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Self Regulated Learning Strategies Of Higher Education Students

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Abstract
The present study was aimed to study the significant differences in self-regulated learning strategies of higher education students at post graduate level with respect to the program of study. Five hundred and sixty 2nd semester students from M.Com, M.Sc. (Chemistry), M.Com, MBA and MCA were completed "Motivated Strategies for Learning Questionnaire (MSLQ)" developed by Pintrich et al. (1991). In order to study the significant differences in self-regulated learning strategies of higher education students one way ANOVA was applied and the results indicated that students of different programs viz. M.Com, M.Sc. (Chemistry), M.Com, MBA and MCA differ significantly with respect to their self regulated learning strategies.

Key Words: Self Regulated Learning Strategies, Motivation, Higher Education Students

1. INTRODUCTION

Self-regulated learning is associated with three psychological processes towards goal attainment: self-monitoring, self-judgment and self-reaction (Bandura, 1986). Self-controlled learning is a sparkling, constructive process whereby a learner lay down targets for his or her learning and then attempt to monitor, regulate, and manage their cognition, motivation, and behaviour, controlled by their goals and environment (Pintrich, 2000). Self-regulation is important in order to achieve the prime aim of education i.e. development of life-long learning skills. Researchers have confirmed that self-regulation directly influences the academic success or failure of the learner. Successful academic self-regulation leads to success, enhanced motivation, self-efficacy and self-confidence of the learner. On the contrary, poor academic self-regulation leads to failure and increased stress and anxiety. Adaptive academic self-regulation includes intrinsic goal orientation, control of learning beliefs, self efficacy, valuing the task, various cognitive and metacognitive strategies, whereas maladaptive academic self-regulation includes task avoidance approach and high level of test anxiety (Pintrich and Garcia, 1991; Pintrich and Zusho, 2002; Barron and Harackiewicz, 2001). The learners who use adaptive self-regulated strategies appraise their strengths, weaknesses, set goals accordingly and self-reflect on their achieved effectiveness. This provides self-satisfaction and motivates them to improve their strategies of learning. Motivation and use of adaptive learning strategies help the learners to succeed academically and enable them to view their future optimistically. Previous researches conducted by Hood, Littlejohn & Milligan (2015), Littlejohn et al. (2016) and Kizilcec et al. (2017) found that the students who possess high level of motivation, commitment to learn, relevant prior knowledge scored more on Self- Regulated leaning. Proctor et al. (2006) reported that high achievers scored higher on the scores of concentration, motivation, information processing, selection of main ideas, attitude, managing time, test strategies and scored less on the score of test anxiety than the low achievers. Further, Hong et

al. (2006) explored that successful students used more effective and adaptive learning strategies than unsuccessful students. However, unsuccessful students used rehearsal strategies more frequently than elaboration and organizational strategies. Yip (2007) investigated the differences between high and low achievers on the use of learning and study strategies of university students. The results found low and high achievers significantly differ in the use of learning and study strategies. Also, attitude and motivation were the two main factors that differentiated high and low achievers.

University students are supposed to be self-directed learners and able to adjust themselves according to the university environment which mostly autonomous and less strict than school environment (Wild, 2000; Streblow and Schiefele, 2006). It is expected that the students entering university or college are well motivated to plan, organise and use different learning strategies to achieve their academic goals. One of the globally known characteristics of higher education is the need to regulate their own learning. All students can learn how to regulate their learning regardless of age, gender, competence and knowledge level. Self-regulated learning is not an innate ability but an acquired quality through which the students are able to improve their functioning in terms of their behaviour, knowledge and motivation. This helps them to improve their academic achievement and performance. Naumann et al. (2003) explored that expectancy belief was one of the most important factors in predicting GPA among first-year students. Virtanen and Nevgi (2010) found that male and female students of behavioural science and female students of Sciences reported consistently high, while, male students of Information Technology reported remarkable low on using self-regulation in learning. Thibodeaux et al. (2016) investigated that first-year students scored less on self-regulated learning strategies as compared to the students of the second semester. Abadikhah et al. (2018) surveyed 98 college students from 3rd and 4th year, having English Language as their major subject. The results showed that 4th year students scored more on using self-regulated learning strategies as compared to 3rd year students. Demiroren et al. (2016) studied 2nd year and 3rd year medical students and found that 2nd year students showed lack of self - regulation as compared to their 3rd year counterparts. Ozan et al. (2012) studied university students from different disciplines and found no significant differences among the students of education, health sciences and agriculture with respect to their metacognitive self-regulation but found that students of education, health sciences and agriculture differ significantly with respect to time and study environment management

