Motivation Factors in Distance Education

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Abstract—This study describes the relationship between motivation factors and academic performance among distance education students enrolled in a postgraduate nursing course. Students (n=96) participated in a survey that assesses student's motivational orientations from a cognitive perspective using a self-administered questionnaire based on Pintrich's Motivation Strategies for Learning Questionnaire (MLSQ). Results showed students' motivational factors are highest on task value (6.44, 0.71); followed by intrinsic goal orientation (6.20, 0.76), control beliefs (6.02, 0.89); extrinsic goal orientation (5.85, 1.13); self-efficacy for learning and performance (5.62, 0.84), and finally, test anxiety (4.21, 1.37). Weak positive correlations were found between academic performance and intrinsic goal orientation (r=0.13), extrinsic goal orientation (r=0.04), task value (r=0.09), control beliefs (r=0.02), and self-efficacy (r=0.05), while there was weak negative correlation with test anxiety (r=-0.04). Conclusions from the study indicate the need to focus on improving tasks and targeting intrinsic goal orientations of students to courses since these were positively correlated with academic performance and downplay the use of tests since these were negatively correlated with academic performance.

Keywords—Motivation factors, academic performance, distance education

I. INTRODUCTION

MOTIVATION in learning is especially important among distance education students since they are usually studying in isolation – physically far from their teacher and classmates. This study aims to determine the motivation factors of distance education students based on the motivation variables identified by Pintrich from a cognitive perspective [1]. The study also aims to find if relationships exist between these motivation factors and students' academic performance. Possible roles of students' age, sex and location as confounders were also explored.

Pintrich and De Groot [2] studied motivational components relationship to self-regulated learning and academic performance in the classroom. They named three motivational components, namely: (a) an expectancy component, which refers to students' beliefs about their expected success in performing a task, (b) a value component, which concerns students' appreciation of and beliefs about the importance of the task for them and (c) an affective component, comprised of students' emotional reactions to the task. They found that motivational components to be significantly linked to students' cognitive engagement and academic performance in the classroom.

The three main motivation components identified in [2] can be expanded into six motivation variables, namely: intrinsic

goal orientation, extrinsic goal orientation, task value, control beliefs, self-efficacy and test anxiety [1]. Goal orientation refers to the student's perception of the reasons why she is engaging in a learning task. It may be intrinsic, wherein student perceives self to be participating in a task for reasons such as challenge, curiosity, and mastery; or extrinsic where student perceives self to be participating in a task for reasons such as grades, rewards, performance, evaluation by others and competition. Goal orientations lead students to engage with learning activities in various ways [3]. Task value differs from goal orientation by not focusing on the why but on student's evaluation of how interesting, how important, and how useful the task is. Task value refers to the student's perceptions of the course material in terms of interest, importance and utility [1]. Control of learning refers to student's beliefs that their efforts to learn will result in positive outcomes. It concerns the belief that outcomes are contingent on one's own effort, in contrast to external factors such as the teacher. If students believe that their efforts to study make a difference in their learning, they should be more likely to study more strategically and effectively [1]. Self-efficacy is a self-appraisal of one's ability to master a task. Self-efficacy includes judgments about one's ability and confidence to accomplish a task. Self-efficacy belief is key to students' level of engagement with tasks and their achievement [4]. Schunk and Zimmerman [5] reported a positive relationship between self-efficacy and academic achievement. Students who are trained to have higher self-efficacy beliefs have better academic performance. Test anxiety is thought to have two components: a worry or cognitive component, and an emotionality component. The worry component refers to student's negative thoughts that disrupt performance, while the emotionality component refers to affective and physiological arousal aspects of anxiety.

II. MATERIALS AND METHODS

A. Research and Sampling Design

The research study utilizes a descriptive correlational research design. Students enrolled in a specific postgraduate nursing course delivered via distance education were asked to answer a self-administered survey questionnaire to determine their motivation factors and academic performance. Out of 141 enrolled students, 68% participated in the study voluntarily.

B. Data Collection Instrument

The survey instrument for motivation factors was based on Pintrich's Motivation Strategies for Learning Questionnaire (MLSQ) [1]. The MLSQ is a self-report instrument originally designed to assess college student's motivational orientations

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and their use of different learning strategies. Its use among postgraduate distance education students is a new look into the motivation factors of adult learners based on a cognitive perspective. The questionnaire measures six variables, namely: (a) intrinsic goal orientation, (b) extrinsic goal orientation, (c) task value, (d) control beliefs, (e) self-efficacy for learning and performance, and (f) test anxiety. The survey was distributed using SurveyMonkey – an online survey website.

C. Statistical Treatment

The students' final grades in the course were recorded and correlated with the six motivation variables. Demographic profiles of students such as age, gender, and residence location were also determined as possible confounders of the correlation between motivation factors and academic performance.

III. RESULTS AND DISCUSSION

A. Demographic Profile

The students who participated in the study are first time postgraduate students in distance education program in nursing. The mean age of the student participants is 30 years old (±7.34). There is nearly 1:3 ratio of male to female. Twenty-six percent of them are based abroad. Almost all (92%) are employed full-time. The course is delivered fully online using a learning management system based on Modular Object Oriented Dynamic Learning Environment (MOODLE).

