Exploring Academic Motivation of Canadian Master's of Education Learners

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Abstract

Motivation, an important characteristic of the learner, is related to several key educational outcomes, such as persistence; performance; learning quality; and psychological well-being. Self-determination theory posits that human behaviors are either intrinsically motivated, extrinsically motivated, or amotivated. Using a self-reported questionnaire within the framework of self-determination theory, this study examined the motivational styles of Canadian Master's of Education learners. Results indicated that this group of learners reported using more self-determined motivational styles. The age of the participants was a factor in that the participants who were more advanced in age reported less frequently that they perceived a locus of control for their academic learning from external sources. Part-time and full-time learners showed significant differences in terms of amotivation and identified regulation, indicating that part-time learners were more motivated than full-time students. By clarifying motivational styles used by graduate students, the study provides educational implications for graduate programs and adult education.

Introduction

For several decades, researchers in education and psychology have recognized the importance of learner motivation, as this characteristic relates to various outcomes, such as persistence; performance; learning quality; and psychological well-being (Deci & Ryan, 2000). A variety of motivation theories have been proposed to explain why individuals choose to engage or disengage in different activities, and how individuals' beliefs; values; interests; and goals relate to their achievement behaviors (Eccles & Wigfield, 2002; Pintrich, 2003). A theory of self-determination proposed by Deci and Ryan (1985) posits that human behaviors are either intrinsically motivated, extrinsically motivated, or amotivated. Although much of the research on motivation has been conducted with children, adolescents, children with disabilities, gifted children, and college/undergraduate students, fewer studies have been conducted with learners in graduate and professional programs. Given the importance of professional development and life-long learning, as well as the prevalent acceptance of the value of an advanced degree in today's era of globalization, research focusing on motivation in graduate students is critical.

In this paper, I discuss the findings of a study into the motivational styles of Master's of Education learners in their academic studies. In particular, I analyze my participants' motivational styles within a framework of self-determination theory. This framework is useful for highlighting both the levels of motivation of participants, as well as the kinds of motivation that support their learning activities. As such, the higher education and advanced degree focus of this article addresses significant gaps in the literature that may inform educators and mature student–researchers who are pursuing graduate studies.

Literature Review

Graduate students in Andragogy

The term *andragogy* is based on the Greek root *andr-*, meaning *man, not boy*. In the area of education, a distinction has been made between andragogy, the teaching of adults, as opposed to *pedagogy*, the art and science of teaching children. Adults are often likely to display characteristics quite different from children. A pioneer in the field of andragogy, Malcom Knowles, stated that andragogy differed from child learning in four discrete ways (1980). First, "an adult's self-concept moves from one of being a dependent personality toward one of being a self-directed human being" (p. 43). Adult learners are mostly autonomous and self-directed. They actively involve themselves in the learning process and work on projects and tasks that reflect their interest. They usually perceive themselves to be independent and responsible for their own learning and have a need to be directly involved in planning and directing their learning activities. Adult learners also have accumulated rich life experiences that become resources for their learning. This is to say that adult learners tend to connect their learning with work-related activities, previous education, and established knowledge and skills. This transformative learning enables experienced learners to develop their knowledge through reflection on their practice (Nesbit, 2001). As well, adult learners are mostly goal-oriented and are ready to learn. Generally speaking, adults know what goal they want to attain after enrolling in a program or deciding to learn a skill by themselves. In addition, the adult learning process shifts from subject–centeredness to problem–centeredness, where adult learners are more focused on dealing with problems that they encounter in their life situations.

Learners in graduate and professional programs are at a stage in which societies may treat them as fully–fledged adults, despite controversies in defining *adult* (Knowles, 1980). They are likely to take on responsibilities in their own lives and adopt certain social roles. What is unknown is whether or not individual students have these features described by Knowles (1980) in andragogy, that is, being self–directed; reflective; goal–oriented; and problem–centered learners.

Importance of Academic Motivation

Simply phrased, motivation refers to a reason that explains why people do what they do. Ryan and Deci (2000) stated that motivation involves "energy, direction, persistence, and equifinality" (p.69). They vary not only "in level of motivation (i.e., how much motivation), but also in the orientation of that motivation (i.e. what type of motivation)" (Ryan & Deci, 2000, p.54). People are motivated to be engaged in the same activity by different factors resulting in different experiences and consequences. All distinctive types of motivation brought by people to learning situations have a strong influence on how and what they learn.

