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Self-directed Learning Readiness Among Web-based Learners

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ABSTRACT

The purpose of this research is to explore the practice of self-directed learning in web-based learning environments. The main objectives of research are: (1) to determine whether students following UNITAR and UiTM web-based learning models are ready as self-directed learners, (2) to establish the relationship between level of readiness to students' academic achievement. The research employed the quantitative methodology. Data were collected using the Self-Directed Learning Readiness Scale (SDLRS). SDLRS is developed and designed to measure the level of readiness for self-directed learning among adult learners. The data set comprised of 109 students responding to the SDLRS instrument. From the 109 students, 53 students are from UNITAR and 56 students are from UiTM.

The research revealed that Malaysian web-based learners are below average in their level of readiness for self-directed learning. Both groups from UiTM and UNITAR have a mean score of 203 and 189 respectively. However, UiTM's web-based distance learners have a higher SDLRS score than UNITAR's web-based distance learners. Test of significance shows that there is a significant different between the means of the two groups. The research also revealed that there is a strong and positive relationship between level of readiness and academic achievement. The test of significance shows that the relationship is significant. The research concluded that there is a need to provide students' with knowledge and skills to be more ready for self-directed learning. Further research should explore these areas within different web-based distance learning models.

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Introduction

The issue of self-directed learning creates new challenging requirements for the development of new technologies for learning. The development of modern technology has enabled educationalist the ability to develop self-directed learners and provide self-directed learning (SDL) environments. It is a fact that successful learners and workers are often self-directed. Self-directed learning is important for web-based distance education. According to Knowles (1975), self-directed learning is related to learners' initiative and achievement. Therefore it is important to investigate if the students following the two web-based learning models are ready for self-directed learning.

Guglielmino's work focused in the area of self-directed learning readiness. Based on her study, she says that a highly self-directed learner will exhibit these characteristics, that is: Openness to Learning Opportunities, Self-Concept as an Effective Learner, Initiative and Independence in Learning, Informed Acceptance of Responsibility for One's Own Learning, Love of Learning, Creativity, Positive Orientation to the Future and the Ability to Use Basic Study and Problem Solving Skills as Self-Directed Learning.

Past Research on Self-Directed Learning Readiness

Beitler (2000) says that individuals who score low in SDLRS usually prefer very structured learning options such as lectures in traditional classroom settings. Those individuals with average SDLRS scores are likely to be successful in more independent situations, but at the same time are not fully comfortable with handling the entire process of identifying their learning needs or planning their learning and then implementing them. In contrast, those with high SDLRS scores usually prefer to determine their own learning needs, plan their learning and then implement their learning plan. However, this does not mean that individuals with high SDLRS scores never choose to be in a structured learning situation.

Reports by Guglielmino say that the average score for adults is 214 and the standard deviation is 25.59. Beitler (2000) reports a high score of SDLRS among Japanese Managers at General Motors Japan that is 243. Beitler also mentions that his MBA students in the part time program in University of North Carolina at Greensboro have a score of 235. Whereas Hiemstra (1988), believes that most individuals have self-directed tendencies or readiness, however some do not. Not all adults are at a state of readiness for full self-directed learning. This is due to the fact that the school system that we have, has trained learners to be dependent rather than independent. Thus, most adults are not prepared for self-directed learning (Knowles, 1970).

Research Questions

This study explored three main questions:

1. What is the level of self-directed learning readiness among Malaysian web-based learners?
2. Is there a relationship between self-directed learning readiness and academic achievement?
3. Is there a relationship between self-directed learning readiness and selected students' characteristics?

Research Methodology

To measure the level of self-directed learning readiness, the Self-Directed Learning Readiness Scale (SDLRS) was adopted. It was administered to 109 students from UiTM and UNITAR.

Findings

1. The level of self-directed learning readiness among Malaysian web-based learners

The researcher uses the Self-Directed Learning Readiness Scale or SDLRS to measure the level of readiness of self-directed learning. SDLRS was designed by Lucy Guglielmino to measure the level of readiness among adults. There are eight components in the SDLRS scale. The first component is Openness to Learning. Both universities recorded an average score in this component. A majority (87.5%) of students from UiTM are at an average level of Openness to Learning. Likewise, in UNITAR about 86.8% of the respondents are at an average level of Openness to Learning.

