Analysis of Motivational Strategies for Learning of Students on their Performance: A Case of Private Higher Education Institutions of Pakistan

Faiza Amir[*] & Yasir Kamal[**]

Abstract

Learning cannot take place in isolation rather it required an active participation of learner and instructor. For active participation the motivation is an essential element. Student's performance greatly relies on their motivation of learning, style of learning, strategic behavior; self regulated process and personal dedication. Objective of this research is to analyze the different motivational strategies for learning of Pakistani students in context of private sector educational institutions. Research will identify the impact and practical use of strategies on the performance level of the students. Three sizeable set of data, collected through motivated strategy learning questionnaire (MSLQ) from the students. Statistical techniques of correlation, regression are used for data analysis. Findings of this research are that self efficacy & performance and the intrinsic goal orientation are significantly related with the GPA of the students. Regression model indicates that over all self efficacies has the significant impact on the student's performance. The implications are that instructors must design their courses and use coaching methods which will compel students to use their conceptualizing abilities and analytical skills with confidence.

Keywords: Learning, Higher Education, Private Higher Education Institution, Pakistan

Problem Scenario

In Pakistan academic institutions and education environment is facing a lot of issues and problems, a few of them are summed up by Hussain.[1]

[*] Faiza Amir, Lecturer, Shaheed Zulfikar Ali Bhutto Institute of Science & Technology, Islamabad, Pakistan, faiza@szabist-isb.edu.pk

[**] Dr. Yasir Kamal, Assistant Professor, Shaheed Zulfikar Ali Bhutto Institute of Science & Technology, Islamabad, Pakistan

Curriculum
Our school and university curriculums are subject-oriented and opinion-based. The problem with this approach is that most of 'educationists' are subject specialists. They know about their respective subjects but not about the needs, perceptions and expectations of the students.

Teaching Methods
Generally speaking, except for some recent abortive attempts to redesign the curriculum for training and educating teachers, the methods teachers use today are more or less the same they were more than 50 years ago. Then, of course, the question of attracting good outstanding graduates to teaching has not been addressed.

Textbooks
We, in this country, through the existing text book boards, produce some of the worst books probably found anywhere plus books of international authors do not cover the local issues and scenarios. In any case restricting all learning to a single textbook is an academic disaster. There is an urgent need to look at the whole gamut of textbook formulation and production.

Examinations
That examinations were introduced to evaluate what a student has learned has been conveniently forgotten and now it is increasingly used to judge student performance.

Class Timings
Classes generally start at around nine in the morning with a peak, in terms of attendance, at around 11 am. And by one in the afternoon few students or faculty left are on campus. Most of the facilities like libraries or laboratories are used very little and this just goes to show the generally low level of motivation among the student body.

Introduction

Learning is a multidimensional and on going process. Learning cannot take place in isolation rather it required an active participation of learner and instructor. For active participation the motivation is an essential element. There are two types of motivation, intrinsic and extrinsic. According to Delong and Winter "intrinsic motivation include fascination with the subject, a sense of its relevance to life and the world, a sense of accomplishment in mastering it, and a sense of calling to it".[2] On the other hand, extrinsic motivation includes parental expectations,

expectations of other trusted role models, earning potential of a course of study, and grades (which keep scholarships coming).[3]

The concept of self-regulated learning is new but it is under the researcher's observation quit some time. Theoretically self regulated learning provides a description of how and why students actively control their cognition, motivation, affect, and behavior for academic task.[4] Student's performance greatly relies on his /her motivation of learning, style of learning, strategic behavior; self regulated process and personal dedication. According to Pintrich et al.,[5] self-regulated learning is an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment.

Teachers, peers, or parents can try to regulate an individual's cognition, motivation, or behavior by directing or scaffolding the individual in terms of what, how, and when to do a task. As suggested by Wolters, et al.,[6] generally, other task and contextual features e.g., task characteristics, feedback systems, and evaluation structures can facilitate or constrain an individual's attempts to self-regulate his or her learning.

Findings of Dunigan and Curry[7] indicates that the motivational subscales which include intrinsic goal orientation, task value, and self efficacy for learning and performance are not the positive predictors for success in a distance learning class. The learning strategies subscales which include elaboration learning strategies, organization strategies, critical thinking strategies, and meta-cognitive self- regulation are positive predictors for success in a distance learning class. The resource management subscales which include time and study management strategies, effort regulation strategies, and help-seeking strategies are positive predictors of success in a distance learning class.

