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Readiness for Self-Directed Learning among Pakistani Students: A Comparison of Traditional and Virtual Classrooms

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Abstract

The researchers, in this study, attempted to find out whether a significant statistical difference exists in the level of self-directed learning readiness (SDLR) of students in traditional and virtual (on line) classroom environment. A quantitative approach was used to achieve the objectives of the study. The population for this piece of research consisted of master of technology education students of sessions 2017-2019 and 2018-2020, enrolled in the Institute of Education and Research, University of the Punjab, Lahore, Pakistan. Total population was used as sample due a limited and manageable population through census survey. A modified version of self-directed learning instrument (SDLI) developed by Cheng, Kuo, Lin, and Lee-Hsieh (2009) was used to measure the self-directed learning readiness level of the respondents. Data was analyzed through SPSS 23. It was determined that a significant statistical difference exists in the levels of SDLR of students being educated in traditional and virtual classroom environment.

Key Words: Online Learning, Self-Directed Learning Readiness (SDLR), Technology Education, Students.

Introduction

To achieve educational goals efficiently, it is indispensable to have a deeper understanding of factors that impact students' learning. Such understanding enables us to make better decisions about available resources, their use, and efficiency. This saves time and effort in the long run while simultaneously streamlining the education process. Self-directed learning readiness (SDLR) is one of the many phenomena that have an effect on the teaching-learning process (Knowles, 1975), the most prominent contributor of this idea. He defined it as a process in which individuals take independent or aided initiative to identify their learning requirements, along with setting aims and objectives, recognizing resources, selecting and applying relevant strategies for learning, and judging the outcomes of their own learning (Shen, Chen & Hu, 2014).In essence, self-directed learning (SDL) has two requirements; a process in which learners actively assess and evaluate themselves, and an intrinsically motivated individual capable of independent learning(Chen, Hsu, &Hsieh, 2012).

The COVID-19 pandemic has created the largest disruption of education systems in history (United Nations, 2020). Keeping in view the evolving academic practices and the sudden shift in the educational norms, it is prudent that stakeholders determine the best practice for distance education. It is crucial for developing

countries like Pakistan to stay ahead of the curve and devise options to ensure the survival of the academic framework. As teaching-learning is moving to the online realm, effective use of resources need to be a priority.

There is evidence that suggests that there is that SDLR is affected by internal and external factors. In this study, the researchers attempted to determine the SDLR of technology education students. Moreover, the researchers also endeavored to compare the SDLR for virtual and traditional classroom environments in an attempt to establish the most conductive environment for learning. The findings of this study may lead to better decision-making capabilities. Stakeholders may be able to determine the best use of resources to achieve the educational goals

Literature Review

Huang (2008) claimed that internal and external factors may be responsible for variance in SDLR in students. Environmental factors were top of the list for external factors. There have been numerous studies to expand our understanding of SDLR and the many possible factors impacting it.

A study to gain insight into the phenomenon of SDLR was conducted by Alotaibi in 2016. The results of his study indicate that SDLR was significantly influenced by students' perceptions of their learning environment. However, the analysis of internal and external factors of SDLR and student academic achievement by Ramli, Muljono, Afendi (2018) contradicted Alotaibi's findings. This study was conducted in Tadulako University Medical Undergraduate Program, demonstrates that the characteristics of the students and the internal factors significantly affect the SDLR whereas; the external factors have no effect on the SDLR and the students' academic achievement.

SDLR was found to have a significant association with demographic variables and some external factors by Slater, Cusick, Louie(2017). They determined that female students showed a higher readiness for self-directed learning. Similarly, the researchers determined that SDLR was positively correlated to age and level of previous education. It is apparent from the literature that there is quite a gap to be filled. There is not much concrete evidence to ascertain whether SDLR levels are actually related to environment. The present study seeks to examine the readiness for self-directed learning in virtual classroom environment, and if it significantly differs from traditional classrooms.

Material and Methods

The researchers used an ex post facto design to answer the research questions posed above. Cross-sectional surveys were used to gather data from the two groups of interest (students in traditional and virtual classrooms. The population for this study consisted of the students of master of technology education from the sessions 2017-2019 and 2018-2020, studying in the Institute of Education and Research, the University of the Punjab, Lahore, Pakistan. There were 43students in the 2017-2019 class while 2018-2020 class contained 33students. The sample was selected through the census survey. The class 0f 2017-2019 was taught entirely in the traditional classrooms, whereas, class of 2018-2020 started in traditional environment, and

continued their final year courses via online classes held over the zoom application. Both these classes were taught similar courses. Moreover, the researchers gathered data from final semester students.

The standardized instrument developed by Cheng, Kuo, Lin, and Lee-Hsieh's (2010) self-directed learning instrument (SDLI) was adapted for this study. It was modified by Hussain, Sabar, and Jabeen (2019)for use in Pakistan. Its validity and reliability (α = .83) was also established. The questionnaire consisted of 25 statements distributed into four subscales; learning motivation, planning and implementing, self-monitoring, and interpersonal communication. A physical, pen-and-paper version was used for collecting data from the session 2017-2019, and an online, digital version was filled by the respondents of 2018-2020 Session.

