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A Study of the Self-Loci of Control towards Students' Achievements in Distance Education

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Abstract

This article reports on the study undertaken to elucidate the role of the self-loci of control towards the achievements of distance education learners in their endeavour to pursue life-long learning. Six dimensions of the self-loci of control were studied, namely, time management, the learning style, attitude and perception, motivation, self-directedness and past learning experiences. The analysis revealed that all dimensions studied had a positive effect on students' academic achievements with motivation and self-directedness registering higher contributory roles; on the other hand, past learning experiences played the least contributory role. The non-parametric comparative analysis revealed some differences in the characteristics between the high-achieving students and the low-achieving students in all the dimensions studied. Significantly more high achievers ($p < 0.05$) were motivated to make a successful completion of their studies. The students demonstrated good time management skills, learned collaboratively with peers, were disciplined and strategised their learning. In the aspect of self-directedness, a significantly higher number of high achievers ($p < 0.05$) showed that they possessed the required self-directed characteristics which were imperative for academic achievements in distance education.

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1.0 INTRODUCTION

High achieving and persistence in distance education are complex phenomena that are influenced by a multitude of variables. Previous research has provided insights into some factors that can contribute to the success or failure of students in their studies. Factors such as gender difference in the areas of organisation and the use of study materials, confidence about studies and study styles are known to affect achievements in distance education (Taplin & Jegede, 2001; Fields & Lemay, 1989). Parker (1999) revealed that the combination of the students' loci of control in terms of the self-directedness and source of financial assistance may also act as predictors of their non-completion in distance education. Atan et al. (2004) on the other hand, have shown that the support system played a part, mostly in the dimension of course facilitation such as video conferencing and the annual residential intensive courses provided by the institution. These facilities have some effect on student achievements and hence, influence the progress of course completion.

The focus of this study is to elucidate the role of the self-loci of control in affecting students' achievements and to look at the differing characteristics between the high and low achievers within the dimensions of the self-loci of control. A learner with internal loci of control may be defined as one who holds the belief that the outcomes of the situation are contingent on his or her own behaviour. The self-loci of control are then self-internal variables determining the self-efficacy that assumes control of both methods (means) and contents (objectives) of one's own learning (Martin, 1990; Dille & Merzack, 1991). By such definition, the elements of self-loci of control undertaken in this study include time management, the learning style, attitude and perception, motivation, self-directedness and past learning experiences.

McAllister (1998) has shown that study habits, approach and time management can have a significant effect on student achievements. New students often lack necessary independence and the time management skills that are needed for effective studies and this may lead eventually to failure and even withdrawal (Eisenberg & Dowsett, 1990; Erham, 1990). Proper time management form the basis of the ability of students to put more effort into their studies, complete all assignments, use practice tests for review and allocate more time for examination preparation.

Fairly extensive research has also been undertaken to investigate the learning styles of distance education learners. Various styles have been identified including those of students who prefer to study independently as opposed to those who prefer to study collaboratively in a study group. There are also students who prefer to study for deeper understanding as opposed to those who focus on the reproduction of details at a surface level. Students' achievements can be adversely affected if there is a mismatch between the students' preferred learning style to those being practised (Harper & Kember, 1986).

The right attitude and perception, such as having confidence and persistence in executing the educational activities in distance education programmes, have also been found to be predictors of good study habits and hence, a predictor of the level of academic attainment. Low achieving students tend to be lacking in confidence and they are not motivated to work hard when their studies are not progressing well. Such students have a negative view of themselves as well as on their abilities to cope and come to terms with returning to formal education. They are easily de-motivated particularly with seeking help or approaching the academic staff for assistance (Kumar, 1999).

The dimension of motivation in the self-loci of control is also known to affect the students' level of attainment. Researchers have found that students with a high level of motivation put in the extra hours and hard work because they expect this effort to affect their success (Altman & Arambasich, 1982; Uba, 1997). There are various aspects of motivation that are known to drive the student to be intrinsically driven and these include the need for financial or job status rewards, enhancing personal growth, failure avoidance and competitiveness (Taplin & Jegede, 2001).