There are some studies conducted on self-regulated learning strategies of children and adolescents (Pintrich and De Groot 1990; Wolters et al., 1996; Patrick et al., 1999 and Schwinger and Stiensmeier-Pelster, 2012; Xu et al., 2010) and most of the studies in the context of higher education have been conducted in western countries (Naumann et al., 2003; Zusho et al., 2003; Chyung, 2007 and Ahmed, 2018). Moreover, very few research studies have been found on comparing the SRL among the higher education students of different programs of study. Therefore, present research was a new effort to bring into focus the importance of self-regulated learning in the Indian context.

The main aim the present research was to study the significant differences in self-regulated learning strategies of higher education students at post graduate level with respect to the program of study.

2. METHOD

Sample

The sample comprised of 560 2nd semester students from M.Com (79, 14.1%), M.Sc. (Chemistry) (152, 27.1%), MBA (179, 31.9%) and MCA (150, 26.7%). The data was collected

from the PG students from different colleges and universities of Punjab state of India through convenient sampling technique.

Instrument

In order to assess self regulated learning strategies, "Motivated Strategies for Learning Questionnaire (MSLQ)" developed by Pintrich et al. (1991) was used. The scale is 7-point Likert scale, 1 ("not at all true of me") to 7 ("very true of me"). The scale has 81-items in 2 sections i.e. "Motivation" and "Learning Strategies". . Motivation section has 31 items related to individual's view on the motivational beliefs on goal orientation, value beliefs for a particular course of study and their perception about the skill to succeed in the course and also their anxiety for tests in the course. Similarly, learning strategy section is of 50 items which further has 2 subsections. The learning strategy section includes 31 items related to the use of cognitive and metacognitive strategies and 19 items are related to Resource management. Summarily, the MSLQ is having 15 sub-scales, six within the motivation section and nine within the learning strategies section.

3. RESULTS

In order to study the significant differences in self-regulated learning strategies of higher education students at PG level with respect to the program of study; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and the results are reported in table 1. Further, in order to analyse the variance of various dimensions and total score of self-regulated learning strategies of different PG programs viz. M. Com, M.Sc. (Chemistry), MBA and MCA of 2nd semester, the obtained scores were subjected to one-way ANOVA and the results are reported in the table 2.

Table 1: Means and SDs of Sub-groups of One Way ANOVA with respect to Various Dimensions and Total Scores of Self-Regulated Learning Strategies in relation to Different PG Programs

Dimensions	**IGO**					**EGO**					**TV**					**CLB**				
Program	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**
M	5.2	5.4	5.1	5.0	5.2	5.4	5.4	5.1	4.8	5.1	5.2	5.2	5.1	4.9	5.1	5.1	5.2	5.1	4.9	5.1
σ	1.4	1.2	1.2	1.2	1.2	1.3	1.1	1.2	1.2	1.2	1.4	1.0	1.1	1.1	1.1	1.4	1.1	1.2	1.1	1.2
N	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560
Dimensions	**SELP**					**TA**					**Motivation**					**REH**				
Program	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**

M	5.0	5.3	5.0	4.8	5.0	4.3	4.4	4.2	4.4	4.3	30.0	30.7	29.4	28.5	29.6	5.0	5.1	4.8	4.7	4.9
σ	1.1	1.0	1.0	1.1	1.1	1.4	1.2	1.2	1.1	1.2	6.3	4.5	4.9	5.6	5.3	1.3	1.0	1.2	1.1	1.1
N	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560
Dimensions	**ELAB**					**ORG**					**CT**					**MSR**				
Program	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**
M	5.0	5.2	4.9	4.7	4.9	5.3	5.3	5.1	4.8	5.1	4.9	5.0	4.7	4.6	4.8	4.7	4.8	4.6	4.5	4.6
σ	1.2	1.0	1.1	1.0	1.1	1.3	1.0	1.2	1.1	1.2	1.2	1.0	1.0	1.0	1.1	1.0	0.7	0.7	0.8	0.8
N	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560