Objective

Objective of this research is to analyze the different motivational strategies for learning of Pakistani students in context of private sector educational institutions. On the basis of these analyses findings can help to identify the impact and practical use of these strategies on the performance of students. It will provide great insight in the learning strategies of the Pakistani students.

The research findings will provide value able information regarding student motivational strategies at private education institution of Pakistan. It will greatly help the instructors to design course material and adopt instructional techniques for better student comprehension and

performance. Further it will provide guidelines for students as well for improving their grades.

On the basis of findings it will be observed that if this research in Pakistani context conform and substantiate the results of previous researches or differs. In case of difference what is significance and magnitude.

Literature Review

The teaching based on individual learning styles is an effective way to ensure students' achievement and motivation. It is argued by Bostrom[8] awareness of learning styles, influences meta-cognition and choice of relevant learning strategies. Consciousness of own improvement provides students with new perspectives of their learning potential. Such positive academic experiences may enhance self-efficacy.

Learning strategies are seen as conscious or unconscious choices made by teachers or students as to how to process given information and demands of a learning activity.[9] According to the findings of Chye, Walker and Smith[10] self-efficacy was found to be significantly correlated with strategy use and strategy use and self-efficacy was also shown to be significantly related with academic grade. Specifically, a higher level of self-efficacy was found to be associated with higher levels of strategy use. Further, both higher levels of strategy use and self-efficacy were found to be associated with higher academic grades.

The learning strategies may vary and develop over time. They include learning style, but are broader concepts with various methods for example; use of self efficacy and performance, motivational strategy of extrinsic goal orientation positively contributes towards higher grades. Self-efficacy is a flexible concept described by Skaalvik and Bong.[11] The four underlying elements are: registration of previous successes and failures on similar tasks; observation of other's learning; persuasion from others; and emotional arousal.

An interesting question raised by Bostrom Lassen[12] is whether one bases one's choice of learning strategies on one's learning style and whether certain learning style characteristics correspond with certain learning strategies? More specifically, with a better understanding of the conditions of learning and more precise knowledge of how choices of strategies affect learning in a positive or negative way, teachers, and students' consciousness of learning may be expanded.

Through increased self-awareness of their strengths, student's self-efficacy, academic competence and resilience may be enhanced.[13] In Scandinavia for example, legislation emphasizes that schools should create the best possible circumstances for enabling students to attain

knowledge and provide an environment that encourages a positive attitude toward learning, particularly for those who have had negative learning experiences in the past.[14]

Students can accurately self-report some aspects of their cognition, motivation, and behavior but not all. The scales used to assess students' thoughts and actions at a particular level of analysis that has proven useful for understanding and predicting certain academic outcomes. However, self-reports may not be appropriate for the more fine detailed analysis of students' functioning necessary to address some research questions. In short, it is important to consider the nature of the information that is made available through these scales when evaluating their appropriateness for any particular study. As a whole, the strategies presented here provide a reasonably valid and reliable way of assessing many of the regulatory activities that contribute to students' self-regulation of their learning in academic contexts. The scales can be used flexibly to tap into those aspects of this complex process that are of most relevant to a particular study. Thus, they provide a useful set of tools that can be used to address a variety of important research questions focused on understanding students' functioning within academic contexts.[15]

Hellertz[16] identified the learning strategies for students majoring in social science: listening, questioning, talking, thinking, intuition, action, reading, writing and vision as well as combinations of these strategies. She questions whether some strategies (for example: listening or thinking) should be defined as ways of gaining knowledge rather than as learning strategies. An important question is whether there exists a difference between the concepts of learning strategy and study techniques. General study strategies (such as "mind-mapping") can be directly conflicting with the best learning strategy for some students.[17]

In investigating learning strategies for reading, Santa and Engen emphasized that teachers should develop competence in their students so they can create their own strategies.[18] Tornberg points out how learning strategies take on a distributive role arguing that student's previous knowledge, their learning style and the problems they face influence their choice of strategy.[19]

It appears in the research conducted by Zimmerman[20] that self-regulated students were not passive learners but actively sought information and assistance when needed. This is one of the most widely emphasized characteristics of self-regulated learners and data support its theoretical importance.

