

THE INFLUENCE OF LEARNER READINESS ON STUDENT SATISFACTION AND ACADEMIC ACHIEVEMENT IN AN ONLINE PROGRAM AT HIGHER EDUCATION

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ABSTRACT

The purpose of this study was to measure the self-perceptions of distance education learners in terms of learner readiness and to determine the predictors of satisfaction and success in distance education. Learner readiness consists of five sub-dimensions: (1) computer/internet self-efficacy, (2) self-directed learning, (3) learner control, (4) motivation for learning, and (5) online communication self-efficacy. The subjects of the study are 84 English Language and Literature Distance Education Program students. In order to collect data, Online Learning Readiness Scale (OLRS), developed and validated by Hung, et al. (2010), was used. For the current study the Cronbach Alpha was found .88. The correlation analysis revealed that all the sub-dimensions of learner readiness correlate significantly with the concept of student satisfaction and student success. In addition, regression analysis was carried out in order to see the impact of each of the sub-dimensions of learner readiness on satisfaction. As a result of the regression analysis, it was found out that *motivation* is the most important dimension that influences student satisfaction in online learning. As a next step, another regression analysis was carried out in order to determine the impact of the sub-dimensions of learner readiness on student success. The results indicate that *self-directed learning* is the most important predictor of success. The next two most important predictors of success in distance education were found to be *learner control* and *motivation*.

Keywords: Learner readiness, student satisfaction, academic achievement, on-line EFL learning environment

1. INTRODUCTION

The concept of learner readiness was first proposed by Warner, Christie, and Choy (1998). They specified the three important aspects of readiness for online learning environments. These are: (1) students' preferences for the form of delivery as opposed to face-to-face classroom instruction; (2) student confidence in using electronic communication for learning and, in particular, competence and confidence in the use of the Internet and computer-mediated communication; and (3) the ability to engage in autonomous learning.

Online learning environments offer more opportunities for individualization and flexibility, which creates an increased demand for self-directed learning (Grabinger & Dunlap, 1995). Similarly, Wolfe (2000) states that distance education programs assign more demands on learners compared to traditional learning environments. Grabinger and Dunlap (2000) clearly state that students enrolled in online programs need a bulk of "well-developed lifelong learning skills and strategies, such as goal-setting, action planning, learning-strategy selection and assessment, resource selection and evaluation, reflective learning and time management." (p. 37). In short, self-direction and initiatives on the part of students are necessary components that distance education students are supposed to have in order to fulfill their learning goals.

2. THEORETICAL BACKGROUND

Learner readiness consists of five sub-dimensions. Self-directed learning focuses on learners' ability to take responsibility for the learning context to reach their learning objectives. The concept of learner control refers to online learners' control over their learning efforts to direct their own learning. Thirdly, motivation for learning is related to online learners' learning attitudes, and the concept of computer/internet self-efficacy is about online learners' ability to demonstrate proper computer and internet skills. Finally, the concept of online communication self-efficacy centered on describing learners' adaptability to the online setting through questioning, responding, commenting, and discussing (Hung et al., 2010).

2.1. Sub-dimensions of learner readiness

The first dimension of learner readiness is computer and Internet self-efficacy, which is, according to Kuo, Walker, Belland, & Schroder (2013), not addressed as much as other variables. The authors point out the existence of evidence that support the influence of Internet self-efficacy on student satisfaction and indicate that it is not at a satisfactory level and does not lead to clear conclusions. There are, however, a few studies. Eastin and La Rose (2000), for example, found a positive correlation between Internet self-efficacy and expected learning outcomes. Chu and Chu (2010) found a positive correlation between Internet self-efficacy and

satisfaction. Rodriguez Robles' study (2006) found that Internet self-efficacy is not a significant predictor of student satisfaction.

