
Motivational Goal Orientation and Learning Strategies of E-learners

Narjis Sherazi

*Lecturer, Department of Psychology
Virtual University of Pakistan
narjis@vu.edu.pk*

Sadia Jabeen

*Lecturer, Department of Sociology
Virtual University of Pakistan*

Abstract

Motivational goal orientation and learning strategies have a great impact on students' learning in an e-learning environment. This study explores the relationship between motivational goal orientation and the metacognitive strategies of 400 students of Virtual University enrolled in various degree programs in the semester Spring 2015. Data is collected using an online survey and data analysis is done by doing descriptive and correlational analysis of motivational goal orientation and the learning strategies used by the students. Findings of the study indicate that there is a strong correlation between intrinsic motivation and metacognitive strategies such as elaboration, organization and time management techniques used by the students in an online environment. Insignificant association is found between intrinsic and extrinsic goal orientation and peer learning among the students. The study concludes that intrinsic motivation of the students and the use of meta-cognitive strategies enable the students to become self-directed learners.

Key words:

Intrinsic Motivation, Extrinsic Motivation, Motivational Goal Orientation, Learning Strategies, Metacognitive Learning.

Introduction

Distance education has made learning more student-oriented and customized by abolishing time and space limits. As distance learning is more self-directed, it requires more self-motivation to keep the students more organized. Furthermore, the focus of learning has shifted from “know what” to “knowing how” by making students learn information and relate it to the changing phenomena of a society (Thomas, 1995; Sacchanand, 2002).

E-learning is that type of distance education that makes students and teachers interact through online media. The course contents are available online which can be accessed by the students anytime. Similarly, the students perform their learning activities individually and independently most of the time. As a result, individual characteristics of the students become more prominent in e-learning environments (Chen and Lin, 2002) and affect their success directly. Therefore, e-learners need to be self-directed (Sacchanand, 2002) and the students must be motivated to access appropriate learning material and use suitable learning strategies to continue the learning process.

Studies on the relationship of motivation and learning strategies indicate that the students with high motivational goal orientation perform better in their studies (Pintrich, Smith, Garcia & McKeachie, 1991, 1993; Garcia & Pintrich, 1996). In a learning process, the concept of motivation is associated with the learner’s internal drive to explore the expected outcomes and achievements in the class (Elliot, 1999). Motivation has a very close connection with goal-orientation as well. In general, two types of goal orientations are identified i.e. intrinsic goal orientation and extrinsic goal orientation. Intrinsic goal orientation focuses the level of personal involvement of the learner. A learner with intrinsic goal motivation is motivated to increase his or her subject knowledge (Dweck & Leggett, 1988). In extrinsic goal orientation, the learner is involved in the learning process due to some external factors such as rewards, appreciation and recognition etc. (Middleton & Midgley, 1997; Pintrich, 2000, Deemer, 2004; Muirhead, 2006; Bell & Akroyd, 2006).

The motivational goal orientation has an impact on the learning strategies of the students and these strategies play a significant role in e-learning (McCormack & Jones, 1997). If a student adopts effective and efficient strategies for e-learning, s/he can better achieve learning outcomes. Wallace (2000) highlighted that seeking online information is a multifaceted, difficult and challenging process for both students as well as teachers and the understanding of this process may develop over time. Therefore, the students’ motivational goal orientation and learning strategies are the major factors that positively influence the learning achievements of the students (Shih, Ingebritsen, Pleasants, Flickinger & Brown, 1998).

Motivational goal orientations help students to use different metacognitive strategies such as rehearsal, elaboration, organization, time/study environmental management, peer learning and help

seeking (Nevgi, 2001; Chen, 2002, Jones, Alexander & Estell, 2010). Nevgi (2001) conducted a study in a virtual learning atmosphere and found that motivational goal orientation had a positive correlation with the students' ability to select effective learning strategies. Hence, there is a link between the level of motivation and the metacognitive strategies used by the students (Pintrich, Smith, Garcia & McKeachie, 1993; Garcia & Pintrich, 1996). The relationship between motivation and learning strategies is further explored in this study by using a sample of 400 students enrolled in different disciplines in Virtual University of Pakistan (VUP).

The students at VUP get education through e-learning mode and materials such as video lectures, lecture handouts, online books and resources are available for their convenience. Further, they also have the option to use Open Course Ware (OCW) and Learning Management System (LMS) on regular basis. Though the students are offered instructional support through Moderated Discussion Board (MDB), synchronous sessions and live tutorials, it is important to identify the motivational factors that help the students to use different learning strategies for their studies.