The three different components of self regulated learning: (a) an expectancy component, which includes students' beliefs about their ability to perform a task, (b) a value component, which includes students'

goals and beliefs about the importance and interest of the task, and (c) an affective component, which includes students' emotional reactions to the task. The expectancy component of student motivation has been conceptualized in a variety of ways in the motivational literature (e.g., perceived competence, self-efficacy, attributional style, and control beliefs), but the basic construct involves students' beliefs that they are able to perform the task and that they are responsible for their own performance.[21]

Research of Jason[22] indicate that task value and self-efficacy were significantly positively related to students' use of elaboration, critical thinking, and meta-cognitive learning strategies task value and self-efficacy were significantly positively related to each other and to students' use of cognitive and meta-cognitive learning strategies.

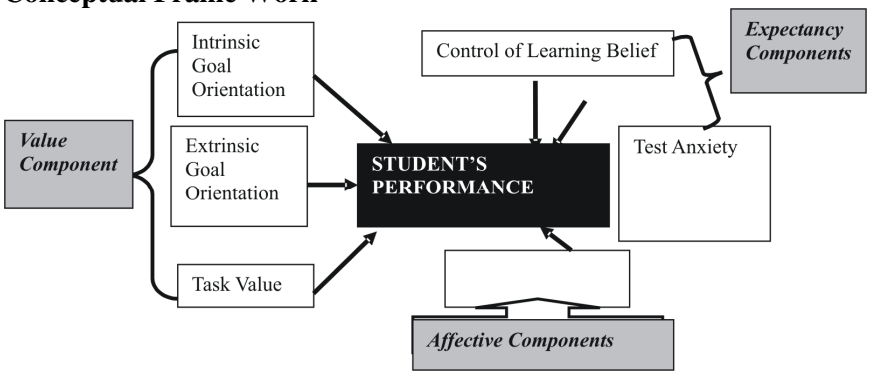
Student involvement in self-regulated learning is closely tied to students' efficacy beliefs about their capability to perform classroom tasks and to their beliefs that these classroom tasks are interesting and worth learning. At the same time, these motivational beliefs are not sufficient for successful academic performance; self regulated learning components seem to be more directly implicated in performance. Students need to have both the "will" and the "skill" to be successful in classrooms.[23]

The achievement of greater self-direction requires the development of a co-operative learning environment, which the learner perceives as being democratic, flexible, challenging, and, most importantly, non-threatening.[24]

According to Kotze, & Plessis through their participation in an array of learning activities students' co-produce their education, at some time they also contribute directly to their own satisfaction, quality and value perception.[25]

Students do not learn much just by sitting in class listening to teachers memorizing pre packaged assignment and spitting out answers. They must talk about what they are learning, write about it relate it to the past experience; apply it to their daily life.[26]

Conceptual Frame Work



The following scales will be used to measure the motivation of students:

Motivation Scale: Value Component
Intrinsic Goal Orientation: Student's perception of the reason why participating in learning task e.g. challenges, curiosity and mastery.
Extrinsic Goal Orientation: Degree to which student participate in a task for reasons such as grades, rewards, competition and evaluation by others.

Task Value: It refers to the student's evaluation of the task how much interesting, important and useful it is for them.

Expectancy Components
Control of Learning Belief: It refers to student's belief that their efforts to learn will result in positive outcome.

Self-Efficacy for Learning and Performance: Self appraisal of one's ability to master a task, it includes judgments about one's ability and confidence in skills to accomplish a task.
Affective Components

Test Anxiety: It includes two components worry, or cognitive component and an emotionality component. Former relates to students negative thoughts which can disrupt performance and later is effective arousal aspects of anxiety which is positive.

An effective tool for measuring motivation of students is MSLQ (Motivated Strategies for learning Questionnaire). It was developed by Paul Pintrich et al.,[27] at the National Center for Research in

Postsecondary Teaching and Learning. The MSLQ is a self report instrument that asks students about their cognitive and meta-cognitive strategies for learning. The MSLQ uses a seven-point Likert scale ranging from 1 (labeled "not at all true of me") to 7 (labeled "very true of me") with no specific labels for the other response categories. The MSLQ does not have norms associated with it as it is assumed that students' responses to the items will vary by subject area or by classroom context.

This Questionnaire is most widely used in academic research science 1991 and different researchers have adopted it according to their study requirements. An advantage to the items/scales described above is that it is possible to more specifically tailor them to particular courses or subject areas. For instance, slight modifications in wording allow items to be tied to students' functioning within mathematics, history, English, or science course without a substantial change in reliability.[28] This flexibility could be useful for researchers interested in examining students' academic functioning within particular contexts, or in examining differences across contexts.

