wylie (eds.), Handbook of Research on Student Engagement (pp. 173-191). NY: Springer

Azevedo R., Cromley J. G. (2004). Does training on self-regulated learning facilitate students' learning with hypermedia? *J. Educ. Psychol.* 96, 523–535. doi: 10.1037/0022-0663.96.3.523

Banerjee, P. & Kumar, K. (2014). A Study on Self-Regulated Learning and Academic Achievement among the Science Graduate Students. *International Journal of Multidisciplinary Approach and Studies*. 01(6), 329-342.

Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior.* Cambridge, UK: Cambridge University Press.

Duchesne, S., & Larose, S. (2018). Academic competence and achievement goals: Self-pressure and disruptive behaviors as mediators. *Learning and Individual Differences, 68,* 41–50. https://doi.org/10.1016/j.lindif.2018.09.008

Duckworth, A. L.Gendler, T. S. & Gross, J. J. (2014). Self-control in school-age children. *Educational Psychologist,* 49(3).

Fukuda A. (2019). What less-proficient efl learners tell us about their language learning: qualitative analysis of self-regulated learning. *J. Pan Pac. Assoc. Appl. Linguist.* 23, 103–126. doi: 10.25256/PAAL.23.1.6

Gambo, Y., & Shakir, M. Z. (2022). Students' readiness for self-regulated smart learning environment . *International Journal of Technology in Education*

and Science (IJTES), 6(2), 306-322. https://doi.org/10.46328/ijtes.341

Gravill J., Compeau D. (2008). Self-regulated learning strategies and software training. *Inf. Manag.* 45, 288–296. doi: 10.1016/j.im.2008.03.001

Joseph Nijru & Russsel Waugh (2007). Students' regulation of learning in "Information and Communication Technology (ICT) rich environment. A research paper presented at the Australian Association for Research in Education Conference held at Notre Dame University, Fremantle.

Kitsantas A, Winsler A, Huie F. 2008 Self-regulation and ability predictors of academic success during college: A predictive validity study. *Journal of Advanced Academics: Special Issue - Self-Regulated Learning*, 20, 42-68

Lawson et al., 2019).

Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, Competence, and Relatedness in the Classroom Applying Self-Determination Theory to Educational Practice. *Theory and Research in Education,* 7, 133-144.

Pintrich, P. R., & Zusho, A. (2002). The development of academic self-regulation: The role of cognitive and motivational factors. In A. Wigfield & J. S. Eccles (Eds.), *Development of achievement motivation* (249–284).

Pionera M., Degeng I. N. S., Widiati U., Setyosari P. (2020). Instructional methods and self-regulated learning in writing. *Int. J. Instr.* 13, 43–60. doi: 10.29333/iji.2020.1334a

Puntularb P., Yippikun C., Pinchunsri P. (2021). The characteristics and self-regulation of undergraduate students in online English learning: a case study of a private university in Thailand. *Int. J. High. Educ.* 10:34. doi: 10.5430/ijhe.v10n7p34

Robbins M. M., Onodipe G. O., Marks A. (2020). Reflective writing and self-regulated learning in multidisciplinary flipped classrooms. *J. Scholarsh. Teach. Learn.* 20, 20–32. doi: 10.14434/JOSOTL.V20I3.27541

Rothbart, M.K. & Posner, M.R. (2005). The Development of Effortful Control. In *Developing individuality in the human brain: A tribute to Michael I. Posner*. (167-188). American Psychological Association.

Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72 (2), 271–324.

Weinstein, C., & Meyer, R. (1988). *The teaching of learning strategies.* In M. Wittroch (Ed.), Hand book of research on teaching pp.315-327, New York.

Winne P. H. (1995). Inherent details in self-regulated learning. *Educ. Psychol.* 30 173–187. 10.1207/s15326985ep3004_2

Wolters, C. A. (2003). Regulation of Motivation: Evaluating an Underemphasized Aspect of Self-Regulated Learning. *Educational Psychologist, 38*(4), 189–205. https://doi.org/10.1207/S15326985EP3804_1

Yüce, 2019).

Zimmerman B. J. (1989). A social cognitive view of self-regulated academic learning. *J. Educ. Psychol.* 81, 329–339. doi: 10.1037/0022-0663.81.3.329

Zimmerman, B. J., & Schunk, D. H. (Eds.). (1989). *Self-regulated learning and academic achievement: Theory, research, and practice*. Springer-Verlag Publishing. https://doi.org/10.1007/978-1-4612-3618-4

Zimmerman, B. J. (2000). *Attaining self-regulation: A social-cognitive perspective.* In: M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation, 13–42. San Diego, CA: Academic Press