In the past few decades, empirical research conducted on motivation has concluded that there are close relationships between motivation and educational outcomes, including *(a)* affective variables, such as anxiety; attitude toward learning; and feelings of self–efficacy (e.g., Bye, Pushkar, & Conway, 2007); *(b)* behavioral variables, such as strategy use; learning approaches; persistence; classroom engagement; and dropping out (e.g., Biggs, 1988); *(c)* cognitive variables, such as academic performance; teacher rating of competence; and psychological well–being (e.g., Sheldon & Kasser, 1995). The issues of how much learners are motivated and what types of motivation they have are matters of significance for the field of education. For example, Vallerand and Bissonnette (1992) conducted a study that investigated the role of intrinsic, extrinsic, and amotivational styles as predictors of behavioral persistence in college academic settings. Statistical results showed that students who persisted and finished the course had higher initial levels of intrinsic motivation toward academic activities than students who dropped out of the class. Biggs (1988) conducted a study with college students to examine the relationships between motivation and learning approaches. Focusing on college students' approaches to essay writing, the study found that learners adopting a surface approach tended to be pragmatically motivated while learners who employed a deep approach appeared to be more intrinsically motivated. Therefore, if deeper level learning is to be fostered, learners should first be aware of their motivation used in their learning.

Self–Determination Theory

Among various motivation theories, the self–determination theory (SDT) is widely used to examine causes of human behaviors and to design social environments in order to optimize people's performance, development, and well–being (Deci & Ryan, 2000). When the SDT is applied to the field of education, it is mainly concerned with "evaluating and promoting learners' interest in learning and a valuing of education" (Deci, Vallerand, Pelletier, & Ryan, 1991, p. 326). The SDT suggests that motivation should not be viewed from a uni–dimensional perspective. Instead, three dimensions of motivation that are based on differences in reasons or goals for learning are identified: intrinsic motivation, extrinsic motivation, and amotivation. The most basic distinction is between intrinsic motivation, which means doing an activity because it is inherently interesting or enjoyable, and extrinsic motivation, which refers to doing something because it leads to a separable consequence.

Intrinsic motivation refers to motivation to perform an activity simply for satisfaction that accompanies the action. In the SDT, three types of intrinsic motivation are identified for stimulation, accomplishment, and knowledge (Deci & Ryan, 1985). Intrinsic motivation to experience stimulation refers to motivation based on sensations, such as excitement; aesthetic experiences; and sensory pleasure. Intrinsic motivation towards accomplishments can be defined as engaging in an activity for the satisfaction when an individual masters a task or achieves a goal; and intrinsic motivation to knowledge is associated with obtaining more knowledge and exploring new ideas. Deci, Vallerand, Pelletier, & Ryan (1991) hypothesized that when people are free to choose to perform an activity, they will seek interesting situations and challenges that the activity presents. By striving to seek information and meet challenges, they develop a sense of competence in their abilities. For example, in the case of graduate students, students are enrolled in Masters' programs because the learning activities challenge their abilities and provide satisfaction in relation to their innate psychological needs. Thus, intrinsically motivated students are expected to maintain their effort and engagement in the learning process, even when no external rewards are provided. Ideal learning, according to Deci, Vallerand, Pelletier, & Ryan (1991), is accompanied by interest and volition, which lead learners to "display greater flexibility in problem–solving, more efficient knowledge, knowledge acquisition, and a strong sense of personal worth and social responsibility" (p. 326). Intrinsic motivation is considered to be highly self–determined and volitional, and to have a positive influence on academic learning (Brophy, 2004).