Furthermore, with slight modifications many of the scales these can be used to assess students' regulatory functioning within academic contexts across a broad age range.

Research Questions

1. Is there any relationship between the students grades and motivational strategies
2. What is the direction of relationship between grades and motivational strategies?
3. What is the magnitude of relationship?
4. Which motivational strategy has the strongest impact on the performance of the students?
5. Which motivational strategies have the significant impact on the performance of the students?

Research Hypothesis

Ho: No relation between final grades and motivational strategies.

H1: There is a relation between final grades and motivational strategies.

H2: Intrinsic goal orientation has the significant effect on the student's grades.

H3: Extrinsic Goal Orientation has the significant effect on the student's grades.

H4: Task Value has the significant effect on the student's grades.

H5: Control of learning Belief has the significant effect on the student's grades.
H6: Self-Efficacy for Learning and Performance has the significant effect on the student's grades.
H7: Test Anxiety has the significant effect on the student's grades.

Data Collection
In this study primary data has been used. The cross sectional data has been collected through questionnaire from graduate, undergraduate and post graduate students of private sector higher education institutions of Pakistan. For the research purpose questionnaire is self administrated, plus distributed among students Vie e – mail.

Sample Size
In this study the convenience sampling method for data collection has been used. Formula for computing the sample size required for a multiple regression analysis: $N \geq 50 + 8m$,[29] where m equals the number of predictor variables. In this research predictor variables (Independent Variables) are 6 so the calculation of the sample size is as follow. $50 + 8(6) = 98$
The strength of this research is that it is based upon three sizeable set of data segments. To increase the validity of result findings a larger sample has been selected, which is: Total: 200

Research Instrument
MSLQ (Motivated Strategies for Learning Questionnaire)

Data Analysis
For in-depth analysis of the different motivational strategies of Pakistani private sector students, Statistical techniques of Correlation & Regression has been used for result findings, For data analysis SPSS software has been used.

Methodology
Variables:

- Student GPA or Academic Grade
- Intrinsic Goal Orientation
- Extrinsic Goal Orientation
- Task Value
- Control of learning Belief
- Self-Efficacy for Learning and Performance
- Test Anxiety

Research Findings

All components have relationship with the final grades but the correlation is not very high rather weaker one but still impact is there. Test anxiety (r: -.110) and Extrinsic Goal Orientation (r: -.01) are the components which are negatively correlated with student's grades GPA. Self efficacy & performance (r: .167, p: .018) and the intrinsic goal orientation (r: .144, p: .041) are significantly correlated with the GPA of the students which predicts that these factors have the significant impact on the final grades.

The first question was: Is there any relationship between the student's grades and motivational strategies? On the basis of result findings, yes there is a significant relationship among the motivational strategies and the final grades of the students. As per second question regarding the direction of relationship between grades and motivational strategies results shows that Test Anxiety and Extrinsic Goal Orientation have the negative correlation and remaining all four variables are positively correlated with the final grades.

The magnitude of relationship is not very strong between the independent and the dependant variables, but the few elements; intrinsic goal value and self efficacy has significant Impact. Results of regression shows that the t value of the motivational strategy Self Efficacy and performance (t: 2.377, p: .018) has the strongest impact on the performance of the students as compare to other variables and it is significant on 5 % α (95%) confidence interval. After stepwise regression analysis, and excluding insignificant variables, statistical results of the research show that the single independent variable of motivational strategy; Self Efficacy has the significant impact on the performance of the students in the private higher educational institution of Pakistan.

The motivational elements are for all three segments; graduate, undergraduate and post graduate students, are correlated three out of six variables are negatively correlated (extrinsic goal orientation, control of learning belief and test anxiety), but these are not significant. Only the intrinsic goal orientation shows a little bit better relation as compare to other variables.

The model shows that there are not significant impact of any independent variable in any programme; graduate, undergraduate and post graduate students. Another interesting finding as per table 1 is that Self Efficacy & performance, Intrinsic Goal Orientation and Task Value have strong significant correlation among them and they collectively impact the final grades of students as well. Finally after stepwise treatments only Self Efficacy and performance remains single

independent variable which has the significant impact on the final grades of the Pakistani students.

