



SELF-REGULATED LEARNING AND DECISION MAKING STYLES AMONG UNIVERSITY STUDENTS

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ABSTRACT - *Self-regulated learning is considered as a higher order cognitive process which attracted the attention of many researchers. Decision making refers to an ability to choose and implement the appropriate choice. It is understood by the researchers that effective decision making requires self-regulatory capabilities and an attempt is made to explore the relationship between self-regulated learning and decision making among university students. 240 students from Periyar University selected randomly and the data was collected through a survey. Results revealed that there is a significant positive association between vigilance style of making decisions and self-regulated learning of students. Female students found to have higher usage of self-regulated learning strategies. The findings and implications are discussed in this article.*

Keywords—self-regulated learning, decision making styles, vigilance style, university students.

1. INTRODUCTION

Learning plays a prudent role in every one's life. It helps us to acquire important skills and adapt to changing conditions in the external environment. Most of our behaviour occurred through a wide variety of learning processes. At university level it is crucial since the career of an individual will be set on the basis of their knowledge and skill acquisition. In this stage, Self-regulated learning (SRL) is viewed as an important cognitive process in which students' learning capability to achieve mastery and get success is the main focus. In turn this leads students to make right choices for their career as well as the life.

1.1. Self-Regulated Learning (SRL)

Self-regulated learning indicated an ability of an individual to behave in accordance with one's own intention and purpose in a more flexible way (Kuhl, 1992). Zimmerman (1986) viewed self-regulated learning as an intrinsic part of cognitive learning. The complexity of



incoming information to the senses and processing of information there after hand in hand contributed to self regulated learning. Bandura (1986) viewed self-regulated learning as a process which is deliberative, judgmental and adaptive in nature. It is basically consisted of knowledge, beliefs and acquired skills. Self regulated learning is inferred through the utility of effective learning strategies. Learning strategies lead to skill acquisition which would include thoughts, emotion and that initiate studying, understanding, knowledge and reorganization of once received information. Zimmerman & Martinez-Pons (1986) defined “self regulated learning strategies as the actions used by learner to obtaining information, which involves agency, purpose and instrumentality and self perception by the learner”. They identified fourteen self regulated learning strategies such as self-evaluation, organizing and transforming, goal setting and planning, seeking information, keeping records and monitoring, environmental structuring, and self-consequences, rehearsing and memorizing, seeking social assistance, and reviewing records (Zimmerman & Martinez-Pons, 1986). The students’ use of these strategies indicated their self-regulated learning (Zimmerman,1986).

1.2 Decision Making

We make numerous decisions in our day to day life. Perhaps, making decisions leads to reflect either positive or negative consequences. According to Robbins (2001), decision making is defined as “the selection of a favored way of action from variety of alternatives”. Decision making is one of the essential skill in individual’s core life skills pattern which could be learned and trained. More specifically, in students’ life decision making is followed by learning and training which is based on their effectiveness of educational setting. Generally, decision maker use following process for getting better outcome for their problems viz, identification of the purpose of the decision, gathering relevant information, judging the alternative, analyzing the different choice, evaluation of the alternative, selecting the better alternative, executing the decision and finally execute the results. Janis and Mann (1977) proposed six different styles based on their conflict theory viz, vigilance, hyper vigilance, defensive avoidance, rationalization, buck passing and procrastination. Among these decision making styles, vigilance style is the most effective than other decision making styles (Rahaman, et al. 2014). Vigilance style is decision also known as healthy decision making style than others. Vigilance style involves appropriate decision making process, which help individuals to choose better alternative and consequences for their problems. The



components of vigilance resembles the components of self-regulation. Hence, it could assume that utilizing self-regulated learning strategies would tend to make better decisions in their life.

1.3 Need for the Study

In the fast developing globalized world the younger generations are expected and compelled to be competent to cope up with societal pressures. Being highly competitive and successful would makes the individual to lead relevant and meaningful life. The globalized world also have brought a lot of distractions which made the younger generation to face failures in life. Perhaps, it is due to inability of using acquired skills in suitable situations. However, individuals would use various learning strategies and methods for acquiring skills which in turn help them to succeed by making right choices. At students level, it often take place to make decision for achieving goals. Self regulation learning is one of the effective method lead to which if followed with greater sense of commitment aid individuals to achieve success. Hence it is imperative to explore the nature of self regulated learning and its relationship with decision making styles among university students.

1.4 Hypotheses

1. There is a significant relationship between self-regulated learning and decision making styles of university students.
2. Male and female students differ significantly in their self-regulated learning.
3. Students from I year and II year differ significantly in their use of self-regulated learning.
4. Students from rural and urban areas differ significantly in their self-regulated learning.