However, "most of the activities people do are not, strictly speaking, intrinsically motivated" (Ryan & Deci, 2000, pp. 60). As a comparison, *extrinsic motivation* refers to doing an activity for its instrumental value instead of the enjoyment of the activity. The SDT posits that extrinsic motivation can vary greatly in the degree along a continuum from autonomous self–regulation to external control: *integrated regulation*, *identified regulation*, *introjected regulation*, and external regulation. Integrated regulation is the most autonomous form of extrinsic motivation. It occurs when "identified regulations have been fully assimilated to the self" (Deci & Ryan, 2000, p.62). Integrated regulation describes the instance in which a person has completely incorporated the activity into the individual's other values, needs, and identities. Deci and Ryan (2000) thought the integrated form of motivation shared many qualities with intrinsic motivation. Although such behavior is autonomously regulated, unlike intrinsic motivation, this form of regulation is not fundamentally driven by enjoyment of the activity, but by its importance to the individual's self–concept.

A less autonomous type of extrinsic motivation is identified regulation. The individual performs a behavior because it is judged to be personally important. At this point, individuals invest energy and time in an activity because they connect such a behavior with personally relevant reasons. For instance, Master's learners who take tremendous hours working on writing skills because they see them as relevant to their professional development, which they value as a life goal, have identified with the value of this learning activity. A third type of extrinsic motivation is introjected regulation. It refers to reasons that pertain to performing an activity due to some type of pressure that individuals have incorporated into the self so that they compel themselves to carry out that activity. Basically, individuals perform a task because they think they should do so, perhaps to avoid the feeling of guilt or anxiety or to attain pride. The least autonomous form of extrinsic motivation is external regulation. When externally motivated, behavior is controlled by some external source other than the individual, such as a tangible reward or punishment. If the external reason for learning a program is taken away, there is no incentive for continued engagement in the learning process.

Amotivation refers to the situation in which people have no reason, intrinsic or extrinsic, for performing the activity, and they would be expected to quit the activity as soon as possible. Without a goal of any type, the learner has little

reason to engage in learning and might be expected to quit performing that activity at the earliest convenience. Amotivation is considered the lowest level of autonomy on the continuum of motivational styles.

In terms of autonomy and self–determination, a taxonomy of human motivation is clearly ordered increasingly from amotivation to external regulation, introjected regulation, identified regulation, integrated regualtion, and intrinsic motivation (stimulation, accomplishment, and knowledge). The SDT is different from classic literature in that it posits some types of extrinsic motivation, including identified regulation and integrated regulation, representing active learning states. Within the framework of SDT, many studies with children; adolescents; children with disabilities; and undergraduate students in colleges or universities have found that more autonomous motivation is connected with better academic performance; greater engagement; lower attrition rates; higher quality learning; and greater psychological well–being (Deci & Ryan, 2000).

Research Questions

Keeping pace with demands for active engagement in knowledge and competence acquisition entails lifelong learning as a necessary condition of survival in the 21st century (Glastra, Hake, & Schedler, 2004). Graduate and professional programs as a continuing education resource provide an opportunity for professional development and lifelong learning. Numerous studies found that adults report learning outcomes similar to younger students across a wide array of areas (e.g., Graham & Donaldson, 1999). However, older students are more likely to have different learning experiences due to their conflicting life roles and previous experiences compared to younger students (Kasworm, 2003). As Knowles (1980) pointed out, adult students approach learning by making connections to life experience; prior knowledge; and skills. Learners in higher education "use their life experiences as a basis for assessing and revising existing theories of action which then lead to more effective strategies for professional practice" (Nesbit, 2001, p.5).

These learner characteristics indicate that students in graduate and professional programs might employ motivation, learning approaches, and study habits in a multidimensional way. Since little research has been conducted with learners in graduate and professional programs, the present study explored how Canadian Master's learners in education used different types of motivation. More volitional and autonomous types of motivation, therefore, may be fostered in higher education. Specifically, the following questions were addressed in the study within the framework of self–determination theory: (1) What motivational styles are used by this group of Master's of Education learners? (2) Are there any differences in their reported motivational styles regarding age within this group? If so, what are the differences? (3) Are there any differences in their reported motivational styles regarding enrolment status (full–time and part–time) within this group? If so, what are the differences?