On the basis of these findings we can conclude the results for hypothesis as follow:

H0: No relation between final grades and motivational strategies. Reject

H1: There is a relation between final grades and motivational strategies. Accept

H2: Intrinsic goal orientation has the significant effect on the student's grades. Reject

H3: Extrinsic Goal Orientation has the significant effect on the student's grades. Reject

H4: Task Value has the significant effect on the student's grades. Reject

H5: Control of learning Belief has the significant effect on the student's grades. Reject

H6: Self-Efficacy for Learning and Performance has the significant effect on the student's grades. Accept

H7: Test Anxiety has the significant effect on the student's grades. Reject

Results Discussion

Value Components

(a) Intrinsic Goal Orientation: Student's perception of the reason why participating in learning task e.g. challenges, curiosity and mastery. In this regard relationship is significant but very weaker one which indicates that for Pakistani students there is impact of challenging subjects on their final grade. They take more interest in the courses which they perceive need learning while seeking curiosity and mastery.

(b) Extrinsic Goal Orientation: Degree to which student participate in a task for reasons such as grades, rewards, competition and evaluation by others. Results show that it is although negatively correlated with the students grades but there is not much importance of outward reward and public applause and acknowledgment for Pakistani students in pursuit of their studies.

(c) Task Value: It refers to the student's evaluation of the task how much interesting, important and useful it is for them. Results shows' those Pakistani students are very minutely concerned regarding the importance and usefulness of the courses.

Expectancy Components

(a) Control of Learning Belief: It refers to student's belief that their efforts to learn will result in positive outcome. According to the results Pakistani students have very minor beliefs that their efforts will highly contributes towards the positive results.

(b) Self-Efficacy for Learning and Performance: Self appraisal of one's ability to master a task, it includes judgments about one's ability and confidence in skills to accomplish a task. This element indicates that Pakistani student have significant confidence upon judgment of their abilities and skills.

Affective Components

(a) Test Anxiety: It includes two components worry, or cognitive component and an emotionality component. Former relates to students negative thoughts which can disrupt performance and later is effective arousal aspects of anxiety which is positive. As for Pakistani students test anxiety is negatively correlated with their GPA at a significant level which indicates that emotionality and negative thoughts can affect their performance in studies.

Five out of six elements of motivational strategies are significantly correlated with each other for the students of all programmes, only Test Anxiety is the element which is not significantly correlated with the other element of motivational strategies, If we compare the results between the different programs; graduate, under graduate and post graduate levels. No significant impact of any element.

According to literature review the findings of previous researches indicates almost the similar trends for other international students. For examples result finding of Pintrich and Degroot [30], Jason,[31] Chye, walker and smith[32] all shows that self efficacy is the positive predictor of the final grades and have the significant impact on the students performance. According to Dungial and Curry the motivational subscales which include intrinsic goal orientation, task value, and self efficacy for learning and performance are not the positive predictors for success in a distance learning class.[33]

This research substantiated and confers with the findings of the previous researches of Jason, Chye and Pintrich that the self efficacy significantly affects the performance of the Pakistani students. Plus one more variables intrinsic goal orientation also found significantly correlated with the final grades of Pakistani students of the private higher education institution.

Implications

The implications of the research findings are that instructors must design their courses and use coaching methods which will compel students to use their self efficacy & performance (Self Confidence and belief in one's ability and skills that they can handle the task successfully), conceptualizing abilities and analytical skills with confidence e.g.; case studies, practical class assignments, simulations and reality based exercise & projects.

Recommendations

In Pakistani private sector higher education institutions Instructors should design their courses and use coaching methods which will compel students to use their conceptualizing abilities and analytical skills with confidence e.g.; case studies, practical class assignments, simulations and reality based exercise & projects.

Students must not exceptionally worry about exams. They must counter emotionality with calm and control tactics to minimize the negative effect on their performance. During the studies for the students teachers and instructors must design the course material which will increase students curiosity and present challenges to them.

Limitations

This research encompasses only the private educational institutions of Pakistan. Further due to irresponsible or occasionally biased attitude of the students, accurate responses will be very difficult to collect and interpret. Anyhow this research provides great insight in student's learning attitude.

Future Research Scope

Future researches can be conducted on same scales in the context of public sector higher education institutions plus broad spectrum analysis can be done on students of secondary and higher secondary levels as well.