1.5 Research Method

This study adopted survey method. The population of this study comprised of post graduate students in Periyar University, Salem, Tamilnadu. There are about 1200 students in this university out of which 300 students were selected through simple random sampling (25% of the population). The data was collected with the help self-regulated learning scale by Kadhiraivan (1999) and Flinders decision making questionnaire-II by Leon Mann (1982). Out of the collected data some of them were found to be incomplete and skewed, so only 240 data was considered for final analysis.



2. RESULTS AND DISCUSSION

Table-1 Self-Regulated Learning Vs Decision Making Styles of University Students

Decision Making Styles Components of Self-Regulated learning	Vigilance	Hyper-vigilance	Defensive- avoidance	Procrastination	Buck-passing	Rationalization
Self—evaluation	0.132*	0.118	0.059	0.038	0.092	-0.209
Organizing & Transforming	0.140*	0.119	-0.122*	0.037	0.042	-0.121*
Goal Setting & Planning	0.079	-0.010	0.085	-0.044	0.036	0.703
Seeking Information	0.144*	-0.063	-0.070	0.052	-0.081	0.159*
Keeping records & Monitoring	0.097	0.057	-0.009	-0.062	0.014	0.090
Environmental Structuring	0.131*	-0.097	0.036	-0.014	-0.159*	-0.237*
Self-Consequences	0.112	0.011	-0.038	-0.026	0.038	-0.076
Rehearsing & Memorizing	0.196*	0.102	-0.072	-0.025	-0.081	-0.212*
Seeking Social Assistance	0.259*	-0.150*	-0.257*	-0.179*	-0.110	-0.104
Reviewing Records	0.203*	-0.146*	0.007	0.047	0.092	-0.140*
SRL: Total	0.204	-0.158*	-0.123*	0.041	-0.118	-0.223*

*- Significant at 0.05 level

NS- Not significant



Table-1 revealed the association between self-regulated learning and decision making styles among university students. The correlation coefficients were found to be significant for most of the self regulated learning strategies with vigilance style as well as with few other styles of making decision. Hence, the hypothesis is partly accepted. It is concluded that the self regulated learning strategies of university students have significant positive association with vigilance style of making decision.

Vigilance style involves various stages: recognize the problem and survey all the available alternatives; choose the better alternative and evaluate the consequences of the chosen alternative; and implement as well it follow-ups. It is clear that these stages involve careful planning, analysis and execution which are the components of self regulation. Hence, the positive association between self regulated learning and vigilance is logical.

The hyper-vigilance and rationalization styles have significant negative association with the overall self regulated learning. Hyper-vigilance is a kind of emotional decision making where as rationalization include the nature of justifying once own decision. Self-regulation included the ability of learners to utilize their cognitive, motivational and affective tools effectively to attain educational objectives in a systematic manner (Ertmer and Newby, 1996). With emotional imbalance and rationalization we cannot achieve any desirable outcomes of education. Hence, the negative association is understandable.

From the table-2 It is noticed that 't' values are significant for almost all the self-regulated learning strategies along with its total. Hence, the hypothesis-2 is accepted. It is concluded that there male and female students differ significantly in their self-regulated learning. It was observed that female students have shown higher scores in self-evaluation, goal-setting and planning, seeking information, keeping records and monitoring, environmental structuring, self-consequences, rehearing and memorizing and reviewing records. This finding is supported by Peklaj and Pecjak (2002) and Eahaghali Azizi & Ali Ramezani Pachi (2013) indicated that, "female students are better in using self regulated learning strategies than male students". However, it is noticed that the male and female students do not differ in seeking social assistance strategy. The complexities of today's world force each and everyone to seek help form others and probably could lead both male and female to seek social assistance. In general, it s considered that female students had higher usage of self-regulated learning strategies than their counterpart.



Table2: Self-Regulated Learning of Students: Gender wise Comparison

Components of SRL	Male (N1=132)		Female (N2=108)		't' value
	Mean	S.D	Mean	S.D	
Self—Evaluation	10.48	1.867	12.22	1.91	7.13*
Organizing & Transforming	9.81	2.85	7.98	2.46	5.35*
Goal Setting & Planning	10.41	3.17	12.32	2.74	4.67*
Seeking Information	7.98	2.26	9.51	2.42	5.30*
Keeping records & Monitoring	9.14	2.75	8.47	2.85	5.21*
Environmental Structuring	6.75	2.27	8.47	2.85	5.08*
Self-Consequences	8.03	2.21	9.45	3.04	4.05*
Rehearsing & Memorizing	10.40	2.45	12.20	3.04	4.98*
Seeking Social Assistance	8.62	2.96	8.71	3.04	0.22 ^{NS}
Reviewing Records	9.93	2.55	11.63	3.13	4.55*
SRL: Total	91.55	11.74	103.49	17.01	6.18*

*- Significant at 0.05 level NS- Not significant

From table-3 it is found that the ‘t’ values are significant for most of the self-regulated learning strategies along with its total. Hence the hypothesis-3 is accepted. It is concluded that the first and second year university students differ significantly in their self-regulated learning. From the table it is observed that the second year students displayed higher usage self-evaluation, organizing and transforming, goal setting and planning, keeping records and monitoring, environmental structuring, seeking social assistance and reviewing records. Organizing and transforming requires rearrangement of instructional material to improve one’s own learning. Keeping records and monitoring includes the deliberate arrangement of notes, hints from the discussion and a tendency to note down the tough subjects matter whenever they receive. Reviewing records involve the students initiated efforts to re-read notes (Zimmerman & Martinez-Pons, 1986).