Methods

Participants

Graduate programs in Canada have gained a considerable reputation internationally and attracted students from all over the world to pursue advanced education (Chen, 2008). This study was conducted in a Master's of Education program at a medium-sized university in Ontario. Thirty–seven participants were recruited through personal communication. The sample consisted of 19 full–time students and 18 part–time students, as defined by their current program registration status. The sample included 10 full-time students of English as a Second Language (ESL) from Russia, Libya, Cyprus, China, and Mexico. The rest came from Canada. Among the total 37 participants, 7 were male and 30 were female. Participants ranged in age from mid–twenties to early fifties.

Instrument and data collection

Based on self–determination theory, the Academic Motivation Scale (AMS) was designed to assess various types of motivation (Vallerand, Pelletier, Blais, Briere, Senical, & Vallieres, 1992; 1993). The AMS was developed and validated using a sample of 745 university students in Ontario, Canada. Results of a confirmatory factor analysis

(LISREL) confirmed the seven–factor structure of the questionnaire corresponding to seven scales. Different forms of motivation were proven to lie on a self–determination dimension that ranged from amotivation, external regulation, introjected regulation, identified regulation, to intrinsic motivation (stimulation, accomplishment, and knowledge). Integrated regulation as one type of extrinsic motivation was not included in the AMS because earlier studies in motivation had difficulty distinguishing the construct from identified regulation (Vallerand, Pelletier, Blais, Briere, Senical, & Vallieres, 1992; 1993).

The questionnaire for this study first elicited personal information including participants' age and enrolment status in the program. The status of being full–time or part–time was consistent with individual's registration in the program. The questionnaire used the same 7–point Likert scale of the AMS ranging from 1 (not at all typical of me) to 7 (very typical of me). A high score indicated a high degree of correspondence between the proposed reason and the student's own reason for studying in a Master's degree program. Based on the context of the study, 20 closed–ended quesitionnaire items were selected as being the most appropriate from the AMS. The items used in this study essentially remained the same with the ones in the AMS, although some words were slightly changed to fit the context of the Master's program. The questionnaire assessed three types of intrinsic motivation (stimulation; accomplishment; and knowledge), three types of extrinsic motivation (external; introjected; and identified regulation), and amotivation. Each of the seven scales has three items except identified regulation, which included only two.

Data analyses

To answer the first research question of which motivational styles Master's of Education students have, descriptive statistical analysis was conducted in terms of three types of intrinsic motivation, three types of extrinsic motivation, and amotivation. To address the second research question about age, a one–way ANOVA was performed to examine whether there were any age differences. To answer the third question about full– and part–time status, a T–test was performed to examine enrolment status differences. Responses to these closed–ended items were entered and analysed using SPSS 16. No missing values were found.

Results

Descriptive analyses

The results of descriptive analysis for each scale are presented in Table 1. The means of these items ranged from 1.29 to 6.22 and the standard deviations from 1.54 to 4.46. The scales in ascending order by the average means of their items were amotivation, introjected regulation, intrinsic for stimulation, external regulation, intrinsic for accomplishment, intrinsic for knowledge, and identified regulation. All values for skewness and kurtosis were within the accepted limits (of $\pm$ 2), indicating that the responses for the individual items seemed to be normally distributed.

Table 1: Descriptive Analyses of the Motivational Styles

Scale	N	Minimum	Maximum	Mean	SD
Amotivation	37	3	13	1.29	0.64
External regulation	37	3	20	3.54	1.49
Introjected regulation	37	3	19	2.70	1.45
Identified regulation	37	9	14	6.22	0.77
Intrinsic for stimulation	37	3	19	3.36	4.19
Intrinsic for accomplishment	37	6	20	4.86	1.40
Intrinsic for knowledge	37	6	21	5.95	1.07

Age differences using ANOVA

Internal reliability by Cronbach's alpha was computed before comparing group differences. Internal reliability examines the consistency across items that measure the same general construct. Scores on similar items should be related (internally consistent) with scores for each item also contributing some unique information. The results of internal reliability are shown in Table 2. Most scales appeared to demonstrate acceptable levels of internal consistency and the values ranged from .80 (intrinsic motivation for stimulation) to .69 (introjected regulation). However, the two items in identified regulation were found to be slightly negatively correlated with each other. As Nichols (1999) noted, values less than 0 may occur, especially when the number of cases is small and/or there are few questionnaire items. Negative alpha indicates negative average covariance among items. This result may be due to the small sample size or potential conceptual differences between the items. When the sample size is small, measurement error may generate a negative rather than positive average covariance. The more the items measure different rather than the same dimension, the greater the possibility of negative average covariance among items, and hence, negative alpha.