Objectives

The main objectives of the study are:

- To find out the motivational goal orientation of the students of VUP
- To explore the learning strategies used by the students of VUP
- To find out the association between motivational goal orientation and the learning strategies used by the students of VUP

Methodology

This study was conducted to find out the relationship between motivational goal-orientation and the learning strategies used by the student of VUP. Data was collected using an online survey. The sample population was the students enrolled in Computer Science, Management Science and Social Sciences Degree Programs at VUP in the semester Spring 2015. Four hundred students attempted the survey with a response rate of 53% percent. Good response rate of the e-learners may be accredited to the students' positive attitude towards e-learning. The questionnaire used for this study was adopted from the Pintrich, Smith, Garcia, & McKeachie's 1991 work on 'Motivational Strategies for Learning' questionnaire. Chronbach Alpha was 0.816. Motivational orientation was measured through intrinsic goal orientation and extrinsic goal orientation both containing 4 items. For learning strategies, the metacognitive strategies measured were rehearsal (4 items), elaboration (6 items), organization (4 items), time/study environmental management (8 items), peer learning (3 items) and help seeking (4 items). The questionnaire was a Likert-type scale with five categories. For data analysis purpose, descriptive statistics and correlation were used.

Results

Out of 400 respondents, 69% were males and 31% were females. Sixty three percent (63%) respondents were enrolled in Computer Science, 23% in Management Science and 14% in Social Sciences Degree Programs.

Table 1:
Descriptive Statistics of the Constructs

Constructs	M	SD
Motivational Goal Orientation		
Intrinsic motivation	13.65	4.23
Extrinsic motivation	14.82	4.87
Strategies for Learning		
Rehearsal	12.24	4.21
Elaboration	19.49	6.10
Organization	12.75	4.32
Time/Study Management	25.37	7.00
Peer Learning	7.94	3.73
Help Seeking	11.89	3.98

Data in Table 1 explains the descriptive statistics of the motivational goal orientation and the strategies for learning. Results explain more favorable trend towards extrinsic goal orientation of the students ($M=14.82, SD=4.87$) as compared to the intrinsic goal orientation ($M=13.65, SD=4.23$). The students show almost similar good scores on rehearsal, organization of work and help seeking as the strategies of learning with mean scores of ($M=12.24, M=12.75, M=11.89$) respectively. Overall mean values depict good score except for peer learning ($M=7.94, SD=3.98$).

Hypothesis

H₁: There is an association between motivational goal orientation and the learning strategies of the e-learners.

Table 2:
Correlation of Motivational Goal Orientation and Learning Strategies

Items	1	2	3	4	5	6	7	8
1 Intrinsic Motivation	---							
2 Extrinsic Motivation	.556**	---						
3 Rehearsals	.556**	.505**	---					
4 Elaboration	.711**	.533**	.660**	---				
5 Organization	.626**	.520**	.704**	.718**	---			
6 Time study management	.639**	.563**	.553**	.594**	.605**	---		
7 Peer learning	.268**	.178**	.331**	.308**	.376**	.421**	---	
8 Help Seeking	.474**	.419**	.460**	.507**	.523**	.605**	.728**	---

** $p < .001$ * $p < .005$

Table 2 illustrates the correlation matrix of 08 items for measuring the association of intrinsic and extrinsic goal orientation with different learning strategies used by the e-learners. The table shows that there is a significant association between the intrinsic motivational goal orientation and elaboration as a learning strategy used by the learners. A moderate level of association is also found between extrinsic goal orientation and the elaboration strategy. Intrinsic motivation also has a moderate level of association with organization and time study management techniques used by the students. Insignificant association is found between intrinsic and extrinsic goal orientation and peer learning among the students of online learning. Help seeking is moderately associated with intrinsic and extrinsic goal orientation of motivation.

Discussion

Motivational goal orientation is considered to be one of the most important factors to influence the students' learning. Motivational goal orientation also strongly influences the learning strategies of the students as well as the resulting academic achievements (Svinicki, 2005). Motivational orientations in one way or the other stimulate the students for self-learning (Zimmerman, 2002). In e-learning, there are limited studies that outline how the students get motivated for learning and which strategies they adopt for self-directed learning. This study, by focusing on these two important factors tries to find out the link between motivational goal orientations i.e. intrinsic and extrinsic motivation and the learning strategies adopted by the students (Ryan & Deci, 2000).

Results of the study indicate that motivation is linked to the learning strategies used by the students. Descriptive analysis reveals the fact that the students respond more positively to extrinsic motivational factors such as getting a good grade in exam and in return receiving appreciation from the people around like family, friends, employer etc. (Hendrikse, 2003). The strategies that the students prefer for learning are rehearsals, organization of work and seeking help. In an e-learning environment, the students prefer to rehearse their learning by watching lecture videos again and again as they have the facility to watch video lectures in their respective courses at their own pace. Second important strategy that is identified by the students is organization such as making outline of the content, going through handouts, making diagrams and making an outline of the important concepts (Dunlosky et al. 2013; Karadeniz, 2008).