Dimensions	**TSE**					**ER**					**PL**					**HS**				
Program	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**
M	4.3	4.4	4.4	4.2	4.3	4.2	4.1	4.4	4.1	4.2	4.8	5.0	4.8	4.7	4.8	4.6	4.7	4.7	4.5	4.6
σ	0.9	0.7	0.7	0.7	0.7	1.0	0.9	0.9	0.7	0.9	1.5	1.1	1.2	1.2	1.2	1.2	1.0	0.9	0.8	1.0
N	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560
Dimensions	**Learning Strategies**					**Self Regulated Learning Strategies**														
Program	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**	**M.Com**	**M.Sc.**	**MBA**	**MCA**	**Total**										
M	42.5	43.3	42.1	40.7	42.1	72.5	74.0	71.5	69.1	71.7										
σ	8.3	5.9	6.6	6.8	6.8	13.7	9.2	10.8	11.9	11.3										

N	79	152	179	150	560	79	152	179	150	560

"IGO- Intrinsic Goal Orientation", "EGO- Extrinsic Goal Orientation", "TV- Task Value", "CLB- Control of Learning Beliefs", "SELP- Self-Efficacy for Learning and Performance". "TA- Test Anxiety", " REH- Rehearsal", "ELAB- Elaboration", "ORG- Organisation", "CT- Critical Thinking", "MSR-Metacognitive Self-Regulation", "TSE- Time and study environment", "ER- Effort Regulation", "PL- Peer learning", "HS- Help-Seeking"

Table 2: Summary of One Way ANOVA with respect to Various Dimensions and Total Scores of Self-Regulated Learning Strategies in relation to Different PG Programs

DV	**IGO**	**EGO**	**TV**	**CLB**	**SELP**	**TA**	**Motivation**	**REH**	**ELAB**	**ORG**	**CT**	**MSR**	**TSE**	**ER**	**PL**	**HS**	**Learning**	**Self Regulated**
Source	**Program**																	
SS	14.1	31.88	9.5	8.7	20.24	4.62	378.08	11.23	18.44	24.84	14.72	8.4	2.14	6.91	8.34	3.94	558.34	1866.8
Df	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MSS	4.7	10.63	3.17	2.9	6.75	1.54	126.03	3.74	6.15	8.28	4.91	2.8	0.72	2.3	2.78	1.31	186.11	622.2
F	3.16*	7.58**	2.49	2.14	6.25**	1.08	4.63**	2.89	5.69**	6.39**	4.43**	4.51**	1.37	2.89*	1.88	1.44	4.07**	5**
Sig.	0.02	0.00	0.06	0.09	0.00	0.36	0.00	0.04	0.00	0.00	0.00	0.00	0.25	0.04	0.13	0.23	0.01	0.00
Source	**Error**																	
SS	826	779.4	708.7	752.7	599.9	794.6	15139.4	719.5	600.9	720.9	615.6	345.3	290.4	443.1	823.2	508	25437	69202
Df	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556
MSS	1.49	1.4	1.28	1.35	1.08	1.43	27.23	1.29	1.08	1.3	1.11	0.62	0.52	0.8	1.48	0.91	45.75	124.46

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

It has been found from the table 2 that the F-values for 'Task Value', 'Control of Learning Beliefs', 'Test Anxiety' came out to be 2.49, 2.14 and 1.08 respectively, which have not been found significant even at the 0.05 level of confidence. However, F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance' and total score of 'Motivation' came out 3.16, 7.58, 6.25 and 4.63 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that subgroups differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance' and total score of 'Motivation'.