Knowles (1975:18) defines self-directed learning (SDL) as “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources, choosing and implementing appropriate learning strategies, and evaluating learning outcomes”. This definition is highly comprehensive and indicates a complex learning process that makes high demands on students for choices (Boekaerts, 1999; Winne & Perry, 2000). Paris and Paris (2001: 89) stated that self-directed learning “emphasizes autonomy and control by the individual who monitors, directs, and regulates actions toward goals of information acquisition, expanding expertise and self-improvement”. To summarize, self-regulated learners are “metacognitively, motivationally, and behaviorally active participants in their own learning process” (Zimmerman, 1989a: 4).

The place of motivation in educational research has been accentuated by many researchers. There is no doubt that motivation is one of the leading factors in student success and other issues. In literature, intrinsic motivation was found to be influential on a lower dropout rate, higher-quality learning, better learning strategies, and greater enjoyment of school (Czubaj, 2004; Deci & Ryan, 1985). Similarly, extrinsic motivation is linked to getting higher grades on exams, getting awards, and getting prizes. Therefore, as an element of learner readiness, motivation assumes importance in measuring student satisfaction and academic achievement.

Learner control implies the degree to which learners can direct their own learning process (Shyu & Brown, 1992). By nature, distance education programs require learners to take hold of their own learning as opposed to traditional learning environments where learners are required to follow a developmental sequence by the help of coursebooks or other instructional materials. In distance education programs, learners are given control over their own learning process in terms of the amount of content, the sequence, and the pace of learning (Hannafin, 1984; Reeves, 1993). Now that learners are by themselves with the course material in distance education programs, especially in handling the asynchronous course materials, learner control assumes great importance. Another sub-dimension of learner readiness is computer and internet self-efficacy. Self-efficacy is derived from Albert Bandura's social cognitive theory and offers a conceptual framework to get a grasp of how self-efficacy beliefs affect student satisfaction and academic achievement in online programs (Bandura, 1977). Accordingly, Eastin and LaRose (2000) stressed that computer and internet self-efficacy leads both to increased performance in technical issues like downloading documents or managing the online system and better performance in solving problems in online learning. Therefore, it is hypothesized that increased computer and internet self-efficacy leads to increased students satisfaction and achievement. Tsai and Tsai (2003), for example, found that students with high Internet self-efficacy learned better than students with low Internet self-efficacy in a Web-based learning task.

The final sub-dimension of learner readiness is online communication self efficacy. Palloff & Pratt (1999) found that introvert students participate more in online learning environments than traditional environments. Roper (2007) claimed that successful students are supposed to take the advantage of classroom discussions as much as possible. In short, Hung et al (2010) concluded that communication self-efficacy in online learning is an essential dimension for overcoming the limitations of online communication.

2.2. Student satisfaction in online programs

Although there is a bulk of literature emerging on distance education, there are no studies that focus on learner readiness and student satisfaction. According to Kuo et al. (2013), student satisfaction means the perceptions of learners of the value of a course and their experiences in the learning program. Thus, they point out that it deserves to be studied.

Higher education institutions consider student satisfaction as one of the major elements in determining the quality of online programs in today's markets (Yukselturk & Yildirim, 2008). Student satisfaction in online programs has been studied in relation to a number of factors. It has been studied in relation to persistence (Allen & Seaman, 2008), retention (Debourgh, 1999; Koseke, & Koseke, 1991), course quality (Moore & Kearsley, 1996), and student success (Keller, 1983; Pike, 1993). Findings indicate that high satisfaction leads to higher levels of retention, higher persistence in learning, and higher motivation (Keller, 1983; Koseke, & Koseke, 1991). There is no doubt that research studies on satisfaction help course designers, educators and administrators to work on areas that need improvement (Reinhart & Schneider, 2001).

