ARE NEWLY UNDERGRADUATES SELF-DIRECTED, RESILIENT, AND SKILLFUL DURING ONLINE LEARNING?

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ABSTRACT

First year university undergraduates' academic experience have always been an interesting topic of study. The main objective of the study was to seek a better understanding on the level of self-directed, resilience, and online study skills among first year undergraduates toward online distance learning during the COVID-19 pandemic. A total of 159 students who were selected through the purposive sampling method participated in the online survey. They answered two sets of instruments namely the Learner Personality Profile and Online Learning Skill that consisted of 60 items and 30 items respectively. Both instruments were measured based on a five-point Likert scales. Learner Personality Profile scales were measured based on (1) Never; (2) Rarely; (3) Sometimes; (4) Very Often, and (5) Always responses, while Online Learning Skills were measured based on (1) Strongly Disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, and (5) Strongly Agree responses. Findings of the study reported that female students' level of Self-directed scores (mean=3.06) were higher compared to male students' scores (mean=2.92) based on a three-level range of mean scores (low=1.00 to 2.33; average=2.34 to 3.67; and high=3.68 to 5.00). Female students' level of online study skills scores (mean=3.90) were also reported to be higher compared to male students' scores (mean=3.61). However, both male and female students reported average level of resilience scores (mean=3.21 and mean=3.33) respectively. The correlation analyses reported no significant relationships between self-directed, resilience, and online study skill. The multiple-regression analyses reported that the self-directed variable did not act as a mediating factor in the relationship between resilience and online study skills. In conclusion, the resilience factor among first year male and female undergraduates seemed to be a concerned issue that need to be addressed and further investigated by the university academic management.

1. INTRODUCTION

The global impact of the COVID-19 pandemic has been profound, particularly on the higher education systems. Universities swiftly adapted their teaching methods, shifting to online platforms to ensure safety. Online learning gained prominence as an alternative, offering flexibility and accessibility. Ensuring universal access to quality materials and active participation emerged as key concerns for universities. Students, particularly first-year undergraduates, grappled with adjustment issues, including emotional stress and academic struggles (Azahari et al., 2018; Azlan, et al., 2020; Gurbuz, 2014; Sad, Goktas, and Bayrak, 2014).

The drastic change of the traditional mode of tertiary learning has directly affected Malaysian newly undergraduates who are registering first time for their university studies. The sudden shift from traditional mode of learning to online learning disrupted their ability to function effectively within the university environment (Shazad et al., (2020). The COVID-19 pandemic reshaped education globally and underscored the importance of flexibility, support, and resilience within educational systems.

2. PROBLEM STATEMENT

Due to the COVID-19 pandemic, Malaysian universities indefinitely shut campuses. Classes transitioned online, including registration and communication via platforms like Google Meet and Zoom. This shift

pressured students particularly those could not afford high specification smart phones, laptops or computers for online learning classes. They become more demotivated when they could not get access to online classes due poor internet connections from their own homes (Clark and Mayer, 2016; Kunjukunju, Yusof, and Ahmad, 2020)).

Ahmad and Reddy (2020) heightened stress among new undergraduates struggling to proficiently engage in online classes. Studies reported that the newly enrolled undergraduates suffer from reduced academic and social connections, affecting their purpose (Amantha and Al-Samarraie, 2019; Thomas, 2012). Online learning, conducted remotely, demands independent studying from home. Distractions due to poor home environments and familial interactions hinder learning (Albritton, 2003; Holcomb, King, and Brown, 2004; Sarker, 2020; Wang and Newlin, 2000). Self-directed is crucial for academic success and retention, frequently mentioned in online education studies (Moore and Kearsley, 2005; Thomas 2012; Atan and Rosli, 2019). Terrell and Dringus (1999) proposed self-directed students to be independent and successful. Contradictory outcomes on achievement and persistence in distance learning exist (Gibson, 2003, and Hussein, 2017).

3. LITERATURE REVIEW

Online learning has become a new approach in the university settings around the world since the onset of COVID-19 pandemic. This method has been widely used to cater educational needs in the various parts of the world prior to COVID-19 pandemic. This approach is gaining its popularity among universities and is expected to be the main approach in teaching and learning for many years to come (Ana, et al., 2020, and Cater, Michel, and Varela, 2012). The sudden transition in the mode of learning in the university system has taken many students, parents, and lecturers by surprise. Majority of students were taken aback and have impacted their sense of learning direction and self-resilience.

