

Self-Directed Learning Readiness between Students Enrolled in Integrated Modular versus Traditional Curriculum

MAHWISH AROOJ¹, KHADIJAH MUKHTAR², TAYYABA AZHAR³, MAHNOOR MUKHTAR⁴

¹Professor Physiology University College of Medicine and Dentistry

^{2,3}Assistant Professor, DME, University College of Medicine and Dentistry

⁴University College of Medicine and Dentistry

Correspondence to Dr. Mahwish Arooj, Email: mahwish@uol.edu.pk, Tel. 03244122224

ABSTRACT

Background: Self-directed learning is the quality of student in which they acquire their own requirements refer to their curriculum and owns the capability to study and improve their information, ability and behavior fulfilling the demands of medical profession. Readiness of self-directed is the degree to which the student possesses this ability to control over the quality of self-directed learning.

Aim: To identify self-directed readiness among students and also to compare the self-directed learning readiness between students of traditional and integrated modular curriculum.

Methodology: Current study was cross-sectional quantitative study among students of 1st year and 4th year MBBS in University College of Medicine and Dentistry, The University of Lahore. Pre-validated Questionnaire Self Directed Learning Readiness Scale (SDLRS) were used to check level of readiness of Self-Directed Learning among students of 1st year and 4th year. Data obtained was interpreted by using SPSS version 21. T-test was applied to compare the difference among the mean score of both the classes.

Results: Significant difference between Readiness of Self-Directed Learning among modular system and traditional system. P value is 0.004 (significant value <0.05) (95% confidence interval) which shows high readiness of Self-Directed Learning among students of 1st year than 4th year.

Conclusion: In this study, it was revealed that in spite of high level of maturity and experience of 4th year students, readiness of self-directed learning is more amongst students of 1st year MBBS students.

Keywords: Integrated modular curriculum, self directed learning, traditional curriculum

INTRODUCTION

Self-directed learning (SDL) is defined as the process in which student takes responsibility of their own learning. According to WHO, one of the competencies of medical students is "life-long learners". A Study that was held in India showed that SDL is essential component for producing life-long learner and medical colleges/school can play important role for the development of self-directed qualities amongst students. Self-directed learning is the characteristic in which students set their own needs according to their curricula, syllabus and possesses the ability to what extent it should be studied and how they should improve their knowledge, skill and attitude according to the demands of medical profession as educators or practitioners. Readiness of self-directed is the degree to which the student possesses this ability to control over the quality of self-directed learning¹.

According to Reem Rachel Abraham, in medical colleges students should be able to maintain self-management abilities along with self-control. For measuring degree of readiness of SDL Fisher et al. reported Self Directed Learning Readiness Scale (SDLRS). This scale can be used in medical, allied and nursing schools according to their own curricula or syllabus². In literature, self-directed learning has been studied over period of time in context with adult learning which shows that self-motivation, self-management and self-monitoring was the major factor of self-directed learning³.

SDLRS scale was initially developed in order to

evaluate the student's ability, behavior and personality which is essential for developing self-directed learning qualities among students⁴.

In medical schools, SDL is the essential component of the curriculum with the separate slots specially which are following problem-based learning (PBL) as teaching and learning strategy in their curriculum. PBL is a modern educational method which alters learning methods from teacher-centered approach towards student-centered approach by engaging them in learning and teaching strategy to solve different real-life scenario-based problems. PBL improves learning capabilities, meta-cognitive perceptive skill by pursuing self-directed learning and peer collaboration⁵. According to them done by Zachariah and Donna reported on pharmacy school, complex learning need can be accomplished by high SDL readiness⁶.

University College of Medicine and Dentistry (UCMD) following integrated modular curriculum since 2014. First 3 years of MBBS students in UCMD study under spiral running integrated curriculum in which PBL and SDL have slots in their timetable. 4th year MBBS students still following traditional curriculum in which there is no emphasis on self-directed learning.

Objective of this study is to determine student readiness regarding SDL and also to compare the self-directed learning readiness between students of integrated and tradition curriculum.

