

RELATIONSHIP BETWEEN SELF-DIRECTED LEARNING READINESS AND LEARNING STYLES OF SELECTED EDUCATION DEGREE COLLEGE STUDENTS

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Abstract

The main purpose of this study was to explore the relationship between the self-directed learning readiness and learning styles of education degree college students. The study adopted a descriptive research design and employed with a survey method. A total of 310 (male = 125, female = 185) students from 5 selected education degree colleges were selected as participants by using simple random sampling technique. As research instruments, Self-directed Learning Readiness Scale (SDLRS) developed by Fisher (2001) and Student Learning Style Scale (SLSS) developed by Grasha and Riechmann (1996) were used to assess self-directed learning readiness and learning styles of students. The results revealed that self-directed learning readiness of education degree college students was found to be satisfactory. In addition, significant differences were not found in self-directed learning readiness of education degree college students by their gender and college. Concerning learning styles, the results showed that the most dominant learning style of education degree college students was collaborative learning style. The results of chi-square test confirmed that there was a significant gender difference in the preferred learning styles of education college students ($\chi^2 = 21.163, p < 0.01$). It was also stated that there was a significant difference on the learning styles of students relating to their education colleges ($\chi^2 = 42.093, p < 0.01$). Finally, the association between the level of self-directed learning readiness and learning styles of education college students was confirmed by conducting a chi-square test ($\chi^2 = 52.53, p < 0.001$). Therefore, this study can provide some innovative ideas to the teachers and educators in developing the self-directed learning readiness and excellent learning styles of students as well as it provides the valuable suggestions and directions for their more effective teaching-learning processes.

Keywords: Self-directed Learning, Readiness, Learning Styles

Introduction

Education is one of the effective tools that help nations achieve their aims. The educators should do their best to bring up effective, productive, prospective, and qualified manpower. To improve education system, all citizens must try the best as much as possible. The teachers' role is also important for improving the education system and it is important for the teachers and prospective teachers to understand the nature of learning such as how learning takes place; how individual learns; which factors influence the learning process; and which factors effects academic achievement.

According to Karban (2015), learning is the process of acquiring new understanding, knowledge, behaviors, skills, values, attitudes, and preferences. Learning takes place when students interact with others and with environment by observing, taking, listening, discussing, writing and relating their own ideas and experiences with others. Over the past years, extensive research programs have been developed which investigate learning as it occurs in the context of higher education, using qualitative and quantitative research methods.

The importance of self-directed learning has been discussed over four decades. In 1975, Knowles predicted self-directed learning as a means of survival for individuals and the human race living in a new world. Several decades later, Guglielmino (2008) described self-directed learning

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as an effective mode of learning for individuals to possess in the information age since it encompasses the capacity to cope with constant changes.

Apart from its importance for survival and competition in general, self-directed learning readiness is also viewed as an effective mode of learning for college students in particular since college learning requires that learners be self-directed. College students need to be active in their own learning and able to conduct such learning at any time and any place (Cohen, 2012). Specifically, students in colleges of education, who will likely become teachers, need to possess the readiness for self-directed learning since knowledge in the field is constantly changing.

Like the readiness for self-directed learning, learners differ in their preferences to certain learning styles. It will be important for teachers to examine the variations in their students on the features of their learning styles because the information about learner's preference can help teachers become more sensitive to differences students bring to the classroom (Felder & Spurlin, 2005). In other words, the learning styles may have different effects on the student's academic achievement and thus, it is important for educational psychologists to know how learning styles influence pupils' academic achievement, and from there, to design possible means of intervention for promoting effective learning and academic achievement.

By investigating the self-directed learning readiness and learning style of students from education degree college, it will be helpful for students to identify and differentiate their own readiness for self-directed learning and their preferred learning style. Additionally, the findings in the present study will shed light on the current circumstances of students' self-directed learning readiness in education degree colleges in Myanmar. These findings will be able to add to the knowledge base of teacher educators and curriculum designers.

