

A comparative study on the relationship between Self-directed Learning and Academic Achievement among Malaysian and Turkish undergraduates

Badli Esham Ahmad, Mustafa Ozturk, Mohd Amli Abdullah@Baharum, Faizah Abdul Majid

Universiti Teknologi MARA Cawangan Pahang
badli@pahang.uitm.edu.my

Kastamonu University, Turkey
ozturk@kastamonu.edu.tr

Universiti Teknologi MARA Cawangan Pahang
amli_baharum@pahang.uitm.edu.my

Fakulti Pendidikan, Universiti Teknologi MARA
Faiza404@salam.edu.my

Abstract: Self-directed Learning (SDL) is highly valued in the industry and is considered to be a valuable criterion for prospective employers, hence, it is pertinent for university students to develop and demonstrate their ability to be self-directed from their study years. This in turn would prepare them for the upcoming employment as the future workplace is more focused on the Industrial Revolution 4.0 This exploratory study aimed at identifying the level of SDL readiness among Malaysia and Turkey participants as well as comparing any SDL similarities between the two sets of participants. The study also looked at the relationship between SDL and academic achievement of the participants. Adapted version of the SDLRS was used in identifying the level of SDL readiness of the participants. Data was collected from one hundred and six participants from Malaysian and Turkish public universities and was analyzed using SPSS version 24. The findings from the study indicated that a majority of the participants are in the average or below average category of SDL readiness. It was also found that Malaysian and Turkish participants have similar SDL readiness level. Only a small percentage of the participants are highly self-directed. The study also found that SDL has a no significant relationship with academic achievement of the participants. This would indicate the importance of developing high SDL. It can be concluded that a majority of the participants in the study are not highly self-directed and a few contributing factors, cultural factor being one of them, are suggested behind the low scores. Suggestions were also given on how to develop SDL among the participants in order to prepare them for better assimilation into the industry.

Keywords: SDL, Self-directed Learning, Malay, Turkish, Academic Achievement

Introduction

Ability to be self-directed is highly valued in the industry (McCartney et al, 2016) where professionals are expected to be fully self-directed on the job. It is considered to be a valuable criterion for prospective employers (Zander et al, 2012 in McCartney et al, 2016), hence it is pertinent for every student to develop and demonstrate his or her ability to be self-directed (McCartney et al 2016).

Implementation of SDL in training programs for employees has been around for a few years and has yielded good results for the employers (Zainal, 2005). The future direction of the workplace is more focused on the Industrial Revolution 4.0 where internet plays an important role. Workers are expected to be knowledgeable and perform with minimum supervision and training. It is essential for current learners to ready themselves for the future.

Nowadays, the implementation of problem-based learning (PBL) is widespread across various disciplines of study and self-directed learning (SDL) ability is considered to be a pertinent element. Learners are expected to be able to scour for information and knowledge on their own without much help from others. One study among Malaysian students found that despite displaying some

characteristics of SDL, the learners have limited skills on planning, reflecting and evaluating (Tan & Arshad, 2013).

Research questions for the study

The study is guided by the following research questions:

1. What are the levels of SDL among the undergraduates
2. Is there a significant relationship between SDL and academic achievement among the undergraduates?
3. Are there any similarities between the Malay and Turkish undergraduates in relation to SDL?

Statement of problem

In the current scenario in the industry with the emergence of IR4.0, employees are expected to perform with minimum supervision. They have to learn the skills and adapt to the work environment on their own in order to maintain competitiveness. Hence, the ability to be self-directed is pertinent and needs to be identified and developed during study years so as to prepare future employees with the necessary readiness for the industry.

Literature Review

SDL is not a new field of study and was considered to have reached a plateau in the early part of the 21st century (Brockett, 2000). However, the emergence of internet and the propulsion of e-learning content, including mobile learning, have revived the interest in SDL. It is considered to be an integral component in adult learning (Garrison, 1997) and the expansion of adult learning programs and the increasing number of adult learners (Hsu and Shuie, 2005) has cemented its importance.