Table 2 clearly reveals that the F-values for 'Time and Study Environment', 'Peer Learning' and 'Help-Seeking' are 1.37, 1.88 and 1.44 respectively, which are not found to be significant even at the 0.05 level of confidence. However, the F- values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self- Regulation', 'Effort Regulation', total score of 'Learning Strategies' and total score of 'Self-Regulated Learning Strategies' came out to be 2.89, 5.69, 6.39, 4.43, 4.51, 2.89, 4.07 and 5.00 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. Meaning thereby that different programs viz. M. Com, M.Sc., MBA and MCA differ significantly on their scores on 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Effort Regulation', scores of 'Learning Strategies', scores of 'Self-Regulated Learning Strategies'.

To further analyse the significant difference between various subgroups, Post Hoc Scheffe test was applied on various dimensions viz. 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance', 'Motivation Total', 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Effort Regulation', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' and the results are reported in table 3.

Table 3: Summary of Scheffe Post Hoc Test with respect to Various Dimensions of Self-Regulated Learning Strategies in relation to Different PG Programs

Dependent Variable	**IGO**						**EGO**						**SELP**					
(I) PROGRAM	**M.Com**			**M.Sc.**		**MBA**	**M.Com**			**M.Sc.**		**MBA**	**M.Com**			**M.Sc.**		**MBA**
(J) PROGRAM	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**
MD (I-J)	0.24	0.06	0.17	0.31	0.41*	0.11	0.07	0.31	0.63**	0.24	0.56**	0.33	0.28	0.02	0.24	0.3	0.51**	0.22
SE	0.17	0.17	0.17	0.13	0.14	0.14	0.16	0.16	0.16	0.13	0.14	0.13	0.14	0.14	0.14	0.11	0.12	0.12

Sig.	0.56	0.99	0.79	0.16	0.03	0.88	0.98	0.29	0.000	0.34	0.00	0.11	0.3	1	0.43	0.08	0.00	0.31
Dependent Variable	**Motivation**						**REH**						**ELAB**					
(I) PROGRAM	**M.Com**			**M.Sc.**		**MBA**	**M.Com**			**M.Sc.**		**MBA**	**M.Com**			**M.Sc.**		**MBA**
(J) PROGRAM	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**
MD (I-J)	0.63	0.66	1.54	1.28	2.16**	0.89	0.1	0.16	0.26	0.26	0.36	0.1	0.21	0.05	0.28	0.26	.492**	0.23
SE	0.72	0.7	0.73	0.58	0.6	0.58	0.16	0.15	0.16	0.13	0.13	0.13	0.14	0.14	0.14	0.11	0.12	0.12
Sig.	0.86	0.83	0.21	0.18	0.01	0.5	0.94	0.79	0.45	0.23	0.06	0.9	0.55	0.99	0.28	0.16	0.00	0.26

Dependent Variable	**ORG**						**CT**						**MSR**					
(I) PROGRAM	**M.Com**			**M.Sc.**		**MBA**	**M.Com**			**M.Sc.**		**MBA**	**M.Com**			**M.Sc.**		**MBA**
(J) PROGRAM	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**
MD (I-J)	0.05	0.26	0.551	0.21	0.50**	0.29	0.16	0.14	0.26	0.3	0.41**	0.11	0.09	0.07	0.23	0.17	0.32**	0.16
SE	0.16	0.15	0.16	0.13	0.13	0.13	0.15	0.14	0.15	0.12	0.12	0.12	0.11	0.11	0.11	0.09	0.09	0.09
Sig.	0.99	0.43	0.01	0.42	0.00	0.14	0.75	0.8	0.38	0.08	0.01	0.81	0.86	0.92	0.21	0.29	0.01	0.35
Dependent	**ER**						**Learning Strategies**						**Self Regulated Learning Strategies**					

Variable																		
(I) PROGRAM	**M.Com**			**M.Sc.**		**MBA**	**M.Com**			**M.Sc.**		**MBA**	**M.Com**			**M.Sc.**		**MBA**
(J) PROGRAM	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**	**M.Sc.**	**MBA**	**MCA**	**MBA**	**MCA**	**MCA**
MD (I-J)	0.09	0.17	0.07	0.26	0.02	0.24	0.89	0.31	1.8	1.2	2.68**	1.49	1.48	1	3.41	2.48	4.89**	2.4
SE	0.12	0.12	0.12	0.1	0.1	0.1	0.94	0.91	0.94	0.75	0.78	0.75	1.55	1.51	1.55	1.23	1.28	1.24
Sig.	0.92	0.59	0.95	0.08	1	0.12	0.83	0.99	0.3	0.46	0.01	0.27	0.82	0.93	0.19	0.26	0.00	0.29