Purpose of the Study

The main aim of the study is to investigate the relationship between self-directed learning readiness and learning styles of education degree college students. The specific objectives are as follows:

- (1) To explore the state of self-directed learning readiness among education degree college students.
- (2) To inspect whether there is a significant difference in self-directed learning readiness of education degree college students by gender and college.
- (3) To find out the different learning styles of education degree college students,
- (4) To inspect whether there is a significant difference in learning styles of education degree college students by gender and college.
- (5) To examine whether there is an association between self-directed learning readiness and learning styles of education degree college students.

Definition of Key Terms

Self-directed Learning. Self-directed learning is learning that involves the learner taking primary responsibility for planning, implementing, and evaluating learning as well as accepting responsibility for one's thoughts and actions as a learner (Brockett & Hiemstra, 1991).

Self-directed Learning Readiness. Readiness in self-directed learning is the extent to which individuals perceive themselves to possess skills and attitudes frequently associated with self-directedness in learning (Brockett & Hiemstra, 1991).

Learning Style. Learning style is a stable and consistent mode of behaviour acquired by an individual, whenever he is engaged in learning activity (Rosalind, 2001).

Review of Related Literature

Self-directed Learning Readiness

There are several researchers who claimed that students need readiness in order to initiate and engage in self-directed learning. According to Merriam, et.al, (2007), readiness for self-directed learning includes self-discipline, autonomy, effective organization, effective communication, acceptance of constructive feedback, engagement in self-reflection, and self-evaluation. Self-directed learning (SDL) requires various skills and attitudes to ensure successful independent study. Therefore, students have to analyze their current situations, support networks, study habits, and family situations (Caffarella, 2006).

According to Fisher, King, & Tague (2001), the notion of self-directed learning readiness examines the degree at which the self-directed learner takes personal control and acknowledges the freedom that is associated with learning what the individual considers important. The degree of control is dependent on the learner's personality characteristics, attitudes, and abilities. Hence, self-directed learning readiness is considered to be highly individualized and representative along the continuum.

Learning Style

As stated by numerous researchers, the term "learning style" has been defined differently by different people. For some, it is congruent with cognitive style, and for others it denotes preferred approaches to learning based on modality strengths (Nel, 2008). Lawrence (1984) stated that the term learning style is used to incorporate four aspects of the person which include, cognitive style, patterns of attitudes and interests that affect an individual's focal point in a learning situation, a tendency to pursue situations attuned to one's own learning patterns, and an inclination to use certain learning strategies and evade others.

As individuals vary in their habit and views in certain conditions, so do their learning styles. It is realized that learning processes vary from person to person. Individuals do not learn in the same way. Each individual will adopt an approach to learning, with which they are most comfortable and in doing so leave behind the approaches which they are less comfortable. In addition, there may be several factors influencing on the student's learning style preference.

Design and Procedure

Sampling. The participants of this study were second year students who enrolled in Mandalay Education Degree College, Sagaing Education Degree College, Myitkyina Education Degree College, Kyine Tone Education Degree College, and Taunggyi Education Degree College during 2021-22 AY. A total of 310 students (125 males, 185 females) participated in this study. Simple random sampling technique was used to select the sample.

Research Method. The design and method used in this study were quantitative research design and descriptive survey method.

Self-directed Learning Readiness Scale (SDLRS). The key instrument used to explore the students' level of self-directed learning readiness was Self-directed Learning Readiness Scale (SDLRS) developed by Fisher (2001). This instrument involves three subscales with a total of 40

items and it is a 5-point Likert scale. The internal consistency for overall scale of SDLRS was 0.911.

Student Learning Style Scale (SLSS). The key instrument used to examine learning styles of education degree college students was the Student Learning Style Scale (SLSS), developed by Grasha and Riechmann (1996). It contains 60 items and it is a 5-point Likert scale. Six types of learning styles such as avoidant style, participative style, collaborative style, dependent style, independent style, and competitive style are included as subscales. The internal consistency for overall scale of SLSS was 0.825.

Data Collection. With the permission of administrative personal of selected education degree colleges, two questionnaires were administered to students in September, 2021. The participant students were also explained the purpose of the study and the importance of their participation as well as the assurance of confidentiality of their responses which would be used only for this research purpose. Then, the questionnaires were distributed and the participants were asked to complete all items in the questionnaires. On average, the participants spent about thirty minutes to complete all items. Then, all of the participants' responses were gathered.