Various definitions have been put forward in describing SDL.

self-directed learning (SDL) was seen as students taking primary responsibility and control of their learning process, including setting goals, finding resources, determining strategies, and evaluating outcomes (Pilling-McCormick & Garrison, 2007 p 14).

Past research on SDL has focused on a variety of areas and research has been conducted in the areas of management, tertiary education, and government. Current focus on SDL has been in the medical and nursing fields. Quite a large number of researches in the past five years have been focusing on the SDL ability of learners in these fields. The focus has shifted from adult learners to undergraduates as well.

Studies on the relationship between SDL and academic achievement have yielded mixed results. Gebru, Ghiyasvandian, Mohammadi (2015) found that there is no correlation between academic achievement and learning style and that mature students are more self-directed than their respondents who were young adults. Similarly, there were mixed findings among younger adults on the relationship between their SDL readiness and academic achievement, as found by Hendricks Carson (2012). However, Hendrick Carson noted that age was not really a factor in influencing SDL readiness in her studies (Hendrick Carson, 2012). In contrast, Avdal (2013) in a study on Turkish nursing students found that SDL has a positive correlation with academic achievement. The study suggests that SDL is important in the development of the nursing students. This view is shared by Kan'an and Osman (2015) who found that SDL is an important element in a student's academic success and suggest that factors contributing to the development of SDL should be looked into.

What can be digested from the above is that SDL is seen as a pertinent element in learning and it is an important tool for undergraduates to have in equipping themselves for the industry upon graduation.

Methodology

The study is an exploratory study with the aim of identifying the SDL readiness of the Malay and Turkish undergraduates studying in public universities. A comparative analysis was done between the Malay and Turkish undergraduates' SDL readiness. In addition, the study attempts to investigate the relationship between the SDL readiness of the undergraduates and their academic achievement.

The study employed the quantitative approach and employed the Self-directed Learning Readiness Scale (SDLRS) (Guglielmino, 1977) and fifty Malay and fifty Turkish undergraduates pursuing various degree courses were selected to participate in this study. The Malay undergraduates were given the SDLRS questionnaire with accompanying Malay translation while the Turkish students were given the Turkish version of the SDLRS. Despite being over four decades, the questionnaire is still one of the most widely used instruments to determine SDL readiness (Slater & Cusick, 2017). Data analysis included identifying the levels of SDL among the undergraduates, the relationship between SDL and academic achievement as well as looking at the similarities and differences between Turkish and Malaysian learners.

FINDINGS

The discussion is based on answering the research questions set for the study. They are as follows:

1. What are the levels of SDL among the undergraduates?
2. Is there a significant relationship between SDL and academic achievement among the undergraduates?
3. Are there any similarities between the Malay and Turkish undergraduates in relation to SDL?

The total number of respondents from the Turkish university are 58 respondents and 48 respondents from a Malaysian university. The composition from Turkish university is 11 males and 47 females and from Malaysia's university 9 males and 39 females. This can be referred to in Table 1. Both universities had a large number of female students as respondents.

	TURKEY		MALAYSIA	
	Frequency	Percent	Frequency	Percent
Male	11	19.0	9	18.8
Female	47	81.0	39	81.3
Total	58	100.0	48	100.0

Table 1: Gender comparison between Turkey and Malaysia University Student

Based on Table 2, Most of CGPA of Turkish university were at 2.50 to 2.87 that consist of 33 students. While Malaysian university respondents' CGPA are from 3.25 to 3.62 that consist of 17 students.

	TURKEY		MALAYSIA	
	Frequency	Percent	Frequency	Percent

1.80 - 2.49	12	20.7	4	8.3
2.50 - 2.87	33	56.9	6	12.5
2.88 - 3.24	12	20.7	15	31.3
3.25 - 3.62	1	1.7	17	35.4
3.63 - 4.00	0	0	6	12.5
Total	58	100.0	48	100.0

Table 2: CGPA comparison between Turkey and Malaysia Universities in the study

Research Question 1: What are the levels of SDL among the undergraduates?