*significant at 0.05 level, **significant at 0.01 level

It is clear from table 3 that on 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance', total score of 'Motivation' the mean difference of the pair, M.Sc.-MCA has been found to be significant either at 0.05 or 0.01 level of confidence. Also, it has been found that on 'Extrinsic Goal Orientation' the mean difference of the pair, M. Com-MCA has been found to be significant at 0.01 level of confidence.

Further, the results revealed that in case of 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', total score of 'Learning Strategies', total score of 'Self-regulated learning strategies' the mean difference of the pair, M.Sc.-MCA has been found to be significant either at 0.05 or 0.01 level of confidence. Also, results revealed that on 'Organisation' the mean difference of the pair, M.Com-MCA has been found to be significant at 0.01 level of confidence.

4. DISCUSSION

It has been found that only M.Sc.-MCA and M.Com-MCA groups showed significant differences on the aforementioned sub dimensions. Further, on comparing the mean scores from the table 1. It has been found that the mean scores of M.Sc. were found to be consistently higher on 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance', total score of 'Motivation', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', total score of 'Learning Strategies', total score of 'Self-regulated learning strategies'. A high level of 'Intrinsic Goal Orientation' indicates that M.Sc. students imbibed this value from their subject that is why their motivation is mainly due to the intrinsic reasons such that their curiosity, urge of taking challenging study tasks and getting mastery over the content, they use deep information processing strategies like developing manifold examples of a single concept. Such type of students is considered as mastery-oriented students, they spend a great deal of time in understanding the logic behind the concept and this adds to their pride, self-satisfaction with the success as compared to MCA students. Further, high level of 'Extrinsic Goal Orientation' of M.Com students indicates that they are triggered by some external reasons as well, such as getting good scores, competition,

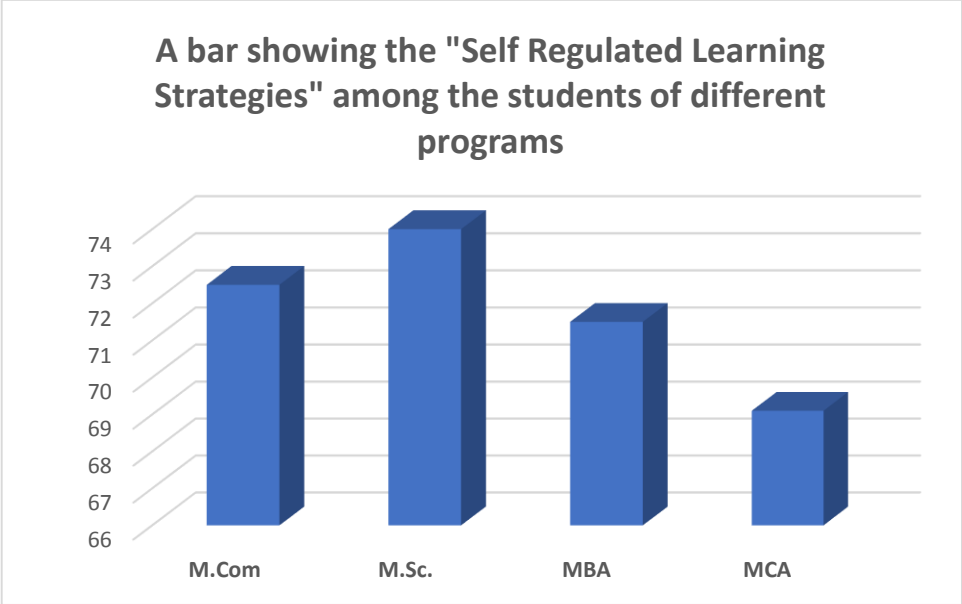
getting rewards from the teachers and parents for good performance. M.Com students tend to set performance-oriented goals while M.Sc. and MCA students tend to set mastery-oriented goals.