Data Analysis and Findings

Self-directed Learning Readiness of Education Degree College Students

In terms of descriptive statistics, means and standard deviations of self-directed learning readiness were presented in Table 1.

Table 1 Descriptive Statistics of Self-directed Learning Readiness

Variable	N	Minimum	Maximum	Mean	Mean%	SD
Self-control	310	43	74	61.76	82.35%	5.09
Self-management	310	35	65	53.39	82.14%	5.49
Desire for Learning	310	34	56	47.64	79.4%	4.09
Self-directed Learning Readiness Total	310	112	195	162.79	81.39%	12.99

As shown in Table 1, the mean and standard deviation of self-directed learning readiness of education college students were 162.79 and 12.99. Since the sample mean (162.79) is greater than the theoretical mean (120) in overall self-directed learning readiness, it can be assumed that the self-directed learning readiness of education college students was satisfactory.

Concerning to the three subscales, the mean percentage of education college students' self-control was found to be highest (82.35%) and that of students' desire for learning was the lowest (79.4%). Thus, it can be concluded that education college students possessed high personal expectations and standards, high awareness to their own limitations and good responsibility and control over their own performance and learning process.

In order to examine whether there is a gender-related difference in the self-directed learning readiness of education college students, independent samples *t* test was conducted and the results were illustrated in Table 2.

Table 2 Independent Samples *t* test Results of Self-directed Learning Readiness by Gender

Variable	Gender	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Self-directed Learning Readiness Total	Male	125	162.82	14.81	3.146	.077
	Female	185	162.77	11.64		

According to Table 2, although a slight difference in the mean scores exists between male and female participants, the result of independent samples *t* test indicated that there was no significant difference between male and female students in total self-directed learning readiness. Thus, it can reasonably be concluded that gender related difference was not found in self-directed learning readiness of education degree college students.

Then, in order to investigate the difference in self-directed learning readiness of education college students by college, descriptive statistics was firstly used. The results were shown in Table 3.

Table 3 Descriptive Statistics of Self-directed Learning Readiness of Students by College

Variable	College	<i>N</i>	Mean	<i>SD</i>
Self-directed Learning Readiness	College 1	67	161.31	15.49
	College 2	43	163.63	12.95
	College 3	80	163.99	10.81
	College 4	69	163.22	11.34
	College 5	51	161.59	14.76

Regarding the education degree college, the mean scores of participants from College 1 was lowest (161.31) and those of participants from College 3 was the highest (163.99) among five education degree colleges (see Table 3). In order to investigate whether these differences were statistically significant or not, one-way ANOVA was calculated and the results were shown in Table 4.

Table 4 ANOVA Result of Self-directed Learning Readiness of Students by College

Variable	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>	
Self-directed Learning Readiness	Between Group	377.243	4	94.311	.556	.695
	Within Group	51737.544	305	169.631		
	Total	52114.787	309			

As it can be seen in Table 4, the obtained value $F(4, 305) = 0.556$ ($p > 0.05$) for self-directed learning readiness was not significantly different according to colleges. In other words, it intended that self-directed learning readiness of students did not differ by their education degree colleges.

Learning Styles of Education Degree College Students

The frequency and percentage of education college students related to their respective learning styles were shown in Table 5.

Table 5 Frequency and Percentage Distribution of Education College Students in Different Learning Styles

Learning Style	Frequency	Percentage
Independent	21	6.8 %
Avoidant	4	1.3 %
Collaborative	142	45.8 %
Dependent	29	9.4 %
Competitive	4	1.3 %
Participative	110	35.5 %

According to Table 5, it was clearly observed that the learning style of most education college students was found to be collaborative (45.8%). Thus, it can be interpreted that most students in this study preferred to share their ideas and opinions with each other, discuss in small groups rather than individual projects, work with others, and also interact with their teachers.

It can also be found out that the percentage of students having participative learning styles was the second largest (35.5%) among the others and therefore, it can be assumed that many education college students were eager to actively participate in the class activities and they also preferred active learning including discussions and presentations to the traditional teacher-centered approaches.