3. RESEARCH METHODOLOGY

3.1. Purpose

This paper aims to measure distance education students in terms of their self-perceptions about learner readiness. The next aim of the paper is to identify the predictors of students satisfaction and student success in the distance education program. Therefore, this paper tries to answer the following research questions:

1. What are distance education students’ self-perceptions about the following sub-dimensions of learner readiness?
 - (a) computer/internet self-efficacy,
 - (b) self-directed learning,
 - (c) learner control,
 - (d) motivation for learning, and
 - (e) online communication self-efficacy
2. What are the predictors of student satisfaction for distance education students?
3. What are the predictors of success for distance education students?

3.2. Subjects of the study

The study included 84 students who attend the English Language and Literature Department at Karabuk University. The number of female students (N = 50) was greater than the number of male students (N = 34). In terms of age groups, there is almost the same number of students in the three age groups (21-25, 25-30, 31-35) while there are only two students who are over 36. The number of third level students (N=54) is greater than that of second level students (N=30). Table 1 presents the demographic characteristics of the students.

Table 1. Demographic characteristics of the participants

	N	P
Gender		
Female	50	59.5
Male	34	40.5
Age		
21-25	27	32.1
25-30	28	33.3
31-35	27	32.1
36-over	2	2.4
Class level		
2 nd class	30	35.7
3 rd class	54	64.3

3.3. Data Collection Tool

In order to collect data, “Online Learning Readiness Scale” (OLRS) was used. OLRS was developed by Hung et al., (2010) and includes five dimensions. These dimensions are a) self-directed learning, b) motivation for learning, c) computer/internet self-efficacy, d) learner control, and e) online communication self-efficacy.

The reliability analysis of the research tool is given in the table below. Internal reliability coefficients (Cronbach’s Alpha) for all dimensions range from .64 to .88 and the total internal reliability coefficient is .88, which indicates a high level of reliability.

Table 2. Reliability analysis

Variables	α	Number of items
student satisfaction	.88	5
computer/internet self-efficacy	.85	3
self-directed learning	.79	5
learner control	.64	3
motivation	.79	4
online communication self-efficacy	.79	3
Total	.88	23

4. DATA ANALYSIS AND RESULTS

4.1. Descriptive Statistics

Table 3 presents the descriptive statistics (range, minimum, maximum, mean, and standard deviation) of variables such as computer/internet self-efficacy, self-directed learning, learner control, motivation for learning, online communication self-efficacy, and student satisfaction.

Table 3. Descriptive statistics for the components of self-regulation

Student satisfaction and sub-dimensions of student readiness	N	Minimum	Maximum	Mean	SD
student satisfaction	84	5.00	25.00	17.904	4.082
computer/internet self-efficacy	84	6.00	15.00	11.369	2.029
self-directed learning	84	9.00	25.00	18.702	3.528
learner control	84	4.00	15.00	10.595	2.297
motivation	84	9.00	20.00	16.428	2.816
online communication self-efficacy	84	6.00	15.00	11.369	2.296

We can understand from Table 3 that students have the highest mean score in self-directed learning (M=18.702) followed by a relatively high level of satisfaction (M=17.904) and motivation (M=16.428). The lowest variable is learner control (M=10.595).

In order to further analyze the level of each dimension of learner readiness and student satisfaction, the results of 84 participants were grouped as *low*, *moderate*, and *high*. To do this, the maximum values were divided into three in order to find the cut-off points. The cut-off points for the variables are as follows: *student satisfaction* (low=1-8, moderate=9-16, high=17-25), *computer/internet self-efficacy* (low=1-5, moderate=5-10, high=10-15), *self-directed learning* (low=1-8, moderate=9-16, high=17-25), *learner control* (low=1-5, moderate=5-10, high=10-15), *motivation* (low=1-7, moderate=8-15, high=16-20), and *online communication self-efficacy* (low=1-5, moderate=5-10, high=10-15). The results are presented in Table 4. According to the results, we can say that the participants have high levels for all the dimensions of learner readiness as well as learner satisfaction in total.