The effect on the achievement of self-directedness in the self-loci of control has received considerable attention. A number of studies have revealed the inter-relationship between the characteristics of self-directedness on the part of the students and their academic performances. Various characteristics of self-directedness have been found to influence the students' behaviour and actions in carrying out their studies to successful completion. These characteristics include being positive, persistent, organised, ready to learn and responsible for the learning process, having the ability to prioritise and accept challenges (Ibrahim & Silong, 2002).

Research has also shown that past learning experiences have some impact on the academic attainment among distance learners. Students with a strong educational background and the necessary metacognitive skills are usually able to approach the course work and examination components of their studies positively (Brent & Bugbee, 1993); at the same time, they have the appropriate reading skills for working with the course materials and writing skills to complete course assignments and essays effectively.

As the dimensions in the self-loci of control play a significant role in contributing towards the students' academic achievements, this research is being conducted with the objective of investigating the extent to which each of these dimensions plays its part and at the same time, elucidating the differences in the characteristics between the high and low achievers within the dimensions studied. In undertaking this investigation, the following questions will be raised:

- a. What is the hierarchy of importance for the six dimensions of the self-loci of control studied, namely, the time management, learning style, attitude and

perception, motivation, self-directedness and past learning experiences, in affecting the students' achievements?

- b. How does the high achiever differ from the low achiever in each of the dimensions studied?

It is imperative for the institutions offering distance education to know the relative importance of the various dimensions pertinent to the self-loci of control that affect the students' achievements and at the same time, have the appropriate information that will enable them to discern the differences in the characteristics between the high achiever and the low achiever. Such information will empower the institutions to put more emphasis on the most important dimensions of the self-loci of control in order to assist the students to perform well in their studies. The academic staff and the counselors can then have advanced opportunities to intervene and assist students who demonstrate characteristics of becoming potentially low achievers. The careful placement and advanced technique of intervention, especially early in course of studies, could be implemented to further assist the students so that they are able to alleviate the problems confronting them, enhancing the chances for the successful completion of their studies. Such an intervention could indirectly improve students' course retention and reduce the rate of course non-completion among distance education learners.

2.0 METHODOLOGY

A specially designed questionnaire was developed for this study that elicited the effect of six dimensions of self-loci of control that influence academic achievements, namely, motivation, self-directedness, attitude and perception, learning style, time management and past learning experiences. The questionnaire was first pilot tested involving a sample of 24 students who did not participate in the final study. Based on the results of the pilot test, the questionnaire was revised and modified. The final instrument showed a high internal consistency of 0.9263. The reliability coefficient for each of the support service categories is depicted in Table 1. The questionnaire consisted of 64 statements and each statement was accompanied by five point Likert scales (1 = disagree very much, 5 = agree very much).

The sample of this study consisted of 248 second, third and final year students enrolled in the arts and science academic programme courses at the School of Distance Education, Universiti Sains Malaysia (USM). The study was conducted during the annual residential three-week intensive course for the 2003/2004 academic session. From the 248 designated students, 197 (79.4%) of them were high achieving students who had obtained a CGPA of 3.00 and higher in the previous academic session final examination. The other 51 students (20.6%) were the low achieving students who had performed poorly in the previous academic session final examination with a CGPA of 2.00 or lower.

Table 1. Measurement of the Internal Consistency

No	Category of Items	No. of Items	Alfa Coefficient
1	Time Management	11	0.8358
2	Learning Style	14	0.6798
3	Attitude and Perception	14	0.8623
4	Motivation	6	0.8691
5	Self-Directedness	9	0.8519
6	Past Learning Experiences	10	0.6213
	Total	64	0.9263