In the component of Self-concept as an Effective Learner, both universities recorded an average score. The mean for UiTM is 34.7 and the mean for UNITAR is 33.0. A majority of UiTM students (62.5%) are of average level of Self-concept as an Effective Learner. UNITAR students' scored slightly higher that is 69.8%.

Findings illustrate, that the majority of UiTM's students (83.9%) are of average level in the component of Initiative and Independence in Learning. The mean for UiTM is 33.9 and the mean for UNITAR is 30.9. UNITAR students recorded a much lower percentage of average, that is 54.7. Interestingly, 41.5% of UNITAR students recorded a low level of Initiative and Independence in Learning.

For the component of Informed Acceptance of Responsibility for One's Own Learning, the mean for UiTM is 28.3 and the mean for UNITAR is 27.3.

Findings also illustrate that majority of UNITAR students (86.8%) are of average level in the component of Informed Acceptance of Responsibility for One's Own Learning. In comparison, UiTM students recorded a much lower percentage of average, that is 67.9%. However, 32.1% of UiTM students recorded a high score in this component.

In the component for Love of Learning, the mean for UiTM is 19.1 and the mean for UNITAR is 17.4. Results show that more than half of UiTM's students (58.9%) recorded a high score in the component of Love of Learning. UNITAR students recorded a much lower percentage of average, that is 39.6%.

Students from both universities scored an average level in Creativity. A majority of UiTM students (71.4%) recorded a high score in Creativity. Likewise, 67.9% of UNITAR students recorded slightly above average score. The mean for UiTM is 14.0, and the mean for UNITAR is 13.4.

Half of the students from UiTM scored a high level in Positive Orientation to the Future. In contrast, only 39.6% of UNITAR students recorded a high score. The mean for UiTM is 26.7%, and the mean for UNITAR is 24.1.

Fifty percent of UiTM students scored high in the Ability to Use Basic Study and Problem Solving Skills. Whereas, the remainder 50% of the UiTM's students scored an average level. For UNITAR students a majority of them (64.2%) scored average level in this component. The mean for UiTM is 21.4 and the mean for UNITAR is 19.8.

The UiTM's web-based distance learners' recorded the mean for SDLRS which is 203. The minimum score is 170 and the maximum score is 266. The standard of deviation is 23.2. UNITAR sample recorded the mean for SDLRS as 189. The minimum score is 121 and the maximum score is 261. The standard deviation is 25. These data can be seen in Table 1.

Table 1: Level of Self-Directed Learning Readiness Scale and Universities, 2002

Level of Readiness	UiTM - % (n = 56)	UNITAR - % (n = 53)	Overall - % (n = 109)
High Level (252-290)	5.4	1.9	3.7
Above Average (227-251)	7.1	3.8	5.5
Average (207-226)	25	15.1	20.2
Below Average (177-206)	48.3	56.6	53.2
Low (56-176)	12.5	22.6	17.4
Mean	203	189	197
Standard Deviation	23	25	25

Table 2: Self-Directed Learning Readiness Scale According to Selected Items and Universities, 2002

Level of Readiness	UiTM - % (n = 56)	UNITAR - % (n = 53)	Overall - % (n = 109)
Openness to Learning	7.1	7.5	7.3
Opportunities	87.5	86.8	87.2
High Level (30-40)	5.4	5.7	5.5
Average Level (19-29)	24.35	24.11	24.24
Low Level (8-18)	4.03	4.03	4.01
Mean			
Standard Deviation			
Self-Concept as an Effective Learner			
High Level (38-50)	30.4	22.6	26.6
Average Level (27-37)	62.5	69.8	66.1
Low Level (10-26)	7.1	7.5	7.3
Mean			
Standard Deviation			
Initiative and Independence in Learning			
High Level (38-50)	5.4	3.8	4.6
Average Level (27-37)	83.9	54.7	69.7
Low Level (10-26)	10.7	41.5	25.7
Mean	33.9	30.9	32.4
Standard Deviation	4.4	4.8	4.9
Informed Acceptance of Responsibility for One's Own learning			
High Level (30-40)	32.1	11.3	2.2
Average Level (19-29)	67.9	86.8	77.1
Low Level (8-18)	0	1.9	0.9
Mean	28.3	26.2	27.3
Standard Deviation	3.9	3.7	3.9
Love of Learning			
High Level (19-25)	58.9	22.6	51.4
Average Level (12-18)	37.5	69.8	42.2
Low Level (5-11)	3.6	7.5	6.4
Mean	19.1	17.4	18.2
Standard Deviation	3.4	3.9	3.7
Creativity			
High Level (16-20)	23.2	22.6	22.9
Average Level (10-15)	71.4	67.9	69.7
Low Level (4-9)	5.4	9.4	7.3
Mean	14.0	13.4	13.8
Standard Deviation	2.7	2.7	2.7