The assumption that there is a link between motivational goal orientation and the learning strategies is verified by the current study results. The most significant association was found between intrinsic motivation and the metacognitive strategy of elaboration. The e-learners with intrinsic motivation use elaborative techniques for learning such as collecting information from the lectures, readings, and discussions, trying to relate the ideas to other lectures and subjects, relating the new

concepts to already known terms and constructs, making connections by summarizing the content learnt through lectures and applying the conceptual ideas to real life situations. Intrinsically motivated learners make their experience enjoyable by finding more information on their areas of interest.

This study also shows that the learners having good intrinsic motivation are also found to be good organizers and have better time management skills. In this regard, the findings of the study support the concept of self-regulated learning given by Zimmerman (2002). The results show poor association among peer learning, help seeking and intrinsic and extrinsic goal orientations. Plausible reason could be that in an online learning environment, sometimes the students are home based or working professionals who have limited level of interaction with the online community of the students as compared to those who visit campuses regularly. Another reason can be the lack of connection between the students in the online environment. The students do not introduce themselves at the beginning of the course hence they are unable to familiarize with each other.

Help-seeking is an important learning strategy adopted by the students in both conventional and unconventional modes. It was found that the students with both types of motivational orientation seek a moderate level of help from their class fellows or instructors (Yang & Cao, 2013). The students having high intrinsic goal orientation regulate their learning and put in their efforts (Shia, 1998) whereas those who are extrinsically motivated prefer to work independently to show their hard work and get appreciation as a result (Ryan & Pintrich, 1997).

Conclusion

On the basis of the e-learners' responses, it can be concluded that the motivational orientation has an association with the learning strategies adopted by the students. The survey results strongly support that the students with intrinsic motivation are more likely to adopt elaboration, organization and study time management as effective strategies for learning as compared to the students with extrinsic motivation. It can also be inferred that the students in the e-learning system lack the element of peer learning and their help seeking behavior are not as encouraging as they should be. Overall, it can be concluded that in e-learning, intrinsic motivation leads the e-learners to the self-regulated learning and customized learning.

Study Limitations and Suggestions

This study is limited to the correlational analysis of the data that only explains the association between the motivational orientation and learning strategies but it cannot sophisticatedly find out which orientations influence what type of learning strategies. In this regard, it is suggested that in future inferential statistics may be used to determine and predict which type of orientation affects which type of learning strategy. It is also important to find out the motivational orientations of the

students of different study programs so that differences in the attitude and behavior of different subjects' students may be observed. The conclusion of the study leads towards the idea of self-regulated learning. In this context, future study can be focused on how self-regulated learning can be improved in open and distant leaning modes.

Implications

The results of this study have shown the relationship between motivational goal orientation and the learning strategies used by the students in an online learning environment. Further research can be done to find out the possible ways to enhance students' motivation for learning in an online education mode.

References

- Barnard, L., Lan, W. Y., To, Y. M., Paton, V. O., & Lai, S. L. (2009). Measuring self-regulation in online and blended learning environments. *The Internet and Higher Education, 12*(1), 1-6.
- Bell, P. D., & Akroyd, D. (2006). Can factors related to self-regulated learning predict learning achievement in undergraduate asynchronous Web-based courses. *International Journal of Instructional Technology and Distance Learning, 3*(10), 5-16.
- Chen, C. S. (2002). Self-regulated Learning strategies and achievement in an introduction to information. *Information Technology, Learning and Performance Journal, 20*(01), 11-25
- Dabbagh, N., & Kitsantas, A. (2005). Using web-based pedagogical tools as scaffolds for self-regulated learning. *Instructional Science, 33*(5-6), 513-540.
- Deemer, S. (2004). Classroom goal orientation in high school classrooms: Revealing links between teacher beliefs and classroom environments. *Educational Research, 46*(1), 73-90.
- Diaz, D. P. (2000). Carving a new path for distance education research. *The Technology Source, 25*(3), 35-39.
- Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013). Improving students' learning with effective learning techniques promising directions from cognitive and educational psychology. *Psychological Science in the Public Interest, 14*(1), 4-58.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological review, 95*(2), 256-273.
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational psychologist, 34*(3), 169-189.
- Garcia, T., & Pintrich, P. R. (1996). The Effects of Autonomy on Motivation and Performance in the College Classroom. *Contemporary Educational Psychology, 21*(4), 477-486.
- Hendrikse, G. (2003). *Economics and management of organizations: co-ordination, motivation and strategy*. New York: McGraw-Hill.