Table 2: Internal Reliability

	Amotivation	External	Introjected	Identified	Stimulation	Accomplishment	Knowledge
Items	3	3	3	2	3	3	3
Alpha	.79	.70	.69	-.07	.80	.73	.74

Three age groups were classified: below 30 years old (N=12), from 31 to 40 (N=13), and above 41 years old (N=12). Among seven scales of motivation, only the scale of external regulation presented a significant difference with three age groups (F = 3.18, p = .05; see Table 3). With the increase of age, the means for those three groups descended significantly from 4.17, 3.69, to 2.75, which indicates that older Master's of Education students are less controlled by external sources in their learning.

Table 3: Age Differences Regarding Motivational Styles

Status		N	Mean	F-value	Sig.
Amotivation	<30	12	1.36	0.93	.41
	31-40	13	1.41		
	>41	12	1.08		
External regulation	<30	12	4.17	3.18	.05*
	31-40	13	3.69		
	>41	12	2.75		
Introjected regulation	<30	12	3.09	0.85	.44
	31-40	13	2.72		
	>41	12	2.31		
Identified regualtion	<30	12	6.00	0.88	.42
	31-40	13	6.23		
	>41	12	6.41		
Stimulation	<30	12	3.64	1.29	.29
	31-40	13	3.59		
	>41	12	2.83		
Accomplishment	<30	12	5.03	0.16	.86
	31-40	13	4.77		
	>41	12	4.77		
Knowledge	<30	12	5.64	1.82	.18
	31-40	13	5.82		
	>41	12	6.42		

Enrolment status differences using T-test

Students in the program had either part– or full–time status in this study. There were 18 part–time and 19 full–time Master's students. Table 4 indicates significant differences exist in the scales of amotivation and identified regulation. Regarding amotivation, the mean for the group of full–time students was significantly lower than that of part–time students ($F = 7.51$, $p = .01$), which indicates that full–time students are not as highly motivated as their part–time peers. Regarding intergrated regulation, the mean for the group of full–time students was significantly higher than that of part–time students, which suggests that full–time students' learning is more related to personally relevant reasons than it is for part–time students. However, since the reliability for the scale of identified regulation could not be fully supported, caution is advised in interpreting the result.

Table 4: Enrollment Status Differences Regarding Motivational Styles

Status		N	Mean	F-value	Sig.
Amotivation	part-time	18	1.09	7.51	.01*
	full-time	19	1.47		
External regulation	part-time	18	3.04	.374	.55
	full-time	19	4.17		
Introjected regulation	part-time	18	2.54	.464	.49
	full-time	19	2.86		
Identified regualtion	part-time	18	6.42	5.11	.03*
	full-time	19	6.03		
Stimulation	part-time	18	3.00	1.09	.30
	full-time	19	3.70		
Accomplishment	part-time	18	4.63	3.72	.06
	full-time	19	5.07		
Knowledge	part-time	18	6.20	2.36	.13
	full-time	19	5.72		

Discussion

Overall, this group of learners in the graduate degree program showed more autonomous motivation in their academic learning along the continuum of motivational styles. Empirical results from the study support the continuum of increasing self–determination, from amotivation to less self–determined forms of motivation (external and introjected regulation), to more self-–determined forms of motivation (identified regulation and intrinsic motivation). A discrepancy can be found in comparison with previous studies conducted with college and university students. For example, in the study conducted with 159 Canadian university students, the results indicated the most frequently reported motivational styles were identified regulation and external regulation (Noels, Pelletier, & Vallerand, 2000). A study conducted with 263 American university students also presented the high use of identified regulation and external regulation (Cokley, Bernard, Cunningham, & Motoike, 2001). However, students in these previous studies were undergraduate students, suggesting that the graduate learners have more autonomous and self–determined motivational styles than undergraduate students.