Table 4. Distribution of the sub-dimensions of learner readiness

sub-dimensions of learner readiness	Low		Moderate		high	
	f	%	f	%	f	%
student satisfaction	3	3.0	18	21.42	63	75.00
computer/internet self-efficacy	0	0	19	22.61	65	77.38
self-directed learning	0	0	22	26.19	62	73.80
learner control	1	1.1	23	27.38	60	71.42
Motivation	0	0	27	32.14	57	67.85
online communication self-efficacy	0	0	19	22.61	65	77.38

Student satisfaction

The results pertaining to each item under each of the variables were presented in detail in this part. First of all, Table 5 presents the frequencies and percentages about student satisfaction. As we can understand from the table, a majority of the participants stated that the courses contribute to their educational development (65,5%) and to their professional development (65,5%), they are satisfied with the level of interaction that took place in the courses (61,9%), and they will continue their online education (60,7%). A moderate number of the participants stated that they were satisfied with the online courses (47,1%). In short, the participants report a high level of satisfaction in their online courses.

Table 5. Frequencies and percentages as regards student satisfaction.

Student satisfaction		Disagree	Undecided	Agree
1. Overall, I am satisfied with the classes.	N	9	27	48
	%	10,8	32,1	47,1
2. This course contributed to my educational development.	N	9	20	55
	%	10,8	23,8	65,5
3. This course contributed to my professional development.	N	10	19	55
	%	12,0	22,6	65,5
4. I am satisfied with the level of interaction that happened in this course.	N	10	22	52
	%	11,9	26,2	61,9
5. In the future, I would be willing to take a fully online course again.	N	12	21	51
	%	14,3	25,0	60,7

Computer/internet self-efficacy

Table 6 presents the descriptive statistics about computer and internet self-efficacy. The figures in the table report that a big number of the participants stated that they could comfortably use the Internet (75,0%), feel confident in their knowledge and skills of how to use online learning software, and finally feel confident in performing the basic function of office programs (70,2%). Computer and Internet self-efficacy is extremely important for distance education students and the findings of this study indicate that they have a high level of computer self-efficacy.

Table 6. Frequencies and percentages as regards computer/internet self-efficacy

Computer/internet self-efficacy		Disagree	Undecided	Agree	
1.	I feel confident in performing the basic functions of Microsoft Office programs (Word, MS Excel)	N %	11 13,1	14 16,7	59 70,2
2.	I feel confident in my knowledge and skills of how to manage software for online learning.	N %	5 6,0	19 22,6	63 71,5
3.	I feel confident in using the Internet to find or gather information for online learning.	N %	6 7,1	15 17,9	63 75,0

Self-directed learning

The third sub-dimension of learner readiness is self-directed learning. The descriptive statistics about self-directed learning are presented in Table 7. As we can understand from the table, a majority of the participants could carry out their own study plan (69,1%), have higher expectations for their learning (67,9%), and set up their learning goals (64,2%). A considerable number of the participants pointed out that they try to get help when they come across with problems (58,4%) and manage time well (55,9%). Overall, we can speculate that distance education students are highly proficient in self-directed learning, which is an extremely important skill for them.

Table 7. Frequencies and percentages as regards self-directed learning

Self-directed learning		Disagree	Undecided	Agree	
1.	I carry out my own study plan.	N %	6 7,2	20 23,8	58 69,1
2.	I seek assistance when I face learning problems.	N %	7 8,4	28 33,3	49 58,4
3.	I manage time well.	N %	11 13,1	26 31,0	47 55,9
4.	I set up my learning goals.	N %	6 7,2	24 28,6	54 64,2
5.	I have higher expectations for my learning.	N %	8 9,6	19 22,6	57 67,9

Learner control

The results about the fourth sub-dimension of learner readiness, learner control, are presented in Table 8. The table indicates that a majority of the participants stated that they repeat the material they learned in the course (64,3%) and can direct their own learning (61,9%), while a moderate number of the participants pointed out that they were not distracted by other online activities (47,6%). Therefore, we can understand that distance education students have a satisfactory level of control over their own learning process.