Conclusion

Findings of this research are that self efficacy & performance, the intrinsic goal orientation and the test anxiety are significantly correlated with the GPA of the students. The Test anxiety and extrinsic goal orientation are the component which is negatively correlated with GPA. Regression model indicates that over all self efficacy has the significant impact on the student's performance, but there is no significant impact at

different level of programmes; graduate, undergraduate and post graduate.

This research substantiated and confers with the findings of the previous research that the self efficacy significantly affects the performance of the Pakistani students. Plus one more variables intrinsic goal orientation also found significantly correlated with the final grades of Pakistani students of the private institution. Further only the one independent variables self efficacy has the significant impact upon the performance of the Pakistani students.

Appendix

Table No 1: Correlations

Variables		GPA
	Pearson Correlation	1
	N	200
Intrinsic Goal Orientation	Pearson Correlation	.144 (*)
	Sig. (2-tailed)	.041
Extrinsic Goal Orientation	Pearson Correlation	-.010
	Sig. (2-tailed)	.884
Task Value	Pearson Correlation	.068
	Sig. (2-tailed)	.336
Control of learnng Belief	Pearson Correlation	.071
	Sig. (2-tailed)	.321
Self Efficacy and Performance	Pearson Correlation	.167(*)
	Sig. (2-tailed)	.018
Test Anxiety	Pearson Correlation	-.110
	Sig. (2-tailed)	.122

Table No 2

Model		Beta In	t	Sig.
1				
	Self Efficacy & Performance	0.87	2.377	.018
	Intrinsic Goal Orientation	.076	.911	.363
	Extrinsic Goal	.085	1.128	.261

	Orientation			
	Task Value	.056	.623	.534
	Control of learnng Belief	.022	.304	.761
	Test Anxiety	.116	1.658	.099

Table No 3: Correlations (Graduate Students)

		GPA
Intrinsic Goal Orientation	Pearson Correlation	.155
	Sig. (2-tailed)	.155
Extrinsic Goal Orientation	Pearson Correlation	.216(*)
	Sig. (2-tailed)	.047
Task Value	Pearson Correlation	.069
	Sig. (2-tailed)	.532
Control of learning Belief	Pearson Correlation	.100
	Sig. (2-tailed)	.361
Self Efficacy and Performance	Pearson Correlation	.248(*)
	Sig. (2-tailed)	.022
Test Anxiety	Pearson Correlation	-.079
	Sig. (2-tailed)	.473

** Correlation is significant at the 0.05 level (2-tailed).*

Table No 4

	N	Mean
Intrinsic Goal Orientation	200	5.0613
Extrinsic Goal Orientation	200	5.2500
Task Value	200	5.2483
Control of learning Belief	200	5.0725
Self Efficacy and Performance	200	5.3094
Test Anxiety	200	4.0490

Notes & References

[1] Abdullah, K Hussain, A Rethinking of Sorts: Social Society Culture, (2008). Available at: http://groups.google.com.pk/group/soc.culture.tamil

[2] Matt DeLong and Dale Winter, *Learning to Teaching and Teaching to Learn Mathematics: Resources for Professional Development*, (Mathematical Association of America, 2002) 163.

[3] Ken Bain, *What the Best College Teachers Do*, (Harvard University Press, 2004) 32-33.

[4] Stefanie Chye, Richard A. Walker, Ian D. Smith, "Self-Regulated Learning in Tertiary Students: The Role of Culture and Self-Efficacy on Strategy Use and Academic Achievement", School of Educational Psychology, Measurement and Technology The University of Sydney, Australia, (2000)

[5] Christopher A. Wolters, Paul R. Pintrich, "Assessing Academic Self-regulated Learning for Indicators of Positive Development Conference", University of Michigan, (2003)

[6] Ibid.

[7] Beth Duniganl and Kenneth J. Curry, "Motivation and Learning Strategies of Students in Distance Education", *Journal of the Mississippi Academy of Sciences,* University of Southern Mississippi, Hattiesburg, 51:2, (2006)

[8] Lena Bostro¨m, "Unraveling learning, learning styles, learning strategies and meta-cognition", *Journal of Education Training*, 48:2/3, (2006) 178-189

[9] T. Kroksmark, "Undervisningsmetodik som forskningsomra°de (Teaching methodology as research)", in Uljens, I.M. (Ed.), Didaktik (Didactic), (Lund: Studentlitteratur, 1997)

[10] Stefanie Chye, Richard A. Walker, Ian D. Smith, "Self-Regulated Learning in Tertiary Students: The Role of Culture and Self-Efficacy on Strategy Use and Academic Achievement", op.cit.