The analysis of the respondents' demographic details revealed that the sample consisted of 41.7% males and 58.3% females with their ages ranging mostly from 31 to 45 years old. The distances to the nearest regional centre were mostly in the range of 0-40 km. Most of the students (92.7%) had a computer at home with 65.9% of them possessing Internet connectivity. The analysis of the data involved two parts. The first part was the extraction of the total mean of each of the categories of the self-loci of controls and the hierarchical ranking of the total mean. This provided the relative importance of each of the dimensions of the self-loci of control that the student perceived was vital in affecting their academic achievements. The effect of these dimensions of the self-loci of controls towards the students' academic achievements was illustrated via the comparative analysis of responses between the high and low achievers. This was performed using a statistical non-parametric χ^2 analysis. Only $p < 0.05$ was used in the analysis and this will be discussed below. The null hypothesis was that there was no difference between the two groups in terms of the responses given to the items put forward to them.

3.0 RESULTS AND DISCUSSION

The relative importance of the dimensions

The relative roles of the various dimensions in the self-loci of control regarding the students' academic achievements are depicted in Figure 1. Among the six dimensions studied, motivation recorded the highest mean ($\bar{x} = 4.353$), followed by self-directedness ($\bar{x} = 3.748$). The two dimensions, namely attitude and perception ($\bar{x} = 3.614$) and learning style ($\bar{x} = 3.605$), recorded almost a uniform mean, indicating a level of importance that was more or less equal in terms of their role in enhancing academic performances. The dimension of time management ($\bar{x} = 3.503$) and past learning experiences ($\bar{x} = 3.458$) recorded the lowest two means.

The fact that motivation recorded the highest mean in this study reflected the importance of the role of this dimension in influencing how and why adults learned as well as how they performed. The association of this dimension with students' achievements is well established as reported in various studies (Altman & Arambasich, 1982; Uba, 1997; Taplin & Jegede, 2001). Generally, motivation is driven by intrinsic rewards (Wilson & Corpus, 2001). Intrinsic rewards provide a sense of self-influence on the choice of activity, determine the effort one is willing to expend, and the persistence one will have when accomplishing a task. The student's internal or intrinsic sense of self and belief in working hard to achieve a goal is the determining factor in whether or not he/she will succeed. The intrinsic reward focuses on goal orientation, that is, the idea that the motivation is determined jointly by the expectation that the effort will lead to the goal (self-efficacy) and that the goal is worth attaining. As this study suggests, it is imperative to instill a high degree of motivation among distance learners that would enhance their belief regarding their own capacity to achieve and perform.