On the other hand, the percentage of students was found to be lowest (1.3%) under the avoidant and competitive learning styles. It can be concluded that there were very few students in education colleges who were either uninterested in learning content and attending classes or with the aim of having better performance than the other students in the classroom.

These must be due to the fact that the curriculum of education degree colleges placed the emphasis on the learner-centered activities and thus, it provided special opportunity for the students to become the collaborative learners.

Then, a Pearson chi-square test was conducted to address whether there was the relationship between the gender and their preferred learning style. Since 80% of the expected frequencies were above 5 and there were not less than 1, Pearson chi-square test was used. The results were presented in the following Table 6.

Table 6 Chi-square Test Result of Learning Styles of Education College Students by Gender

Learning Style	Male		Female		Chi-square	p
	N	%	N	%		
Independent	12	3.9%	9	2.9%	21.163**	0.001
Avoidant	4	1.3%	0	0%		
Collaborative	49	15.8%	93	30%		
Dependent	19	6.1%	10	3.2%		
Competitive	0	0%	4	1.3%		
Participative	41	13.2%	69	22.3%		

Note. ** $p < 0.01$, Cramer's $V = 0.261$

As it can be seen in Table 6, there was a significant gender difference in the preferred learning styles of education college students, $\chi^2 (5, N = 310) = 21.163, p < 0.01$. Thus, it can be concluded that there was a significant relationship between the gender and their learning style preference. Moreover, since Cramer's V for this association is 0.261, the effect size can be considered to be moderate.

Next, a Pearson chi-square test was conducted again to observe whether there was a significant difference in the learning styles of participant students related to their education colleges. Since 80% of the expected frequencies were above 5 and there were not less than 1, Pearson chi-square test was used. The results were presented in the following Table 7.

Table 7 Chi-square Test Result of Learning Styles of Students by College

	Independent	Avoidant	Collaborative	Dependent	Competitive	Participative	Chi-square	p
College 1	10	3	21	14	1	18	42.093**	0.004
	3.2%	1%	6.8%	4.5%	0.3%	5.8%		
College 2	1	0	25	1	0	16		
	0.3%	0%	8%	0.3%	0%	5.2%		
College 3	3	0	41	5	1	30		
	1%	0%	13.2%	1.6%	0.3%	9.7%		
College 4	2	0	35	4	1	27		
	0.6%	0%	11.3%	1.3%	0.3%	8.7%		
College 5	5	1	20	5	1	19		
	1.6%	0.3%	6.5%	1.6%	0.3%	6.1%		

Note. ** $p < 0.01$, Cramer's $V = 0.183$

From the results of chi-square test, it can clearly be observed that there was a significant relationship between the learning styles of students and education colleges, $\chi^2 (20, N = 310) = 42.093$ at 0.01 level (see Table 7). Therefore, it can be interpreted that College 3 possessed the greater percentage of students having either of the collaborative and participative learning styles than the other four education colleges.

Cramer's V which indicates the strength of association between two variables is 0.183 and thus the effect size is considered to be typical according to Cohen (1988). Thus, it can be concluded that although the result is statistically significant, the learning styles of education college students and their attending colleges are only weakly associated.

Association between Self-directed Learning Readiness and Learning Styles

In order to explore the association between the self-directed learning readiness and learning styles of education college students, the level of self-directed learning readiness for participant students were assigned first. Therefore, the students in this study were classified into three groups such as high, moderate and low. Based on the descriptive statistics of self-directed learning readiness as already stated in Table 1, the mean and standard deviation were 162.79 and 12.99.

Hence, students with scores above (+1) standard deviation from sample mean were identified as the high group and students with scores below (- 1) standard deviation from sample mean were considered as the low group. The rest of students whose scores were between (+1) and (- 1) standard deviation were considered to be moderate group. Then, 17.7% of participant students were fallen in high group, 69.4% were in moderate group, and 12.4% were in the low group of self-directed learning readiness. The frequency and percentage of students in different level groups were shown in Table 8.