Ngampornchai and Adams, (2016), and Serebryakova (2016) reported numerous studies on human stress and lack of self-direction among students. Students reported having difficulty adjusting to new way of learning and feeling loss. Thomas (2012), and Amantha and Al-Samarraie (2019) reported countless number of studies has been carried out to understand more about the human stress and lack of direction as a factor that influence success of students under difficult condition.

Proficiency in computer use is vital for online learning (Maaruf and Teng, 2020; Chung, Subramaniam and Dass, 2020). A Cameroonian study revealed two-thirds of new undergraduates lacked familiarity with online learning, with 17% lacking computer ownership. Many African university students only use basic computer functions, leading to computer literacy and online learning anxiety (Uleanya and Ke Yu, 2019). A study conducted by Sandybayev (2020) reported that 70% of the total respondents of the first-year students experienced lack of coping ability and a sense of loss when it comes to online learning.

Self-directed can influence what we learn, how we learn and when we choose to learn (Bhuasiri, et al., 2012 and Schunk & Usher, 2012). Research reported that motivated learners are more likely to undertake challenging activities, be actively engaged, enjoy and adopt a deep approach to learning and exhibit enhanced performance, persistence and creativity (Ryan & Deci, 2000b).

It is undeniable that online learning is enjoyable to do for those who know how to adapt with it. Self-directed is a contributing factor in making students to enjoy online learning and is an 'engine' for learning as described by Paris and Turner (1994). Students with high level of self-direction are likely to take challenge and willing to learn new things that would lead to academic success as compared to students with low level of self-direction (Ryan and Deci, 2000; Sandybayev, 2020). According to Bekele (2020) and Shazad et al., (2020), there were reciprocal relationships between learning and self-directed and have been countlessly researched for traditional education setting.

Studies by Al-Rahmi et al., (2018) and Tinto (1975) reported that lack of self-directed was one of the factors contributing to higher dropout rates. In fact, the dropout rates were higher in online education setting than tradition setting (Harnett, 2016; Palanisamy and Balogun, 2017; Safiyeh, 2015). It was found that students could perform better academically outside traditional classroom setting when the online teaching or delivery is just as effective as face to face learning (Safiyeh, 2015). Carter, Michel, and Varela, (2012), and Deci and Flaste (1996) reported that online learners could also be intrigue by their peers' performances during the online learning activities (Shroff, Vogel, and Coombes, 2008).

Enriching online learning is crucial for fostering self-direction and resilience in first-year undergraduates. Effective online instructors need technological fluency and strong communication skills to encourage students' self-direction (Easton, 2003). However, insufficient tech skills can disrupt learning, affecting resilience and causing academic stress (Darabi, Sikorski, and Harvey, 2006; Easton, 2003).

4. RESEARCH OBJECTIVES

This research explored the relationships between online study skills, self-directed, and resilience constructs among first year undergraduates in one public university during the COVID-19 pandemic. The primary goal was to comprehend newly undergraduate students' viewpoints on their only study skills, self-direction and resilience during the online learning. The study established three key objectives as follows:
  i. To measure the level of self-directed, resilience, and online study skills among first year undergraduates.
 ii. To measure the relationships between self-directed, resilience and online study skills among first year undergraduates.
iii. To measure the mediating effects of self-directed towards resilience and online study skills among first year undergraduates.

5. RESEARCH METHOD

This section outlines the research methodology employed in this study.

5.1 Data Collection

Data were collected through online survey from full-time newly undergraduates from one public university in the east coast of Malaysia. These undergraduates were at their fourth week of the first semester (September 2020 intake). Two sets of online questionnaires (Online Learning Skill and Learner Personality Profile) formulated into the google form formats were distributed to identified students via email and WhatsApp. Students were given one week to answer the two sets of online questionnaires. The returned questionnaires were analysed using the SPSS software.

5.2 Participants

A total of 159 newly undergraduates participated in this study. They were chosen based on purposive sampling method whereby the researcher specifically chose newly undergraduates that are currently undergoing a degree course in counselling. These students were residing in all fourteen states in Malaysia. A total number of 24 (15%) males and 165 (85%) females responded to this study. They comprised of 149 (94.0%) Malays, 3 (2%) Chinese, and 7 (4.0%) other ethnic groups.