METHODOLOGY

This study was quantitative cross-sectional study conducted on students of 1st year and 4th year MBBS

Received on 23-10-2020

Accepted on 09-01-2021

students in University College of Medicine and Dentistry, The University of Lahore. MBBS program in UCMD comprises of 5-year curriculum plan Students of 1st year following integrated modular curriculum which includes PBL and SDL slots in their timetable. In integrated modular curriculum there is vertical as well as horizontal running modules. While 4th year MBBS student still following traditional subject-based curriculum. SDL occupy vital slots in annual timetable.

Before data collection, proposal of this study was presented to Ethical Review Board (ERB) of UCMD, The University of Lahore for ethical approval. After getting ethical approval by ERB we started with data collection from 1st year and 4th year MBBS students.

Questionnaire used to check degree of readiness of Self-Directed Learning was Self Directed Learning Readiness Scale (SDLRS) which was a pre-validated questionnaire as shown in Annexure I. Firstly, this scale was prepared by Fisher in 2001⁵. SDLRS contain 40 items under three categories i.e. self-management, desire for learning, self-control. For self-management there is 13 items, 12 items are for desire for learning and there are 15 items for self-control. Five-point Likert-scale (from strongly disagree to strongly agree) were used for 36 items in the questionnaire while for 4 items i.e., 3, 11,20 and 40 this scale was used in reverse order.

Before distributing the questionnaire, instructions were given to students regarding questionnaire. Consent was taken from each student involved in this study. Students were asked to fill the questionnaire and were assured of the confidentiality. After data collection, data was interpreted by using SPSS version 21. Data was analyzed by applying T-test to compare the difference between the mean score of two classes.

RESULTS

Out of 150 students in 1st year, 121 completed and returned the questionnaire. The overall response rate was 80%. Similarly, out of 150 students 121 responded the questionnaire which showed 80% response by the students of MBBS 4th year. Mean scores of individual items are shown in Table 1. Out of the 13 items measuring "self-management" only two scored 3 and above, 12 items measuring for "desire for learning" scored above 3 and similar results were recorded for 14 items measuring for "self-control".

Table 2 showed the mean scores for the three scales of both classes. In fourth year, self-management was the highest scorer (2.48±0.46) as compare to desire for learning (2.13±0.43), while the least score was for self-Control (2.06±0.31). In 1st year mean score for self-management (4.00±0.29) was highest as compare to other two scales (3.99±0.39) (3.90±0.40).

Overall statistical difference was found between two classes i.e., 1st year and 4th year MBBS students. So, we can say that there is a significant difference between Readiness of Self-Directed Learning among modular system and traditional system. P value is 0.004 (significant value <0.05) (95% confidence interval) which shows high readiness of Self-Directed Learning among students of 1st year than 4th year.

Table 1

	4 th Year		1 st Year	
Self-Management				
Q	Mean	Std. Deviation	Mean	Std. Deviation
Q1	2.15	0.823	4.34	0.90
Q2	2.2	0.839	4.77	0.42
Q3	2.94	1.067	2.31	0.93
Q4	2.45	0.998	4.60	0.77
Q5	3.03	1.033	4.23	0.89
Q6	1.94	0.853	3.92	0.84
Q7	2.34	0.787	3.82	0.86
Q8	2.08	0.875	3.90	0.82
Q9	2.59	0.989	4.50	0.91
Q10	2.44	1.044	4.00	0.79
Q11	3.65	1.105	3.74	0.74
Q12	2.46	0.775	3.88	0.58
Q13	1.97	0.744	4.01	0.75
Desire for learning				
Q14	1.77	.778	4.25	0.70
Q15	2.31	.904	3.89	0.76
Q16	1.80	.795	4.05	0.79
Q17	2.11	.838	4.16	0.66
Q18	2.78	1.124	3.81	0.91
Q19	2.22	.953	3.86	0.66
Q20	3.18	1.026	3.60	0.69
Q21	2.07	.800	3.99	0.75
Q22	2.09	.879	3.93	0.72
Q23	1.80	.777	4.07	0.84
Q24	1.78	.772	4.17	0.81
Q25	1.71	.769	4.18	0.75
Self-Control				
Q26	1.93	0.62	4.26	0.69
Q27	1.87	0.77	4.18	0.72
Q28	2.07	0.94	3.98	0.86
Q29	1.92	0.90	4.18	0.74
Q30	2.10	0.84	4.19	0.81
Q31	1.99	0.85	3.97	0.78
Q32	1.91	0.92	4.11	0.87
Q33	2.03	0.82	4.11	0.72
Q34	2.13	0.77	4.00	0.70
Q35	2.00	0.90	3.99	0.78
Q36	1.84	0.77	4.23	0.72
Q37	1.98	0.82	4.07	0.78
Q38	1.88	0.88	4.14	0.76
Q39	2.12	1.14	4.06	0.87
Q40	3.17	1.40	2.49	0.59