Table 8. Frequencies and percentages as regards learner control

Learner control		Disagree	Undecided	Agree	
1.	I can direct my own learning progress.	N %	12 14,3	20 23,8	52 61,9
2.	I am not distracted by other online activities when learning online (facebook, twitter, etc)	N %	18 21,4	26 31,0	40 47,6
3.	I repeat the instructional materials on the basis of my needs.	N %	8 9,5	22 26,2	54 64,3

Motivation

When it comes to motivation, the results are presented in Table 9. The figures in the table show that a huge number of the participants pointed out that they think that they learn from their mistakes (83,3%) and were open to new ideas (82,2%). A majority of the participants also stated that they liked sharing their ideas with others (75,%) and had motivation to learn (72,6%). To conclude, it is obvious that the participants have a high level of motivation to continue their online education.

Table 9. Frequencies and percentages as regards motivation

Motivation		Disagree	Undecided	Agree
1. I am open to new ideas.	N	4	11	69
	%	4,8	13,1	82,2
2. I have motivation to learn.	N	7	16	61
	%	8,4	19,0	72,6
3. I improve from my mistakes.	N	1	13	70
	%	1,2	15,5	83,3
4. I like sharing my ideas with others.	N	4	17	63
	%	4,8	20,2	75,0

Online communication self-efficacy

Finally, the last important sub-dimension of online learner readiness is online communication self-efficacy. The descriptive statistics are presented in Table 10. The results indicate that a majority of the participants stated that they felt confident in using online tools (72,6%), and in expressing themselves through text (64,3%), while a moderate number of the participants pointed out that they were confident in posting questions in online discussions (58,4%). In short, the figures indicate that the participants have a high level of online communication self-efficacy, which is a fundamental skill for distance education students.

Table 10. Frequencies and percentages as regards online communication self-efficacy

Online communication self-efficacy		Disagree	Undecided	Agree
1. I feel confident in using online tools (email, discussion) to effectively communicate with others.	N	6	17	61
	%	7,2	20,2	72,6
2. I feel confident in expressing myself (emotions and humor) through text.	N	3	27	54
	%	3,6	32,1	64,3
3. I feel confident in posting questions in online discussions	N	8	27	49
	%	9,5	32,1	58,4

4.2. Correlation Study for Student Satisfaction

As can be seen from Table 12, there were positive relationships between learner satisfaction and computer self-efficacy ($r = .28, p < .01$), learner control ($r = .28, p < .01$), online communication self-efficacy ($r = .42, p < .01$), self-directed learning ($r = .32, p < .01$), and learner satisfaction ($r = .47, p < .01$). The highest correlation occurred between learner satisfaction and motivation ($r = .47, p < .01$). Correlation results indicated that all of the independent variables were in positive relationships with students' satisfaction.

Table 12. Pearson Product-Moment correlations among measures for all subjects of the study

Variables	1	2	3	4	5	6
1. CSE	-	.38**	.36**	.51**	.12	.28**
2. LC		-	.22*	.47**	.21	.28**
3. OCSE			-	.28*	.44**	.42**
4. SDL				-	.23*	.32**
5. MO					-	.47**
6. LS						-