5.3 Instruments

Two sets of instruments were used in this study. The first instrument, Learner Personality Profile measured nine personality traits. It consisted of 60 items measured on a five-point Likert scales, (1) never; (2) rarely; (3) sometimes; (4) very often, and (5) always. However, for the purpose of this study, only two traits were chosen i.e., Self-directed and Resilience (Table 2.0). The second instrument, Online Learning Skill measured three constructs. It consisted of 30 items measured on a five-point Likert scales, (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree. The Cronbach's alpha reliability values for both instruments were reported at 0.93 and 0.95 respectively. In the Online Learning Skill instrument, only the Study Skill construct was used. Table 1 below listed the one construct under the Online Learning Skill instrument and two constructs under the Learner Personality Profile.

Table 1. Instrument and constructs chosen in the study

Instrument	Online Learning Skill	Learner Personality Profile	
Construct	Study Skill*	Self-Directed*	
		Resilience*	

6. FINDINGS

This section reported the findings of the study based on the three research objectives as mentioned earlier.

6.1 Study Skills

Table 2 summarizes the respondents' Learning Skill. Respondents were required to indicate their level of Study Skill frequency listed in the questionnaire. They reported their frequency in Learning Skill on a five-point Likert scales from (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. In this study, only the Study Skill construct was being studied. The mean scores reported on the Study Skill construct for male students was (mean=3.61) and for female students was (mean=3.61) respectively. In summary, female students reported a higher level of mean score on the Study Skill constructs as compared to male students.

Table 2. Respondents' learning skills level

Learning Skill	Gender	N	Mean Score	Std. Dev.	Level
Study Skill	Male	24	3.61	.665	Average
	Female	135	3.88	.421	High

The interpretation of the mean scores (1.00 – 2.33 = Low, 2.34 – 3.67 = Average, 3.68 – 5.00 = High) were adapted from Landell (2013).

Based on participants' responses, the data were analyzed and the mean score of each Learning Skill constructs are shown in the Table 3. It presents the summary of means for the Learning Skills constructs by making comparison between the mean score of male and female students. It was evident that most items have a mean score ranging between 3.61 and 3.94. An independent-samples t-test conducted found a significance difference in Study Skills Skill construct between male and female students, t (157) = -2.597, p=.010.

Table 3. Comparison of mean scores between male and female students

Learning Skill Constructs	Gender	Mean	t	df	Sig. (2-tailed)	Results
Study Skill	Male	3.6157	-2.597	157	.010	Significant difference
	Female	3.8836				
	Female	3.9443				

6.2 Personality

Table 4 summarizes respondents' two personality constructs measured. They are the Self-directed and Resilience. The respondents were required to indicate their level of personality frequency listed in the questionnaire. They indicated their frequency in personality on a five-point Likert scales from (1) Never; (2) Rarely; (3) Sometimes; (4) Very often; (5) Always. The interpretation of the mean score was adapted from Landell (2013) on the frequency of Learning Skill as shown in Table 4 above.

Table 4. Respondents' personality level

Personality Constructs	Gender	N	Mean	Std. Deviation	Level
Self-directed	Male	24	2.920	.4593	Average
	Female	135	3.063	.5845	Average
Resilience	Male	24	3.213	.4337	Average
	Female	135	3.332	.4772	Average

Based on participants responses, data were analyzed and the mean score of each personality constructs are shown in Table 4. It presents the summary of means for the personality constructs by making comparison between the mean score of male and female students. It was evident that personality on most construct have an average mean score. The mean score for each construct was between 2.186 and 3.436. The means and standard deviations of personality constructs were relatively similar for male and female students. However, on average, female students reported a higher mean score than male students.

Table 5. Comparison between the mean score of male and female students

Personality Constructs	Gender	t	df	Sig. (2-tailed)	Results
Self-directed	Male	-3.233	157	.001	Significant difference
	Female				
Resilience	Male	-1.141	157	.256	No Significant difference
	Female				

Table 5 presents the summary of t-test for the personality constructs by making comparison between the mean score of male and female students. An independent-samples t-test was conducted to evaluate the hypothesis that there is no significant difference in personality and constructs between group of men and women were found. The test was significant for self-directed t (158) = -1.141, p = .001. For other personality constructs, the results found no significant difference.

6.3 Correlation between Learning Skills and Personality

Table 6. Correlation between learning skill and personality

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Learning Skill	-													
Study Skill	0.84**	-												
Personality	0,50**	0.36**	0.42**	0.57**	-									
Self-directed	0.45**	0.38**	0.35**	0.52**	0.69**	-								
Resilience	0.46**	0.35**	0.37**	0.52**	0.86**	0.50**	0.55**	-0.14	0.59**	0.75**	0.78**	0.71**	0.67**	-

**Significance at level 0.01
*Significance at level 0.05

Table 6 presents the summary of correlation between Learning Skills and Personality constructs. The correlation between Learning Skill and Personality scores was found to be statistically significant, r (157) = .50, p < .01, two-tailed. For Learning Skill, the results suggest that 6 out of 6 correlations were statistically significant and were greater or equal to r (157) = +.35, p < .01, two-tailed. For personality, the results suggest that 36 out of 45 correlations were statistically significant and were greater or equal to r (157) = +.35, p< .05, two-tailed. In general, the results suggest that students who scored high on the personality construct tends to rate themselves as self-directed and resilience.