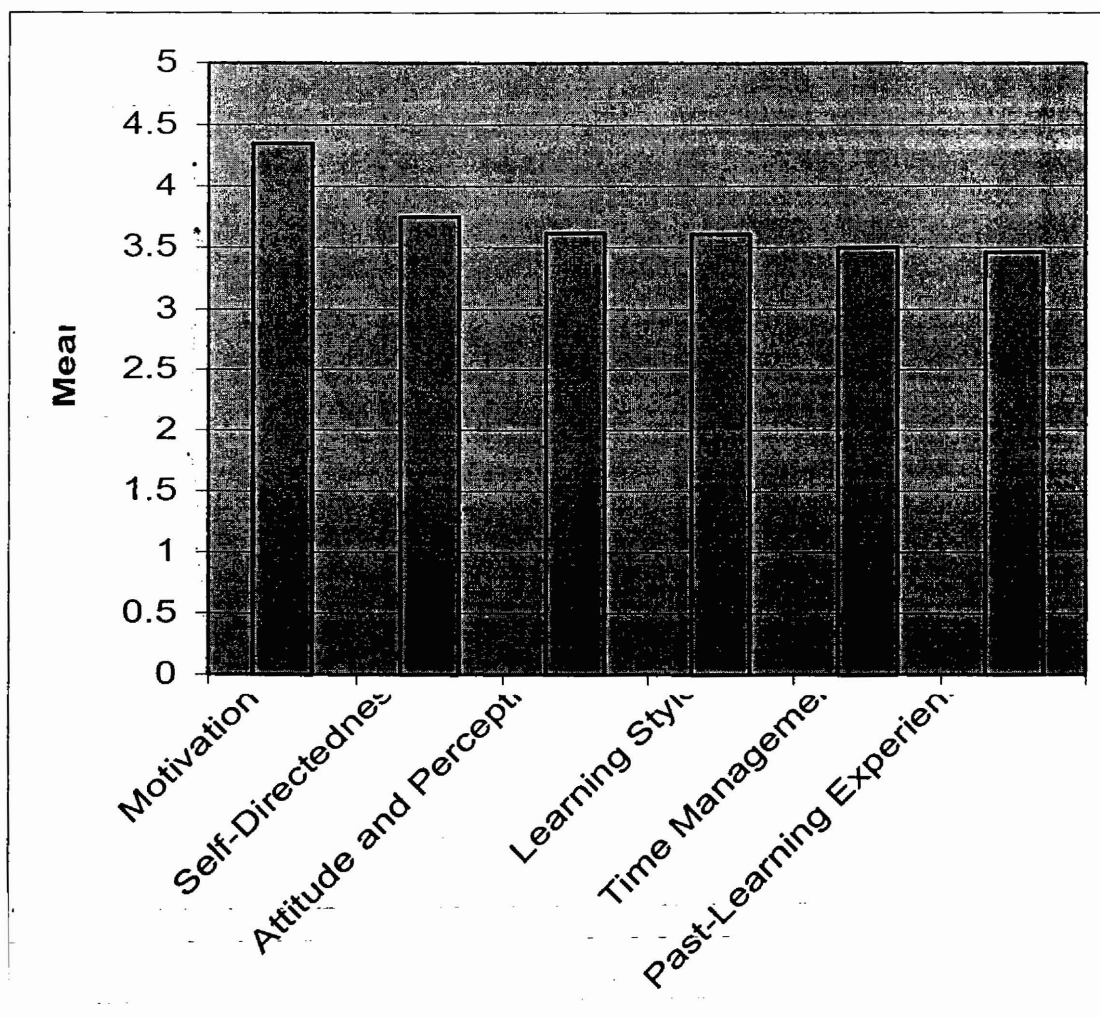


Figure 1. Relative means of self-loci of control affecting students' achievements

This result also highlighted the importance of the dimension of self-directedness in the self-loci of control of the students. The characteristics of effective self-directed learners are that they are highly motivated and know how to seek out, identify and effectively use all the available resources to obtain information and other assistance to solve problems and expand their information and perceptual base (Boone, 1990). The relationship between self-directedness and achievement is well established as Knowles (1975) has also suggested an effective self-directed learner is one who has the ability to identify human and material resources appropriate to different kinds of learning objectives and has the ability to learn any intellectual task regardless of its perceived difficulties.

This finding also reveals that past learning experiences recorded the lowest mean among the six dimensions studied. Past learning experiences provide competency in reading and the writing skills that are necessary for effective learning processes. The reason that this dimension was perceived to be the lowest contributing role may be partly due to the inherent characteristics of the learners. As adult learners, they have the required and necessary reading and writing skills to comprehend course contents and to complete assignments and essays.

Comparative analysis between high achievers and low achievers

In terms of motivation, out of the six items put forward to the students, only one recorded significant difference. The item revealed that the higher achievers have more desire and urge to complete the programme they have enrolled in successfully when compared to the low achievers (χ^2 (df=2) = 6.868; sig. = 0.032). This strong desire and urge to complete the course successfully drive the students to acquire the necessary motivation which in turn compels them to put in more time and effort into their studies. The different desire and urge clearly affect the students' motivational level and these characteristics distinguish the two groups of students.