continued

Table 2 – *continued*

Positive Orientation to the Future			
High Level (26-35)	57.1	39.6	48.6
Average Level (16-25)	42.9	52.8	47.7
Low Level (7-15)	0	7.5	3.7
Mean	26.7	24.1	25.4
Standard Deviation	3.9	5.2	4.7
The Ability to Use Basic Study and Problem Solving Skills			
High Level (22-30)	50	30.2	40.4
Average Level (13-21)	50	64.2	56.9
Low Level (6-12)	0	5.7	2.8
Mean	21.4	19.8	20.6
Standard Deviation	3.2	3.5	3.4

2. Relationship between self-directed learning readiness and academic achievement

UiTM students have better academic achievements compared to students in UNITAR. The scores for student's achievement shows an overall mean of 2.6 points. The UiTM students (2.7 points) show a slightly better grade than UNITAR students (2.4 points). The lowest grade among the students comes from UNITAR with 1.4 points. The highest grade is 3.81 points, this is also from UNITAR.

Twenty nine percent of the UiTM students are high achievers with the CGPA of 3.00 and above. In contrast, only 9.3% of the UNITAR respondents are high achievers. In terms of average academic achievements, the majority of students are from UNITAR with a 82.2% followed by UiTM students with a 69%.

Table 3: Distribution of Students According to Academic Achievement and Universities, 2002

Characteristics	UiTM - % (n =126)	UNITAR - % (n = 118)
Achievement (CGPA)		
< 2.00 (Low)	1.6	8.5
2.00 –299 (Average)	69	82.2
3.00 (High)	29.4	9.3
Mean	2.7	2.4
Standard Deviation	0.4	0.4

For UiTM, the correlation results show that Openness to Learning, Initiative and Independence in Learning, Love of Learning and Positive Orientation to the Future are significantly related to achievement.

There is a positive relationship between Openness to Learning and achievement as the r is 0.35, which is moderately weak with the *p* value of 0.01.

There is a positive relationship between Love of Learning and achievement as the r is 0.36, which is moderately weak with the *p* value of 0.01.

There is a positive relationship between Positive Orientation to the Future and achievement as the r is 0.32, which is moderately weak with the *p* value of 0.02.

For UNITAR, the correlation results show that Openness to Learning, Self-concept as an Effective Learner, Love of Learning, and the Ability to Use Basic Study and Problem Solving Skills are significantly related to achievement.

There is a positive relationship between Openness to Learning and achievement as the r is 0.18, which is a very low correlation with the *p* value of 0.01.

There is a positive relationship between Self-concept as an Effective Learner and achievement as the r is 0.43, which is moderately strong with the *p* value of 0.00.

There is a positive relationship between the Ability to Use Basic Study and Problem Solving Skills and achievement as the r is 0.27, which is a low correlation with the *p* value of 0.02.

Table 4: Relationship between SDLRS and Academic Achievement and Universities, 2002

Variable in SDLRS	University	r	p
Openness to Learning	UiTM	0.35	0.01*
	UNITAR	0.18	0.01*
Self-Concept as an Effective Learner	UiTM	0.16	0.25
	UNITAR	0.43	0.00*
Initiative and Independence in Learning	UiTM	0.48	0.00*
	UNITAR	-0.03	0.85
Informed Acceptance of Responsibility for one	UiTM	0.15	0.27
One's Own Learning	UNITAR	0.33	0.02
Love of Learning	UiTM	0.36	0.01*
	UNITAR	0.36	0.01*
Creativity	UiTM	0.12	0.37
	UNITAR	0.36	0.01*
Positive Orientation to the Future	UiTM	0.32	0.02*
	UNITAR	0.35	0.01*
The Ability to Use Basic Study and	UiTM	0.16	0.24
Problem Solving Skills	UNITAR	0.27	0.05*0

* Significant at the level of 0.05

3. Relationship between self-directed learning readiness and selected students' characteristics

The overall correlation between level of readiness and age is moderately strong with the r of 0.38. The relationship is significant as the *p* value is less than 0.005. For UiTM the r = 0.32, *p* = 0.02. UNITAR data shows that the r = 0.27 and *p* = 0.05. The overall correlation between level of readiness and gender is negative. The relationship is insignificant as the *p* value is less than 0.19.