6.4 Self-directed as a Mediation Effect between Study Skill and Resilience

Figure 1 illustrated the conceptual mediation model to investigate whether the self-directed construct has an effect towards the relationship between Study Skill and Resilience. Self-directed and Study Skill acted the independent variables and Resilience acted as the dependent variable. A multiple regression analysis conducted reported a negative result (p=0.783) whereby the Self-directed construct did not carry an effect on the relationship between Study Skills and Resilience. Therefore, it could be concluded that Self-directed is not a mediating factor in the relationship between Study Skills and Resilience.
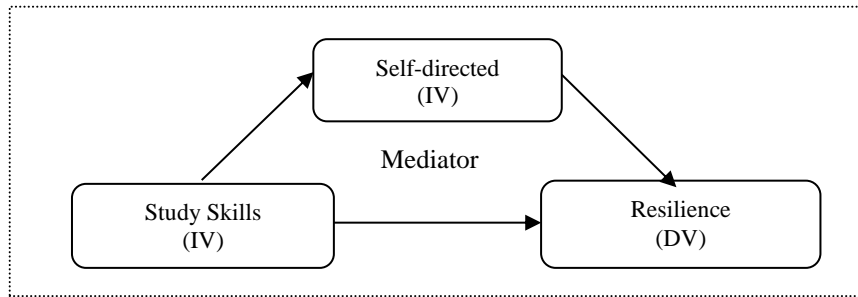

Figure 1. Conceptual Mediation Model

Table 7 shows the result analysis using multiple regression to investigate whether Self-directed construct could be a mediating factor towards the relationship between Study Skill and Resilience. The result p=.783 showed that there was no interaction between Self-directed construct and Study Skill that would affect the Resilience.

Table 7. Analysis using multiple regression

Resilience	Coefficient	t	p	R2	Adjusted R2	F
Model with mediation effect						
Constant	5.06	1.18	.240	0.10	0.08	5.61
Study Skill	-0.92	-0.82	.413			
Self-directed	-0.15	-0.12	.909			
Interaction	0.09	0.28	.783			

7. DISCUSSION

This study addresses three key research questions. It reveals that female students exhibit greater self-direction in online learning than males. Resilience issues arose among male students during remote study, attributed to factors like lack of direction, stress, fatigue, low confidence, and inadequate online skills. Existing research links home learning environment, connectivity, tutor-student dynamics, subject readiness, content, technical support, and students' personalities to resilience levels (Ahmed and Reddy, 2020; Ana et al., 2020).

The study reported a significant relationship between self-directed and resilience. Female students reported higher level of self-directed as compared to male students when conducting their online studies from home. However, both male and female students reported low level of resilience when comes to online learning. Despite a significant relationship reported between self-directed and resilience among male and female students, self-directed was not a mediating factor that contributed towards the relationship between online study skill and resilience among first year undergraduates.

This study offers five key recommendations. Firstly, universities should engage and support students online learning. Secondly, assessing students' preparedness for online learning is vital. Many newcomers lacked readiness due to the abrupt transition caused by the pandemic. Thirdly, university counselors play a crucial role in providing guidance and intervention for students struggling with direction and resilience during remote learning. Students should seek counselling if their resilience is compromised. Fourthly, the student learning

center can enhance the learning experience, especially for those struggling with online study skill. Lastly, online lecturers or tutors play a pivotal role. Universities must ensure they are proficient in online learning system, possess strong communication and coaching skills, and are a student-oriented. These five recommendations are crucial for delivering quality and student-centric online education to newcomers adapting to remote learning from home.

8. CONCLUSION

The research findings offered insights into the states of online study skills, self-direction, and resilience among these students. Remarkably, the study discovered that self-direction did directly impact students' resilience during online learning from home. Furthermore, the self-directed variable did not act as a mediator between online study skills and resilience. The study emphasizes the need for further exploration of resilience levels among undergraduates engaged in remote learning, regardless of gender. These findings contribute to the fields of counselling, educational psychology, and higher education.

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