Table 8 Frequency and Percentage of Education College Students in Different Levels of Self-directed Learning Readiness

Levels of Self-directed Learning Readiness	Frequency	Percentage
High	55	18 %
Moderate	215	69 %
Low	40	13 %

To enable the investigation of the association between the level of self-directed learning readiness and learning styles of education college students, a Pearson chi-square test was conducted. Since 80% of the expected frequencies were above 5 and there were not less than 1, Pearson chi-square test was used. The results were presented in the following Table 9.

Table 9 Association between Self-directed Learning Readiness and Learning Styles

		Independent	Avoidant	Collaborative	Dependent	Competitive	Participative	Chi-square	p
High	N	7	0	25	2	0	21	52.53***	0.000
	%	2.3%	0.0%	8.1%	0.6%	0.0%	6.8%		
Moderate	N	6	0	102	25	4	78		
	%	1.9%	0.0%	32.9%	8.1%	1.3%	25.2%		
Low	N	8	4	15	2	0	11		
	%	2.6%	1.3%	4.8%	0.6%	0.0%	3.5%		

Note. ***p < 0.001, Cramer’s V = 0.261

Based on the results of chi-square test, it can be observed that there was a significant relationship between the level of self-directed learning readiness and learning styles of education college students, $\chi^2 (10, N = 310) = 52.53$ at 0.001 level. Moreover, since Cramer’s V for this association is 0.261, the effect size can be considered to be typical. In other words, the level of self-directed learning readiness and learning style of education college students are moderately associated with each other. Therefore, it can be concluded that the association between the level of self-directed learning readiness and learning styles of education college students was clear.

Discussions

As conceded by Tudor (1996), students play active and participatory roles in the learning process while teachers act as facilitators to motivate learners and help them acquire strategies needed for self-directed learning. It is within this changing of perspective on the roles of teachers and learners that the concept of self-directed learning (SDL) began to gain popularity.

Moreover, Kolb (1984) suggested that a high degree of self-directedness may be linked to particular learning styles. Kolb theorized that learners integrate their preferred style of learning to produce a high level of self-direction. Successful self-directed learners are flexible and adaptable and are able to choose across learning styles, utilizing the one that best meets the demands of a particular learning project and/or learning.

From the findings of this study, it provided an implication for curriculum designers and material developers to incorporate self-directed learning approaches to syllabi, textbooks, tasks and activities to help the dependent learners to find a starting point to grasp autonomous and self-directed learning. In addition, collaboration between students such as giving and receiving peer feedback can be a crucial aspect of interaction that facilitates the development of self-directed learning.

In some educational institutions, self-directed learning can be encouraged through open-learning programs, individualized study options, non-traditional courses and other innovative programs (Esterhuizen, 2007). Hence, it is recommended to implement such incorporation of innovative methods in Myanmar Education Degree Colleges for the students to become more self-directed in their learning situations.

Furthermore, by making students aware of their specific learning style, teachers can encourage them to realize the importance of appropriate learning styles for different disciplines or subjects and that such styles may hopefully be changed to suit changing learning situations (Fatt, 2000). Therefore, it is recommended to the students to become aware of their preferred learning styles.

Moreover, the findings of this study asserted that the education degree college students had a common preference in their styles of learning. Specifically, the majority of education degree college students were found to have collaborative learning style. Due to the fact that students respond better to instructional methods that match their learning style, integrating different learning styles in the classroom environment can enhance the benefits for everyone (Kahtz & Kling, 1999). Therefore, a suggestion would be provided to the teachers that they should try to know their students' learning styles so as to deliver their teaching more effectively and efficiently.

Conclusion

Since this study spotlighted the current situations of students' self-directed learning readiness and learning styles in education degree colleges of Myanmar, the findings of this study can be used as the knowledge base for teacher educators and curriculum designers. This study could be beneficial to the students in order to become aware of their own readiness for self-directed learning and their preferred learning style. Additionally, the findings of this study could also help teachers (trainers) by reminding them to adopt teaching methods that meet the learning styles of their students. Therefore, this study could hopefully help to improve the teaching-learning processes of education college students and teachers in Myanmar to some extent.

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