Regarding the dimension of self-directedness, 2 out of 9 items recorded significant differences. The first item revealed that significantly more higher achievers are comfortable learning through distance education (χ^2 (df=3) = 8.500; sig=0.037). This implies that higher achievers are a group of students who are able to adapt to the open and distance learning technique which emphasises the independent and self-directed format. Learning independently through distance education means utilising and optimising the availability of resources into learning with minimal guidance from the course manager. It also meant not relying solely on learning materials provided by the institution but utilising the available resources to obtain supplementary materials from the library and the Internet to enhance understanding. It is, therefore, essential for the institution of distance education to provide a mechanism to improve the skill of self-directedness where the utilisation of resources and skills in learning through the self-directed format among the low achievers. Such a provision can be an important key to a student to enhance his/her academic performances. The other item that exhibited

significant difference was the item that relates the learning with work experiences. More high achievers are able to relate their learning with working experiences (χ^2 (df=3) = 8.210; sig=0.042). The ability to relate the knowledge and skills learned in the workplace context distinguishes the two groups of students.

In the dimension of attitude and perception, 2 items out of 14 showed significant differences. More higher achievers were persistent and possessed greater discipline in their learning (χ^2 (df=3) = 9.863; sig=0.020) compared to the low achievers. More high achievers too have specific objectives in their learning (χ^2 (df=2) = 6.587; sig=0.037). Clearly, the internal self-loci of control in terms of attitude and perception differentiate these two groups of learners. Learning through distance education requires the students to play multiple roles not only as a student but as an employee, family head and member of the society. In such a situation, persistence and great discipline with well defined objectives are imperative for good academic attainment.

In terms of the learning style, 3 items out of 14 showed significant differences. More high achievers discussed their learning with friends (χ^2 (df=4) = 23.347; sig. =0.000). The collaboratively learning technique where learning is constructed through social interaction clearly distinguishes between the two groups. This implies that higher achievers prefer learning via the sharing of ideas and knowledge which in turns promote better understanding and enhance memory retention; this is in contrast to the preferred learning style of the low achievers who study independently and are reluctant to seek out the help of peers. This analysis also found that the high achievers have their own strategy to fulfil their learning needs (χ^2 (df=3) = 11.638; sig. =0.009) and they refer more frequently to previous assignments and answers before tests and examinations (χ^2 (df=3) = 14.461; sig=0.002) compared to the low achievers. Clearly, strategising the learning around the constraints and putting extra effort to prepare for tests and examinations enhance the students' academic attainment.

In terms of the dimension of time management, this study correctly revealed that more high achievers perceive that they have good time management regarding their studies (χ^2 (df=3) = 7.807; sig=0.050) compared to the low achievers. Effective time management enables the use of time to be maximised in the best possible ways for the learning process. Time could be effectively allocated for reading to understand the course contents, completing assignments and making the necessary preparation for tests and examinations.

In the dimension of past learning experiences, 3 items out of 10 registered significant differences. Even though this dimension recorded the lowest mean relative to the other dimensions being studied, the comparative analysis between the two groups of learners showed some significant differences between them. More high achievers can remember what they have read (χ^2 (df=2) = 11.819; sig. =0.003) compared to the low achievers. The memorising and reading skills imperative for the understanding of the course

contents seemed to distinguish these two groups. This study also found that more-low achievers registered for an extended number of courses in a given academic session that made their learning more difficult (χ^2 (df=4) = 14.766; sig=0.005). Appropriate academic guidance should be given to the students when they enroll for their courses so that only an appropriate number of courses is allowed to be registered in accordance to the students' ability to ensure that they are able to cope with the study demands. Regarding the collaborative skills, more high achievers have the appropriate skills to discuss what they have read with peers (χ^2 (df=3) = 14.560; sig. =0.002). Since learning collaboratively is imperative for the learners to share ideas and knowledge, steps should also be taken to instill such a skill early among the learners.

4.0 CONCLUSION

Achievement in distance education cannot be attributed to one single dimension of the self-loci of control but must be considered as generated from a combination of dimensions. This study has elucidated the hierarchy of the importance of these dimensions and found that the internal loci of control of motivation and self-directedness play imperative roles in affecting academic performances. The comparative analysis between the high and low achievers also revealed a significant difference in the characteristics of the dimensions studied. More high achievers are greatly motivated, possess the necessary characteristics of self-directedness, learn collaboratively, use effective time management, and have the reading and collaborative skills necessary to achieve good academic performances.

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