Data was collected from final semester students for both groups. The researchers distributed the survey among 2017-2019 students after their class while, 2018-2020 students filled an online questionnaire due to closure of educational institutes. The researchers made use of the statistical package for social sciences (SPSS) version 23to analyze data.

Results and Discussion

Table 1
Level of SDLR for students in traditional classroom environment

	Min	**Max**	**M**	**SD**
Learning Motivation	24	34	28.39	2.80
Planning and Implementing	20	35	28.93	3.81
Self-Monitoring	15	25	21.53	2.18
Interpersonal Communication	21	30	25.44	2.72
SDLR	90	120	104.30	8.25

Note: *N* = 43

The above table illustrates the scores of technology education in traditional classroom environment. The data shows that traditional classroom students displayed a high readiness for self-directed learning (*M* = 104.30, *SD*= 8.25).They also scored high on all the sub-scales; LM (*M* = 28.39, *SD*=2.80), PI (*M* = 28.93, *SD*= 3.81), SM (*M* =21.53, *SD*= 2.18), and IC (*M* =25.44, *SD*= 2.72).

Table 2

Level of SDLR for students in virtual classroom environment

	Min	**Max**	**M**	**SD**
Learning Motivation	21	32	28.27	2.68
Planning and Implementing	19	35	26.82	3.37
Self-Monitoring	12	24	19.21	2.63
Interpersonal Communication	19	30	24.30	2.73
SDLR	78	118	98.61	9.06

Note: *N* = 33

The above table illustrates the scores of technology education in virtual classroom environment. The data shows that traditional classroom students displayed a moderately high readiness for self-directed learning (*M* = 98.61, *SD*= 9.06). They also scored moderately high on all the sub-scales; LM (*M* = 28.27, *SD*= 2.68), PI (*M* = 26.82, *SD*= 3.37), SM (*M* = 19.21, *SD*= 2.63), and IC (*M* = 24.30, *SD*= 2.73).

Table 3
Difference in the level of SDLR for students in traditional and virtual classroom environments

	t-value	**Df**	**P**
Learning Motivation	.19	74	.85
Planning and Implementing	2.52	74	.01
Self-Monitoring	4.20	74	.00
Interpersonal Communication	1.80	74	.07
SDLR	2.86	74	.01

Table 3 shows the summary of independent sample *t*-test. The results indicate that there is a significant difference in the level of SDLR of students in traditional and virtual classroom environments (t (74) = 2.86, p = .01). Moreover, a significant difference was observed in the subscales PI (t (74) = 2.52, p = .01), and SM (t (74) = 4.20, p > .001). While, no difference was observed for the subscales; LM (t (74) = .19, p = .85), and IC (t (74) = 1.80, p = .07).

Discussion

The present study was conducted in an effort to determine the SDLR of students in traditional and virtual classroom environment. The researchers also tried to determine whether any difference exists in readiness for self-directed learning in the two aforementioned environments. The population of the study was master of technology education students of session 2017-2019 and 2018-2020, Institute of Education and Research, University of the Punjab, Lahore, Pakistan. The session 2017-2019 completed their course of study in a purely traditional environment while, their 2018-2020 counterparts moved abruptly from traditional to online lessons due to safety concerns during the COVID-19 pandemic. The results of this study show that there is a significant difference in the level of SDLR of traditional and online classroom. The subjects of the study also showed a difference in the scores for the subscales ‘Planning and Implementing’ and ‘Self-Monitoring’

Generally, learning in traditional classroom is considered more advantageous than online learning, mostly due the fact that learners have an opportunity to learn and interact among themselves as well as with the instructors (Bazimaziki, 2020).When considering to move to online classes, countries like Pakistan, who are still in their technological infancy, need to consider several aspects to ensure the economical usage of its educational assets. Around 36.18% of the Pakistani population has access to internet (Pakistan Telecommunication Authority, 2019). If the classes are to be offered online for remote areas in an attempt to make education accessible, internet might be limited factor. The other factor may be the non-availability of the android cell phones which are not available to 35% students from the remote areas. Online teaching may be likely the example of one way traffic having communication liaison between the

teachers and the taught. In this context, the face to face class room teaching seems better than on line teaching. The present study was conducted in an effort to determine the readiness for self-directed learning of students in traditional and virtual classroom environment. The researchers also tried to determine whether any difference exists in SDLR for these environments. The results indicate that SDLR level is significantly different. Moreover, a significant statistical difference was also found in the subscales 'Planning and Implementing' and 'Self-Monitoring'.

Recommendations

On the basis of this study's findings, following recommendations are put forth:

1. Additional studies may help to validate the results of the present study. Therefore, further research at different local and for varied fields of education is strongly encouraged.

2. Some internal and external factors may influence SDLR levels. As such, the researchers recommend studies that may help to identify these factors.

3. The online teaching may be started only in crucial circumstances when the danger is on optimum level due to COVID 19, otherwise, traditional teaching should be continued by following the CORONA SOPs in the class room. The face to face teaching may enhance the learning readiness of students in traditional class rooms.

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