- Hodges, C. B. (2005). Self-regulation in web-based courses. *Quarterly Review of Distance Education*, 6(4), 375-383.
- Jones, M. H., Alexander, J. M., & Estell, D. B. (2010). Homophily among peer groups members' perceived self-regulated learning. *The Journal of Experimental Education*, 78(3), 378-394.
- Karadeniz, S., Buyukozturk, S., Akgun, O. E., Cakmak, E. K., & Demirel, F. (2008). The Turkish Adaptation Study of Motivated Strategies for Learning Questionnaire (MSLQ) for 12-18 Year Old Children: Results of Confirmatory Factor Analysis. *The Turkish Online Journal of Educational Technology*, 7(4), 108-117
- Kramarski, B., & Mizrachi, N. (2006). Online discussion and self-regulated learning: Effects of instructional methods on mathematical literacy. *The Journal of Educational Research*, 99(4), 218-231.
- McCormack, C., & Jones, D. (1998). *Building a web-based education system*. New York: John Wiley.
- Merriam, S., & Caffarella, R. (1999). Key theories of learning. In Merriam, S., & Caffarella, R. (Eds.). *Learning in adulthood: a comprehensive guide* (2nd Ed., pp. 248-256): S.Francisco: Jossey-Bass.
- Middleton, M. J., & Midgley, C. (1997). Avoiding the demonstration of lack of ability: An underexplored aspect of goal theory. *Journal of Educational Psychology*, 89(4), 710-718.
- Muirhead, B. (2006). Creating concept maps: Integrating constructivism principles into online classes. *International Journal of Instructional Technology & Distance Learning*, 3(1), 17-30.
- Nevgi, A. (2001, July). Motivational strategies of students in Virtual University. Paper presented in proceedings at *Third International, Inter-disciplinary Evidence-Based Policies and Indicator Systems Conference* (pp. 1-17), CEM Center, University of Durham, UK.
- Pintrich, P. R. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology*, 92(3), 544-555.
- Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). A manual for the use of the Motivated Strategies for Learning Questionnaire. A Technical Report (91-B-004). *The Regents of the University of Michigan*.
- Pintrich, P. R., Smith, D. A., García, T., & McKeachie, W. J. (1993). Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire (MSLQ). *Educational and Psychological Measurement*, 53(3), 801-813.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Sacchanand, C. (2002). Information literacy instruction to distance students in higher education: Librarians' key role. Paper presented in 68th IFLA Council and General Conference (August 18-24), Glasgow (UK).

- Shia, R. M. (1998). Assessing academic intrinsic motivation: A look at student goals and personal strategy. (Unpublished college thesis), Wheeling Jesuit University, Wheeling, WV.
- Shih, C. C., Ingebritsen, T., Pleasants, J., Flickinger, K., & Brown, G. (1998). Learning Strategies and Other Factors Influencing Achievement via Web Courses. Paper presented at Proceedings of the Annual Conference on Distance Teaching & Learning (August 5-7), Madison, WI.
- Svinicki, M. (2005). Student goal orientation, motivation and learning. *Idea Paper # 41*, Retrieved from IDEA website: http://ideaedu.org/wp-content/uploads/2014/11/Idea_Paper_41.pdf.
- Thomas, G. M. (1995). Education-past, present, future. *At the threshold of the millennium*, Bloomington, Indiana: *Phi Delta Kappa*.
- Tsai, C. W., & Shen, P. D. (2009). Applying web-enabled self-regulated learning and problem-based learning with initiation to involve low-achieving students in learning. *Computers in Human Behavior*, 25(6), 1189-1194.
- Whipp, J. L., & Chiarelli, S. (2004). Self-regulation in a web-based course: A case study. *Educational Technology Research and Development*, 52(4), 5-21.
- Yang, Y., & Cao, L. (2013). Differential influences of achievement approach goals and intrinsic/extrinsic motivation on help-seeking in e-learning. *Knowledge Management & E-Learning: An International Journal*, 5(2), 153-169.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64-70.

About the Authors

Syeda Narjis Sherazi: Ms. Syeda Narjis Sherazi has been serving as a lecturer in the Department of Psychology at Virtual University of Pakistan for the last 6 years. She holds an M. Phil Degree in Applied Psychology from Govt. College University, Lahore. She has special interest in psychological mechanisms involved in e-learning and psycho-social issues of Pakistani society.

Sadia Jabeen: Ms. Sadia Jabeen is serving as a lecturer in the Department of Sociology at Virtual University of Pakistan. Before joining Virtual University, she has served as a Research Officer in the Department of Sociology, University of the Punjab. She holds an M. Phil Degree in Social Sciences. She has special interest in the sociology of e-learning and gender issues.