Table 3 below shows the comparison of mean scores for the items in the SDLRS by both Malaysian and Turkish universities in the study.

ITEM	MEAN	
	TURKEY	M'SIA
I am always excited to learn as long as I am alive.	4.4483	3.9375
I know what I want to learn.	4.1724	3.7083
When there is something that I don't understand, I stay away from it.	2.3448	2.5000
If I want to learn something, I can find ways to learn it.	4.2759	3.7708
I love to learn.	4.5862	3.9583
It takes a while for me to get started on new projects.	2.8103	3.6042
I expect the teacher to tell me what to do in the classroom all the time.	3.7586	3.5417
I believe that thinking about who you are, where you are and where you are going should be a part of every person's education.	4.5862	3.6250
I don't perform well if I work alone.	1.8103	2.6875
If I discover a need for information that I don't have, I know where to get it.	4.0172	3.5625
I can learn things on my own better than most people.	3.8103	3.2917

Even if I have a great idea I can't seem to develop a plan for making it work.	2.2069	3.0000
In a learning experience, I prefer to take part in deciding what will be learned & how.	4.0000	3.7917
Difficult study doesn't bother me if I am interested in something.	4.2241	4.0625
No one but me is truly responsible for what I learn.	4.1207	4.0625
I can tell whether I am learning something well or not.	4.2931	4.1250
There are so many things that I want to learn that I wish there were more hours in a day.	3.4655	3.8958
If there is something that I have decided to learn I can find time for it no matter how busy I am.	4.0000	3.6042
Understanding what I read is a problem for me.	2.2931	3.1875
If I don't learn it is not my fault.	2.6552	1.9375
I know when I need to learn more about something.	4.1379	3.7500
If I can understand something well enough to get a good grade on a test, it doesn't bother me if I still have questions about it.	3.1379	3.4792
I think libraries are boring places.	2.1034	3.0000
The people I admire most are always learning new things.	4.4310	4.0208
I can think of many different ways to learn a new topic.	3.9828	3.3333
I try to relate what I am learning to my long term goals.	4.1552	3.7500
I am capable of learning for myself almost anything I need to know.	3.3103	3.3958
I really enjoy tracking down the answer to a question.	3.9138	3.9583
I don't like dealing with questions where there is not one right answer.	3.0345	3.9375
I have a lot of curiosity about things.	3.8793	4.0208
I'll be glad when I am finished learning.	2.3966	4.5000
I am not interested in learning as some other people seem to be.	2.2759	2.7917

I don't have any problem with basic study skills.	3.6552	3.3542
I like to try new things even if I am not sure how they will turn out.	4.3276	4.1458
I don't like it when people who really know what they are doing point out mistakes that I am making.	2.6034	3.4792
I am good at thinking of unusual ways to do things.	3.6552	3.1875
I like to think about the future.	4.1207	4.2500
I am better than most people are at trying to find out the things I need to know.	3.8448	3.2083
I think of problems as challenges not stopsigns.	3.9483	3.9583
I can make myself do what I think I should.	3.9483	4.2292
I am happy with the way I investigate problems.	3.8793	3.9583
I become a leader in group learning situations.	3.3448	2.8750
I enjoy discussing ideas.	4.2241	3.6250
I don't like challenging learning situations.	2.4138	2.8542
I have a strong desire to learn new things.	4.0862	3.8750
The more I learn the more exciting the world becomes.	4.1552	3.9792
Learning is fun.	4.3621	3.8750
It's better to stick with the learning methods that we know will work instead of always trying new ones.	2.6379	3.2292
I want to learn more so I can keep growing as a person.	4.3966	4.2083
I am responsible for my learning and no one else is.	3.9310	4.3542
Learning how to learn is important to me.	4.4138	4.2292
I will never be too old to learn new things.	4.0862	4.2083
Constant learning is a bore.	2.1724	3.4375
Learning is a tool for life.	4.3966	3.9375