To add to this, high level of 'Self-Efficacy for Learning and Performance' of M.Sc. make them to appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their MCA student counterparts. Further, motivation level of M.Sc. students was found to be higher than MCA students. This shows that M.Sc. students are more motivated to regulate their learning process than MCA students. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed.

On comparing the learning strategies, it has been found that M.Sc. students scored higher on 'Elaboration' strategy than MCA students. Meaning thereby that M.Sc. students make good use of elaboration strategies like paraphrasing, summarising, making internal connections between the items to be learned and new knowledge with the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials and make connections between them as compared to their MCA students' counterparts.

Further, M.Com and M.Sc. students scored higher on 'Organisation' strategy. Meaning thereby that M.Com and M.Sc. students put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They plan their learning more strategically and make good use of organisation strategies like grouping, clustering, outlining and organising the main points from the gathered information, they often make good use of mind mapping technique as compared to MCA students. In case of Critical thinking, M.Sc. students again scored higher than MCA students. Hence, it can be interpreted that MSc. students often question themselves before getting convinced about the idea taught in the class and try to find good supporting shreds of evidence in order to accept any conclusion and assertion. They always play around with their ideas in order to develop a convincing explanation of the content as compared to MCA students. Additionally, M.Sc. students are more metacognitively self-regulated than MCA students. Meaning thereby that M.Sc. students always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate one's progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher.

Further, on comparing the total score of 'Self-regulated learning strategies' again M.Sc. students scored higher than MCA students. This indicates that the self-regulated learning of M.Sc. students was markedly higher than MCA students. This shows that M.Sc. students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. They are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The same shave been shown in the following bar graph.



5. CONCLUSIONS:

The results showed that M.Sc. students were found to have higher level of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance', total score of 'Motivation', 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self- Regulation', 'Effort Regulation', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' than MCA students. This shows that M.Sc. students are highly motivated to regulate their learning process and make good use of learning strategies as compared to MCA students. Further, M.Com students were found to possess higher level of 'Extrinsic Goal Orientation' as compared to MCA students.

REFERENCES

[1] Abadikhah, S., Aliyan, Z., & Talebi, S. H. (2018). EFL students' attitudes towards self-regulated learning strategies in academic writing. *Issues in Educational Research*, *28*(1), 1-17.

[2] Ahmed, W. (2018). Motivation and self -regulated learning: a multivariate multilevel analysis, *International Journal of Psychology and Educational Studies*, 4 (3), 1-11. https://doi.org/10.17220/ijpes.2017.03.001

[3] Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ, US: Prentice-Hall, Inc.

[4] Barron, K. E., & Harackiewicz, J. M. (2001). Achievement goals and optimal motivation: Testing multiple goal models. *Journal of Personality and Social Psychology*, *80*(5), 706-722.

[5] Beri, N., & Jain, M. (2016). Personal growth initiative among undergraduate students: Influence of emotional self efficacy and general well being. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, *8*(2), 43-55. doi:10.21659/rupkatha.v8n2.05

[6] Chyung, S. Y. Y. (2007). Age and gender differences in online behavior, self-efficacy, and academic performance. *Quarterly Review of Distance Education*, 8(3), 213-222.

[7] Demirören, M., Turan, S., & Öztuna, D. (2016). Medical students' self-efficacy in problem-based learning and its relationship with self-regulated learning. *Medical education online*, *21*(1), 30049.