Notes: * $p < .05$; ** $p > .01$

Computer self-efficacy: CSE

Learner control: LC

Online communication self-efficacy: OCSE

Self-directed learning: SDL

Motivation: MO

Learner satisfaction: LS

4.3. Regression analysis for satisfaction

Table 13 below reports the results of multiple linear regression analysis for variables predicting the satisfaction levels distance education students. The multiple correlation coefficient was .57 revealing that nearly 32% of the variance in the sample can be accounted for the linear combination of computer self-efficacy, self-directed learning, learner control, motivation, and online self-efficacy. T-test results for the significance of regression coefficients illustrated that motivation was the only significant predictor of satisfaction ($\beta = .33, p < .05$). Other variables were not significant in predicting in distance education students' satisfaction ($\beta = .08, p > .05$; $\beta = .11, p > .05$; $\beta = .09, p > .05$, and $\beta = .20, p > .05$, respectively). Relying on this finding, it may be speculated that motivated learners become satisfied with their language learning studies. Distance education students work alone without any guidance by either from their teachers or peers, and thus may feel de-motivated without such a lack of guidance. To eliminate this problem, their instructors should help them improve their motivation and thus feed their satisfaction by providing them enjoyable online learning activities so that they can take on responsibility. In return, this is expected to give rise to learner autonomy within a constructivist point of view.

Table 13: Results of regression analysis for variables predicting satisfaction

Variables	B	SE	β	t	p
Constant	.93	.59		.158	.88
Computer self-efficacy	.08	.11	.08	.68	.50
Self-directed learning	.12	.14	.11	.91	.37
Learner control	.10	.12	.09	.83	.41
Motivation	.38	.12	.33	3.129	.00
Online self-efficacy	.22	.12	.20	.184	.07

Notes: $R = .57$; $R^2 = .32$; $F(5, 83) = 7.43$; $p = .00$

4.4. Correlation Study for Academic Achievement

As can be seen in Table 14, there are positive relationships between academic achievement and computer self-efficacy ($r = .21, p < .01$), self-directed learning ($r = .40, p < .01$), learner control ($r = .24, p < .01$), motivation ($r = .24, p < .01$). However, the relation between online self-efficacy and academic achievement was too weak ($r = .03, p < .01$). The highest correlation occurred between self-directed learning and academic achievement ($r = .40, p < .01$). Correlation analysis indicated that there is a positive relation between all of the variables and academic achievement.

Table 14. Pearson Product-Moment correlations among measures for all subjects of the study

Variables	1	2	3	4	5	6
1. CSE	-	.51**	.38**	.12	.36**	.21
2. SDL		-	.47**	.23*	.28*	.40**
3. LC			-	.21	.22*	.24*
4. MO				-	.43**	.24*
5. OCSE					-	.03
6. AC						-

Notes: * $p < .05$; ** $p > .01$

Computer self-efficacy: CSE

Learner control: LC

Online communication self-efficacy: OCSE

Self-directed learning: SDL

Motivation: MO

Academic Achievement: LS

4.5. Regression analysis for academic achievement

Table 15 reports the results of multiple linear regression analysis for variables predicting academic achievement levels of distance education students. The multiple correlation coefficient was .46 revealing that nearly 22% of the variance in the sample can be accounted for the linear combination of computer self-efficacy, self-directed learning, learner control, motivation, and online self-efficacy.

Table 15. Results of regression analysis for variables predicting academic achievement

<i>Variables</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Constant	.1.36	.30		.4.59	.00
Computer self-efficacy ($R = .21$; $R^2 = .05$)	.16	.07	.21	1.96	.05
Self-directed learning ($R = .40$; $R^2 = .16$)	.33	.08	.40	4.00	.00
Learner control ($R = .24$; $R^2 = .06$)	.18	.08	.24	2.26	.03
Motivation ($R = .24$; $R^2 = .06$)	.20	.09	.24	2,26	.03
Online self-efficacy ($R = .03$; $R^2 = .00$)	.02	.83	.03	.26	.79