I learn several new things on my own each year.	4.1897	3.8333
Learning doesn't make any difference in my life.	1.7069	1.9583
I am an effective learner in the classroom and on my own.	3.8103	2.9791
Learners are leaders.	3.9138	3.7708

Table 3: Mean comparison between SDLRS scores between Turkey and Malaysia Universities in the study

According to Table 3, the mean scores for Turkish university respondents are higher than the scores for Malaysian respondents. 25 items were scored above 4.0 for Turkish university respondents as compared to only 13 items that score above 4.0 for Malaysian university respondents.

There are two items which have the highest means for Turkish university respondents, "I love to learn" and "I believe that thinking about who you are, where you are and where you are going should be a part of every person's education" with a score of 4.5862 respectively. While the lowest score for Turkey university respondents are for items "I don't perform well if I work alone" that scored 1.8103 and "Learning doesn't make any difference in my life" that scored 1.7069. There is a relative connection between the highest and the lowest item score as it shows that learning is one of important factors for Turkish university respondents to improve themselves and they can independently use learning to do their work.

The highest means scores for Malaysian university respondents are for items "I'll be glad when I am finished learning" that scored 4.5000 and "I am responsible for my learning and no one else is" that scored 4.3542. On the other hand, the lowest scores for Malaysian university respondents are "If I don't learn it is not my fault" that scored 1.9375, and item "Learning doesn't make any difference in my life" that scored 1.9583. Malaysian university respondents' scores reflect that they are more satisfied with their learning and believe that learning can change their lives.

SDLRS-A score	Readiness for self-directed learning
58-201	Below average
202-226	Average
227-290	Above average

Table 4: Scores for SDLRS

	TURKEY		MALAYSIA	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
below average	18	31.0	20	41.7
average	34	58.6	21	43.8
above average	6	10.3	7	14.6

Total	58	100.0	48	100.0
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Table 5: Score of SDLRS between Turkey and Malaysia University respondents

Based on the result in Table 5, eighteen Turkish university respondents and twenty Malaysian university respondents are in the below average score. This result shows that these respondents have a higher preference to a very structured learning options such as lecture and traditional classroom settings. While thirty-four Turkish university respondents and twenty one Malaysian university respondents are more likely to be successful in more independent situations, but are not fully comfortable with handling the entire process of identifying their learning needs, planning and implementing the learning. Lastly, six of Turkish university respondents and seven Malaysian university respondents are above the average which illustrate that they prefer to determine their learning needs, plan and implementation of their own learning. This does not mean that they will never choose to be in a structured learning situation. They may well choose traditional courses or workshops as a part of a learning plan.

Research Question 2: Is there a significant relationship between SDL and academic achievement among the undergraduates?

A few hypotheses were set prior to data collection and the findings from the data set were tested against the set hypothesis. The first hypothesis was to determine if there are any relationships between the respondents' Cumulative Grade Point Average (CGPA) and self-directed learning readiness.

H_1 *There is a relationship between CGPA and readiness for self-directed learning*

H_0 *There is no relationship between CGPA and readiness for self-directed learning*

The findings revealed that there was a very weak relationship between CGPA and SDLRS ($r=0.195$, $p<0.01$). Hence, the research hypothesis is rejected, and null hypothesis is accepted. It appears that CGPA and SDL do not have any relationship for the Malay respondents.

		CGPA	total_mean
CGPA	Pearson Correlation	1	.195
	Sig. (2-tailed)		.184
	N	48	48
total_mean	Pearson Correlation	.195	1
	Sig. (2-tailed)	.184	
	N	48	48

Figure 1: Correlations between Malay respondents CGPA and Self-directed Learning Readiness

Similarly, the findings for the Turkish respondents, as seen in Figure 2, also revealed that there was a very weak relationship between CGPA and SDL ($r=-0.184$, $p<0.01$), hence, the research hypothesis is rejected, and null hypothesis is accepted.