TABLE I
SOCIO-DEMOGRAPHIC PROFILE OF PARTICIPANTS

Socio-demographic profile	Frequency	Percentage
Age		
21 – 30	62	65%
31 – 40	25	26%
41 and above	9	9%
Sex		
Male	25	26%
Female	71	64%
Residence		
Local	71	64%
Abroad	25	26%
Employment		
Full time	88	92%
Part time	8	8%

B. Motivational Factors

Results on the motivation factors showed that students in postgraduate distance education institution have "high" task value (6.44, ±0.71), intrinsic goal orientation (6.20, ±0.76) and control beliefs (6.02, ±0.89); "moderate" extrinsic goal orientation (5.85, ±1.13) and self-efficacy (5.62, ±0.84); and "low" test anxiety (4.21, ±1.37). The mean and standard deviation of student scores in the six motivation variables are shown in Table II.

TABLE II
MOTIVATION FACTORS OF STUDENTS IN DISTANCE EDUCATION

Motivation Factors	Mean	Standard Deviation
Intrinsic goal orientation	6.20	0.76
Extrinsic goal orientation	5.85	1.13
Task value	6.44	0.71
Control beliefs	6.02	0.89
Self-efficacy for learning and performance	5.62	0.84
Test anxiety	4.21	1.37

Postgraduate distance education students were motivated more by the tasks rather than the goal. The students' participation in the task is an end all to itself rather than participation being a means to an end. Students in distance education put more value in tasks or their perceptions of the course material in terms of interest, importance and utility. This underscores the need for course materials to be more interesting, important and useful to students to contribute to motivating them to learn more.

Intrinsic goal orientation was also found important in motivating postgraduate distance education students; that is, how they perceive self to be participating in a task for reasons such as challenge, curiosity, and mastery. This was deemed more important compared to extrinsic goal, which is more about the end-goal such as grades, rewards, and performance evaluation.

Control of learning belief was also considered an important motivation factor. Postgraduate distance education students considered outcomes as more dependent on one's effort rather than external factors. This means that they think more that motivation for learning is up to them and not due to anybody else.

Self-efficacy was rated moderately important meaning that postgraduate distance education students have moderate expectancy for success as it relates to performance expectations and mastery of a task. This has some implications to the types of learning activities given to them. These learning activities should foster student's self-efficacy to motivate them in their studies.

Test anxiety was rated as the least factor contributing to motivation to learning. Adult learners are usually not comfortable with the idea of being "tested" or being given an examination to prove what they have learned in a course.

Pintrich [6] showed that motivational elements may or may not be relevant and play different roles throughout the learning process. Intrinsic task value is particularly important to predict the learner's initial engagement. At the beginning of a task, students adopt a particular goal orientation that is adjusted or modified in the course of learning. Self-efficacy beliefs have significant role in later steps of task performance. Significant interaction among motivational elements during

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the learning process exists and this interaction may be different at different steps of task performance.

C. Motivational Factors and Academic Performance

Motivation factors were correlated with academic performance measured as their final grade in the course. Weak positive correlations were found between academic performance and intrinsic goal orientation (r=0.13), extrinsic goal orientation (r=0.04), task value (r=0.09), control beliefs (r=0.02), and self-efficacy (r=0.05); whereas there was weak negative correlation with test anxiety (r=-0.04). These weak correlations were found not significant. There was no significant effect of students' age, sex or location to the relationship between academic performance and motivation factors.

In this study, only motivational factors were measured and were shown as not significantly correlated to students' academic performance. Pintrich [6] identified motivational beliefs and cognitive strategies as important elements in the learning process. Motivational beliefs mediate between the classroom context and the students' academic behavior; that is, motivated students will choose to work on course material instead of leisure activity, put forth a great deal of effort, and persist until assignments are completed [7].

Pintrich and De Groot [2] found a positive correlation between motivational beliefs and self-regulated learning and furthermore, all affective components were related to academic performance. Self-regulation has also been found positively correlated to achievement, with highly self-regulated students being more motivated to use planning, organizational, and self-monitoring strategies than low self regulated students. It is therefore important to look into both motivation and cognitive strategies to see if they have meaningful relationship with academic achievement.

IV. CONCLUSIONS AND RECOMMENDATIONS

This study highlights the different motivations of postgraduate students in distance education. This underscores the need for course materials to be more interesting, important and useful to students to contribute to motivating them to learn more. There is also more value on how they perceive self to be participating in a task for reasons such as challenge, curiosity, and mastery. This is deemed more important compared to grades, rewards, and performance evaluation. Postgraduate distance education students consider outcomes as more dependent on one's effort rather than external factors. Learning activities should foster students' self-efficacy and emphasize practical application of tasks. Additional activities in the use of effective learning strategies and test-taking skills should help reduce the degree of anxiety.

Conclusions from the study indicate the need to focus on improving student interest and expectancy for success as motivation strategies for learning in distance education especially since these are positively related to student performance. On the other hand test anxiety is not a strong motivation orientation for students and also negatively correlated to academic performance.

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