Notes: $R = .46$; $R^2 = .22$; $F(4, 33) p = .00$

Table 15 indicates that the relation between computer self-efficacy levels of distance education students and their academic achievement is meaningful ($R = .21, p < .05$). The results of regression analysis, however, indicate that computer self-efficacy is not a significant predictor of academic achievement for distance education students ($\beta = .21, p > .05$). As for self-directed learning, the table shows that the relation between academic achievement and self-directed learning is significantly meaningful ($R = .40, p < .05$). The results of the regression analysis show that self-directed learning is the most important predictor of academic achievement for distance education students ($\beta = 4.00, p > .05$). Table 15 indicates that the relation between learner control, motivation and academic achievement was also found to be meaningful ($R = .24, p < .05, R = .24, p < .05$, respectively). The results of the regression analysis demonstrate that learner control and motivation other important predictors of academic achievement ($\beta = 2.26, p > .05, \beta = 2.26, p > .05$, respectively). Finally, the relation between online self-efficacy and academic achievement was not found to be significant ($R = .03, p < .05$). Therefore, online self-efficacy is not one of the predictors of academic achievement among distance education students. As a result, depending on the results of the multiple regression analysis, self-directed learning is the most important predictor of success. The next two most important predictors of success in distance education are learner control and motivation.

5. DISCUSSION AND CONCLUSION

The purpose of this study was to investigate the relation between learning readiness and student satisfaction at higher education. The dependent variable in the study was student satisfaction and the independent variables were *computer self-efficacy, self-directed learning, learner control, motivation, and online self-efficacy*, which are the sub-dimensions of learner readiness. To this end, the sub-dimensions of learner readiness were investigated in the first place in order to understand the level of learner readiness of the participants. The results indicated that the participants have a high level of learner readiness and satisfaction.

In order to collect data, the OLRS developed by Hung et al. (2010) was used for the purpose of the study. This scale includes 18 items under five dimensions. These five sub-dimensions of learner readiness formed the independent variables of the study. These variables are: (a) *self-directed learning*, (b) *motivation for learning*, (c) *computer/internet self-efficacy*, (d) *learner control*, and (e) *online communication self-efficacy*.

Descriptive statistics pertaining to each of the items under the five sub-dimensions were run in the study. The results have indicated that distance education students think that their courses contribute to their educational and professional development. They also stated that they were satisfied with the level of interaction provided in online courses. With regard to computer and Internet self-efficacy, it was found that the participants could comfortably use the Internet effectively as well as online learning software, and finally feel confident in performing the basic function of office programs. The study found in terms of self-directed learning that the participants could carry out their own study plan and have high expectations from their learning. They can also set learning goals. In addition, as for motivation the participants were highly motivated in their online course. Finally, it was found that the participants view themselves highly proficient in terms of online communication self-efficacy.

In order to investigate the correlation between the dependent and independent variables of the study, correlation analysis was carried out. The results indicated an optimum level of correlation between and among the variables. Therefore, further statistical analyses could be carried out. The next analysis was to run a linear regression analysis in order to see the multiple influences of (a) *self-directed learning*, (b) *motivation for learning*, (c) *computer/internet self-efficacy*, (d) *learner control*, and (e) *online communication self-efficacy* on student

satisfaction. The obtained multiple correlation coefficient (.57) indicated that nearly 32% of the variance in the sample could be accounted for the linear combination of computer self-efficacy, self-directed learning, learner control, motivation, and online self-efficacy. In addition, t-test results for the significance of regression coefficients illustrated that motivation was the only significant predictor of satisfaction ($\beta = .33, p < .05$). It was once again confirmed in this study that motivation variable was found to be highly influential on student satisfaction.

The next important step in the study was to investigate predictors of academic achievement in the distance education program. A correlational analysis was conducted in order to see the relation between the variables of the study and the dependent variable, academic achievement. The results indicated that there was a positive correlation between the dependent and the independent variables. As a next step, a multiple regression analysis was carried out in order to determine the predictors of academic achievement. The results indicated that *self-directed learning* was the most important predictor of success in the distance education program. The next two important predictors were found to be *learner control* and *motivation*.

In terms of the relation between computer/Internet self-efficacy and satisfaction, the results of the study found a positive correlation and support the findings of Chu and Chu's (2010) study. However, although a positive correlation was found, the regression analysis indicated that computer/Internet self-efficacy is not one of the predictors of satisfaction. This finding is in line with the findings of Rodriguez Robles' study (2006).

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