With increasing age, students' external motivation decreases significantly, indicating that that the older a Master's learner is, the less he or she focuses on pragmatic rewards. This interpretation is consistent with Maslow's hierarchy of human needs (1970). His classic theory suggests five levels of human needs: physiological or survival needs; safety needs; affection and belongingness need; esteem needs; and need for self–actualization. An individual cannot satisfy any level unless the needs within the level below are satisfied. For the group aged below 30, they might be struggling with material needs. Their most basic needs have to do with physical and psychological survival. Therefore, this age group strongly expects high–paid salaries and prestigious jobs. In contrast, students who are older than 40 years old are more likely to have their basic needs met, so they might more readily develop their higher level needs and attain personal self–realization in the Master's program (Lu & Lambright, 2010)

Regarding academic status, the scales of amotivation and identified regulation showed significant differences, indicating that part–time students appeared to be more highly motivated than full–time students. These results are consistent with features of adult learners in andragogy mentioned above. Compared with full–time students, part–time Master's learners generally take conflicting social roles (i.e., one as a classroom teacher, a parent, and a wife) and are accumulating more life and working experience. They also likely knew what goal they wanted to obtain after having enrolled in the Master's of Education program. This transformative learning enables part–time experienced learners to develop their knowledge through reflection on their school and classroom practice. Therefore, their learning is understandably more self–determined and autonomous.

On the other hand, full–time Master's students seemed not to be as highly motivated as part–time students. There are two considerations. First, full–time students may be less motivated, as they may not see direct; pragmatic; and

potential benefits by attending the program. Unlike part–time learners who already had a secure job and a better chance for job promotion, full–time learners might see gloomy career prospects and have a sense of uncertainty for their futures. Therefore, they might be faced with a dilemma in which they are unable to associate what they learn from their Masters' program with direct, tangible rewards. As well, the full–time students in this study came from multi–ethnic and multi–national backgrounds, which contrasted with the part–time student participants, who were a relatively homogenous group of Caucasian Canadians. Furthermore, the university at which the inquiry participants attended is located in a small town in northern Ontario. The permanent residents in the town are predominantly White, while the university attracts both local part-time Caucasian Canadian students and full-time international students. A certain gap in understanding Canadian teaching and learning styles may exist for the full–time international students. Since the life and work experience of those learners coming from other cultures might be different from their peers, it is possible that they might experience difficulties in bringing their experiences into new educational surroundings.

These results have implications for graduate and professional programs. According to Brophy (2004), extrinsically motivated actions can become self–determined through the developmental processes of internalization and integration. Proper rewards may enable learners to assimilate external values and reconstitute them into personally endorsed values and self–regulations. Therefore, effective rewards that are properly embedded into graduate and professional programs, such as offering scholarships and discussing career prospects, may motivate students to stimulate the development of intrinsic interest in their academic learning. In addition, graduate and professional programs might offer support through added flexibility to fit particular social and academic circumstances. In using proper pedagogical initiatives and recognizing different types of knowledge, more volitional and autonomous types of motivation may be fostered in higher education.

Conclusion

This study clarifies the motivational styles of graduate students and provides guidance to educators and administrators to increase their understanding of graduate students. Evidence from the study supports the pattern of Master's degree learners using more self–determined forms of motivation, such as identified regulation and intrinsic motivation. Master's of Education learners who were of more advanced ages were less controlled by external sources in their learning than their younger peers, and part–time students appeared to be more highly motivated than full–time students.

Although this study revealed some interesting findings, limitations of the non–probability, small–scale sampling, and a self–reported questionnaire may constrain the generalization of these results to other circumstances. Further research with a variety of programs and universities is needed to confirm investigative findings related to status differences and age differences. Moreover, extensive discussion is needed regarding the reliability of the AMS for diverse populations in various contexts. For example, Cokley (2000, 2001) reported that the construct validity of the AMS was problematic and open to discussion. He thought that adaptation of the AMS to other contexts might only have partial validity. Despite these shortcomings, this study provides teachers, learners, teacher educators, and educational researchers with empirically–based insights into one of the important characteristics of Master's of Education learners— motivation. In this way, this article further serves as a contribution to the literature in the areas of motivation, education, adult education, and graduate study.

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