Table-3 Self-Regulated Learning of I Year and II Year University Students

Components of SRL	I Year (N1=127)		II Year (N2=113)		't' value
	Mean	S.D	Mean	S.D	
Self—Evaluation	11.37	1.96	11.96	2.35	2.11*
Organizing & Transforming	8.81	2.31	9.98	2.73	3.55*
Goal Setting & Planning	10.24	3.10	11.72	2.56	4.06*
Seeking Information	8.69	2.46	8.06	3.02	1.75 ^{NS}
Keeping records & Monitoring	9.22	3.08	10.20	2.97	2.51*
Environmental Structuring	7.04	2.95	8.08	2.65	2.88*
Self-Consequences	8.87	2.69	9.41	2.57	1.59 ^{NS}
Rehearsing & Memorizing	11.00	2.75	10.51	2.59	1.41*
Seeking Social Assistance	8.29	2.94	9.20	3.07	2.34*
Reviewing Records	10.51	3.41	11.85	3.84	2.84*
SRL: Total	94.40	13.08	100.59	14.16	3.51*

* - Significant at 0.05 level NS - Not significant

The second year students have also displayed higher skills in goal setting and planning, self-evaluation, seeking social assistance an environmental structuring. Goal setting and planning involves the effort to set academic goal and planning for sequencing, timing and completing activities related to these goals. This requires and affective evaluation about one’s own ability. In this process one would not have any inhibition in getting the assistance from the peers, elders and teachers. The second year students could have learned these qualities better than first year students due to their long exposure in the university atmosphere. Which they would have learnt these skills in a more conducive manner. The findings of Zimmerman (1989) indicated that self-regulated learning advances with age and grade, supported the present finding.



From table-4 it is noticed that, 't' values are significant for six self regulated learning strategies along with its total and not significant for four strategies. It is concluded that students from rural and urban areas differ significantly in their use of self regulated learning strategies.

Table-4 Self-Regulated Learning of Students from Urban and Rural area

Components of SRL	Urban (N1= 124)		Rural (N2=126)		't' value
	Mean	S.D	Mean	S.D	
Self—Evaluation	12.59	2.07	10.74	1.13	7.52*
Organizing & Transforming	9.92	2.90	8.85	2.76	2.93*
Goal Setting & Planning	12.51	2.55	9.85	3.20	8.16*
Seeking information	8.34	2.41	8.64	2.59	0.93 ^{NS}
Keeping receipts & Monitoring	9.23	3.55	9.85	2.78	1.50 ^{NS}
Environmental Structuring	7.88	2.59	7.24	2.74	1.87 ^{NS}
Self-Consequences	8.57	2.14	10.41	2.77	3.46*
Rehearsing & Memorizing	11.09	2.14	10.41	2.85	2.10 ^{NS}
Seeking Social Assistance	8.96	3.14	8.55	3.19	1.00 ^{NS}
Reviewing Receipts	12.34	2.66	10.02	3.02	6.33*
SRL: TOTAL	101.43	13.71	93.56	15.54	4.17*

* -Significant at 0.05 level NS - Not Significant

It is interesting to note down from the table that students from urban area have shown higher scores in all the self-regulated learning strategies except self consequence. This finding also supported by the finding of Zimmerman (1989) reported that, “Urban area students displayed higher usage of self- regulated learning strategies”. Normally in urban areas students have a lot of exposure, enjoy more freedom, utilized opportunities available to improve their academic and associated activities. Further, they can get the feedback about their performance from their tutors, parents, peers and so on better than rural areas due to the heightened awareness and understanding about cut throat competition. They always strive hard to achieve



higher goals due to the wider exposure with technological advancements. In contrast, the students from rural area do not normally enjoy these privileges that the students from urban area disseminated higher usage of self regulated learning strategies.

3. IMPLICATIONS

The findings of this study provided many eye opening issues regarding the students' self-regulation. The teachers should think about promoting self-regulatory capabilities among students. Classroom instructions should be organized to promote the skills of self-regulation. Efforts should be made to incorporate the self-regulatory skill development at all levels of education. The curriculum planners should include the activities which promote the self-regulating capabilities; thereby we can help the students' community to face the cut-throat competition and also help them to cope up with stress exerted by the knowledge based society.

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