		CG PA	total_mea n
CGPA	Pearson	1	-.184

	Correlation		
	Sig. (2-tailed)		.166
	N	58	58
total_mean	Pearson Correlation	-	1
	Sig. (2-tailed)	.184	
	N	58	58

Figure 2: Correlations between Turkish respondents' CGPA and Self-directed Learning Readiness

The second hypothesis set for the study is to determine if there is any relationship between gender and self-directed learning. The hypothesis is set as:

H_1 There is a relationship between gender and readiness for self-directed learning

H_0 There is no relationship between gender and readiness for self-directed learning

		total_mean	GENDER
total_mean	Pearson Correlation	1	.010
	Sig. (2-tailed)		.949
	N	48	48
GENDER	Pearson Correlation	.010	1
	Sig. (2-tailed)	.949	
	N	48	48

Figure 3: Correlations between gender and Self-directed learning for Malay respondents

The findings of the study revealed that there was a very weak relationship between gender and SDL ($r=0.10$, $p<0.01$). for the Malay respondents as seen from Figure 3. Therefore, the research hypothesis is rejected, and null hypothesis is accepted. Similar findings were also seen among the Turkish respondents as seen from the Figure 4 below.

		total_mean	GENDER
total_mean	Pearson Correlation	1	-.153
	Sig. (2-tailed)		.251
	N	58	58
GENDER	Pearson Correlation	-.153	1
	Sig. (2-tailed)	.251	
	N	58	58

Figure 4: Correlations between gender and Self-directed learning for Turkish respondents

It can be concluded that the data from this study would suggest that gender and academic achievement do not yield any significant relationship with self-directed learning.

Are there any similarities between the Malay and Turkish undergraduates in relation to SDL?

Based on the findings in Table 5, Turkish university respondents who scored average or below average scores on the SDLRS are more than eighty percent from the sample studied (89.6). Similarly, Malaysian university students also scored more than eighty percent in the same bracket (85.5). This would indicate that both sets of university students are not very self-directed. On the other hand, almost similar percentage was found for both Malaysian and Turkish university students in the above average category (14.6 and 10.3 respectively). It can be concluded from this study that the self-directed learning readiness for respondents of both universities is in the average and below average category, while not more than fifteen percent of the respondents are self-directed. However, the findings are limited to this group of respondents but may provide a glimpse into the level of self-directed learning readiness of university students in Malaysia and Turkey.

Discussion

The study found that more than two thirds of the respondents are in the average and below average categories, indicating that they are not very self-directed, hence, preference is more towards a very structured learning environment. Cultural influences could be a contributing factor to this. Western learners are notably more outspoken, independent as compared to non-Western students (Choy, Sedhu, Liew, Lee, Malenee & Anuar, 2015), hence are more likely to more self-directed. Although the findings from this study did not include the influence of culture, various studies have shown that culture may influence self-directed learning readiness of learners (Badli & Faizah, 2010). In addition, this factor needs to be taken into consideration if student-centred learning environment is to be implemented (Choy, Sedhu, Liew, Lee, Malenee & Anuar, 2015).

In order to develop self-directed learning, tertiary institutions must be able to adapt and change in accordance with the development of the industry and embrace the current IR 4.0. Work environment demands employees who are able to work with minimum supervision, learn on their own with minimal training and constantly improving themselves. It falls into the responsibility of the tertiary institutions to provide the necessary skills for the students to become life-long learners and be a part of the ever-demanding workforce. Various factors need to be taken into consideration and developing university students to be self-directed is one of them. Implementing student-centred learning environment, the use of online tools and flexible curricula could be the keys to turning the students into life-long learners.

Conclusion

The study found that both sets of university students (Malaysia and Turkey) have average or below average SDL readiness. There is a no positive relationship between SDL and academic achievement. It can be concluded from the findings that Malaysian and Turkish students have similar levels of SDL readiness.

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