[11] E.Skaalvik, & M.Bong, "Self-concept and self-efficacy revisited", in Marsh, H.W. and Craven, R.G. (Eds), *International Advances in Self Research*, (New York: Information Age Publishing, 2003) 67-89.

[12] Lena Bostro¨m, "Unraveling learning, learning styles, learning strategies and meta-cognition", op.cit.

[13] A. Bandura, *Self-efficacy: The Exercise of Control*, (New York: Freeman & Co., 2003),

[14] Skolverket, La¨ roplan fo¨ r det allma¨ nna skolva¨ sendet, LPO/LPF 94, (Swedish National Curriculum Guidelines), Liber, Stockholm (steering documents) (1994)

[15] Christopher A. Wolters, Paul R. Pintrich, "Assessing Academic Self-regulated Learning for Indicators of Positive Development Conference", op.cit.

[16] P. Hellertz, "Kvinnors kunskapssyn och la¨randestrategier, En studie av tjugosju kvinnliga socionomstuderande" (Women's approaches to knowledge and their learning strategies), Doctoral dissertation, Department of Behavioural, Social and Legal Sciences, O ¨ rebro University, O ¨ rebro, (1999).

[17] Lena Bostro¨m, "Unraveling learning, learning styles, learning strategies and meta-cognition", op.cit.

[18] C. M.Santa, & L. Engen, *Läre å läre. Prosjekt CRISS. Content Reading Including Study System* (norsk utgave). Stiftelsen Dysleksiforsking. Stavanger: Randaberg Trykk, (1996).
[19] U. Tornberg, *Språkdidaktik*, (Malmö: Gleerups, 2000).
[20] Barry J. Zimmerman Manuel Martinez, "Construct Validation of a Strategy Model of Student Self-Regulated Learning", *Journal of Educational Psychology*, 25: 663 (1988)
[21] Paul R. Pintrich, Elisabeth V. De Groot, "Motivational and Self-Regulated Learning Components of Classroom Academic Performance", School of Education University of Michigan Ann Arbor, *Michigan Journal of Educational Psychology*, 82:1 (1990).
[22] Jason M. Stephens & Anthony R. Artino Jr, Learning Online: Motivated to Self-Regulate?, University of Connecticut. Available at: http://www.sp.uconn.edu/~aja05001/comps/documents/AEQ_SRL_Manuscript_ARTINO_FinalDraft_revised_withtables.pdf
[23] Paul R. Pintrich, Elisabeth V. De Groot, "Motivational and Self-Regulated Learning Components of Classroom Academic Performance", op.cit.
[24] David Robotham, "Self-directed learning: the ultimate learning style"? *Journal of European Industrial Training*, 19:7, (1990)
[25] T G Kotze P F du Plessis, "Students as co- producers of education; a proposed model of student socialization and participation at tertiary institutions", University of pretrial South Africa, Journal of quality assurance in education, II:4 (2003) 186 – 201
[26] Ibid.
[27] Christopher A. Wolters, Paul R. Pintrich, "Assessing Academic Self-regulated Learning for Indicators of Positive Development Conference", University of Michigan March 12:13, (2003)
[28] C.Wolters & P. R. Pintrich, "Contextual differences in student motivation and selfregulated learning in mathematics, English, and social studies classrooms", *Instructional Science*, 26, (1998) 27-47.
[29] B.Tabachnick, & L.Fidell, *Using Multivariate Statistics*, Fourth Edition, (Boston: Allyn and Bacon, 2001) 117
[30] Paul R. Pintrich, Elisabeth V. De Groot, "Motivational and Self-Regulated Learning Components of Classroom Academic Performance", op.cit.
[31] Jason M. Stephens & Anthony R. Artino Jr, Learning Online: Motivated to Self-Regulate?, University of Connecticut. Available at: http://www.sp.uconn.edu/~aja05001/comps/documents/AEQ_SRL_Manuscript_ARTINO_FinalDraft_revised_withtables.pdf
[32] Stefanie Chye, Richard A. Walker, Ian D. Smith, "Self-Regulated Learning in Tertiary Students: The Role of Culture and Self-Efficacy on Strategy Use and Academic Achievement", op.cit.
[33] Beth Duniganl and Kenneth J. Curry, "Motivation and Learning Strategies of Students in Distance Education", op.cit.