The overall correlation between level of readiness and working experience is moderately strong with the r of 0.24. The relationship is significant as the *p* value is less than 0.005, that is 0.004. For UiTM r = 0.18, *p* = 0.20. Similarly, UNITAR has a r value of 0.26 and the *p* value is 0.20.

Table 5: Relationship between Self-directed Learning Readiness and Selected Students' Characteristics

Characteristics	University	r	*p*
Age	UiTM	0.32	0.02*
	UNITAR	0.27	0.05*
Gender	UiTM	-0.01	0.93
	UNITAR	-0.21	0.13
Working Experience	UiTM	0.18	0.20
	UNITAR	0.26	0.20
Ownership of PC	UiTM	-0.13	0.33
	UNITAR	-0.05	0.72
Computer Skills Internet	UiTM	-0.22	0.12
	UNITAR	-0.11	0.48
Computer Skills Email	UiTM	0.17	0.21
	UNITAR	0.16	0.25
Computer Skills Assignment	UiTM	0.05	0.74
	UNITAR	0.05	0.75

Conclusion

The results of the findings show that the UiTM web-based distance learners mean for readiness was 203 and UNITAR mean for readiness was 189. The score indicated that the levels of readiness of UiTM and UNITAR students were below average. Although, there were a few students with high levels of readiness, the number was small. The answer would be "no" to the first question. Malaysian web-based distance learners will need much support to improve the

present levels of readiness. The study implied that the Malaysian web-based distance learners are unable to learn effectively as they are not ready for self-directed learning. They also lack the ability to identify and achieve their learning goals. They lack the skills to understand, monitor, manage, evaluate, and reflect their own learning. This explains the fact that web-based distance learners are average in their academic achievement. Therefore, students need more help and support to be ready for self-directed learning.

The main question refers to the relationships between academic achievement and levels of readiness, and between academic achievement and the levels of facilitation. It can be concluded that there was a significant relationship between academic achievement and the levels of readiness. The relationship between academic achievement and the levels of facilitations were not significant. In addition, it can be concluded that this study has established significant relationships between variables such as levels of readiness with age, and levels of facilitation and computer skills.

It can also be concluded that factors such as personal characteristics, the levels of readiness of the individual and the levels of facilitation of self-directed learning in the learning model significantly contribute to students' achievement. For web-based distance learning models in Malaysia, it is found that adults with working experience have better achievement than those of the younger age.

The research shows that distance education environment is suitable for working adults who are more matured and more self-directed than younger students. This might be one of the reasons why students in UiTM have better academic achievement than UNITAR students.

Recommendations for the Improvement of the Level of Readiness for Self-Directed Learning

Students need continuous support from instructors and the education institution to improve their levels of readiness. Among the recommendations are:

Firstly, readiness for self-directed learning must be made as an important agenda in all universities. Students' levels of readiness must be measured during the early stages of university learning. They must be informed of their scores. Assistance must be made to help them improve their level of readiness.

Second, setting up counseling units to motivate and advise students' with low academic achievement in web-based distance learning environment.

Third, plan, design, and develop orientation courses for web-based learning and lifelong learning. Orientation on how to adapt to the web-based distance learning environment is necessary. Examples of this orientation would be induction courses and computer competency training. In addition, courses such as study skills, computer skills courses, writing skills, creative thinking,

writing academic papers, and motivational courses should be provided for web-based distance learners.

Recommendations for Future Research

It is recommended that future research be conducted in these areas. They are:

Firstly, in order to gain a deeper understanding and examination of the levels of readiness for self-directed learning and the capability of the web-based learning model to facilitate self-directed learning, the triangulation method should be employed. The triangulation method should include participant observation and interviews. Secondly, the research should be repeated. The sample size should be larger. The number of universities involved in this study should be increased. In an effort to gain a deeper awareness and insight into the realm of web-based distance learning environments, all universities in Malaysia that offer web-based distance education programs should be studied.

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