[8] Hong, E., Sas, M., & Sas, J. C. (2006). Test-taking strategies of high and low mathematics achievers. *The Journal of Educational Research*, 99(3), 144-155. https://doi.org/10.3200/JOER.99.3.144-155
[9] Hood, N., Littlejohn, A., & Milligan, C. (2015). Context counts: How learners' contexts influence learning in a MOOC. *Computers & Education*, 91, 83-91. https://doi.org/10.1016/j.compedu.2015.10.019
[10] Kizilcec, R. F., Perez-Sanagustin, M., & Maldonado, J. J. (2017). Self-regulated learning strategies predict learner behavior and goal attainment in massive open online courses. *Computers & Education*, 104, 18-33. https://doi.org/ 10.1016/j.compedu.2016.10.001
[11] Littlejohn, A., Hood, N., Milligan, C., & Mustain, P. (2016). Learning in MOOCs: Motivations and self-regulated learning in MOOCs. *The Internet and Higher Education*, 29, 40-48. https://doi.org/10.1016/j.iheduc.2015.12.003
[12] Naumann, W. C., Bandalos, D., & Gutkin, T. B. (2003). Identifying variables that predict college success for First-generation college students. *Journal of College Admission*, 181, 4-9.
[13] Neumann, R., Parry, S., & Becher, T. (2002). Teaching and learning in their disciplinary contexts: A conceptual analysis. *Studies in higher education*, *27*(4), 405-417.
[14] Ozan, C., Gundogdu, K., Bay, E., & Celkan, H. Y. (2012). A study on the university students' self-regulated learning strategies skills and self-efficacy perceptions in terms of different variables. *Procedia-Social and Behavioral Sciences*, *46*, 1806-1811.
[15] Patrick, H., Ryan, A. M., & Pintrich, P. R. (1999). The differential impact of extrinsic and mastery goal orientations on males' and females' self-regulated learning. *Learning and Individual Differences*, 11(2), 153-171. https://doi.org/10.1016/S1041-6080(00)80003-5
[16] Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich & M. Zeidner, *Handbook of self-regulation* (pp. 451-502). Michigan, USA: Academic Press.
[17] Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82(1), 33-40.
[18] Pintrich, P. R., & Garcia, T. (1991). Student goal orientation and self-regulation in the college classroom. In M. L. Maehr and P. R. Pintrich (Eds.), *Advances in Motivation and Achievement* (pp. 371-402). Greenwich, CT: JAI Press.
[19] 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* (pp. 249-284). San Diego, CA: Academic Press.
[20] Pintrich, P. R., Smith, D. A., García, T., & McKeachie, W. J. (1991). *A manual for the use of the motivational strategies for learning questionnaire (MSLQ).* Ann Arbor, MI: University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.
[21] Proctor, B. E., Prevatt, F. F., Adams, K. S., Reaser, A., & Petscher, Y. (2006). Study skills profiles of normal-achieving and academically-struggling college students. *Journal of College Student Development*, 47(1), 37-51. http://dx.doi.org/10.1353/csd.2006.0011
[22] Schwinger, M., & Stiensmeier-Pelster, J. (2012). Effects of motivational regulation on effort and achievement: A mediation model. *International Journal of Educational Research*, 56, 35-47. https://doi.org/10.1016/j.ijer.2012.07.005
[23] Streblow, L., & Schiefele, U. (2006). Lernstrategien im Studium. *Handbuch Lernstrategien*, 352-364.

[24] Thibodeaux, J., Deutsch, A., Kitsantas, A., & Winsler, A. (2017). First-year college students' time use: Relations with self-regulation and GPA. *Journal of Advanced Academics*, 28(1), 5-27. https://doi.org/10.1177/ 1932202X16676860
[25] Virtanen, P., & Nevgi, A. (2010). Disciplinary and gender differences among higher education students in self-regulated learning strategies. *Educational Psychology*, 30(3), 323-347. https://doi.org/10.1080/01443411003606391
[26] Wild, K. P. (2000). Lernstrategien im Studium: Strukturen und Bedingungen [Study strategies in college students: Structures and conditions]. *Münster, Germany: Waxmann*.
[27] Wolters, C. A., Shirley, L. Y., & Pintrich, P. R. (1996). The relation between goal orientation and students' motivational beliefs and self-regulated learning. *Learning and Individual Differences*, 8(3), 211-238. https://doi.org/10.1016/ S1041-6080(96)90015-1
[28] Yip, M. C. (2007). Differences in learning and study strategies between high and low achieving university students: A Hong Kong study. *Educational Psychology*, 27(5), 597-606. https://doi.org/10.1080/01443410701309126
[29] Zusho, A., Pintrich, P. R., & Coppola, B. (2003). Skill and will: The role of motivation and cognition in the learning of college chemistry. *International Journal of Science Education*, 25(9), 1081-1094. https://doi.org/10.1080/ 0950069032000052207