Table 2

	4 th year	1 st year
Self-Management	2.48±0.46	4.00±0.29
Desire for learning	2.13±0.43	3.99±0.39
Self-Control	2.06±0.31	3.99±0.40

DISCUSSION

To become life-long learner, medical students need to be motivated, confident and autonomous. In order to acquire these qualities of life-long learner student should be self-directed learner⁷. For students of medical college, SDL skill is very essential component specially who are following PBL as learning strategy for adopting life-long learning skills⁸. SDL slots in integrated modular curriculum would help to prioritize their outcome and benefit them in remembering and understanding of the subject or a topic⁹. Results of our study showed positive response of students toward self-management, self-control and desire of learning those following integrated modular curriculum. These results are in harmony with previous studies executed in Saudi Arabia⁵. These results are also supported by previous study that showed medical students have high readiness for SDL having PBL incorporated in their

curriculum¹⁰. Even though, study conducted amongst nursing and pharmacy students didn't show any significant results in readiness of SDL after implementing PBL slots in curriculum¹¹.

Present study showed that students following traditional curriculum with no SDL and PBL slots implemented in their curriculum had low readiness towards Self-directed learning. Conversely, students following integrated modular curriculum with SDL and PBL slot merged in curriculum had significant readiness towards self-directed learning. In our study, the differences in scores of Self-Directed Learning Readiness Scale (SDLRS) among two distinct study sets might be due to difference in learning & teaching strategy and difference in curriculum, also personal preferences and learning styles of the students¹².

In this study, in spite of curriculum change from traditional to integrated modular curriculum, students showed positive response towards desire for learning which incorporates positive attitude toward studies. Our study also showed positive impact of desire for learning is high on students under integrated modular curriculum than students following traditional curriculum.

Secondly, scale of self-control showed high scores in 1st year students same as that of desire for learning. Mean score for self-control among students of integrated modular curriculum is 3.99 which is high as compared to the score of self-control among students of traditional curriculum. It shows that students of modular curriculum have more maturity and confidence. Though, 4th year students are more mature and experienced than first year students. We found these results may be because of continuous running SDL, SGD slot in time table with properly defined learning objective designed for each topic in curriculum and each student was provided with reading materials and active participation in Moodle for the students of 1st year with integrated modular curriculum.

Thirdly, self-management scale also showed the same results. Self-management indicate high time-management and planning skills for learning.

According to the results showed in this study indicate that planning and action should be done to improve the readiness of self-directed learning in all three scales among students of 4th year MBBS. This can also be achieved by arranging workshop for them side by side their regular courses¹³. This issue can also be addressed by incorporating SDL and PBL slots in the curricular time table. It would also be useful if peer tutorial or hands-on workshop will be arranged.

CONCLUSION

In this study, it was revealed that in spite of high level of maturity and experience of 4th year students, readiness of self-directed learning is more amongst students of 1st year MBBS students. PBL, SGD and SDL slots have impact on

developing self-management, self-control and desire for learning among students.

Limitations: Only students of two classes were taken. Over the period of time more classes as a sample will be chosen to ensure the readiness of SDL among diverse group of students.

Declaration: I declare that solely myself has composed this paper and it has not been submitted, in whole or in parts, in any previous journal.

Acknowledgements: First of all, I am grateful to ALMIGHTY ALLAH SWT for giving me strength, knowledge and ability to complete this study. I am really indebted to Dr. Mahwish Arooj for her guidance and support to carry out this research. I am really thankful to Tayyaba Azhar for being a part of this study as peer reviewer.

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Annexure I: Questionnaire (SDLRS)

1. Self- management

Item	Strongly Agree	Agree	True Sometimes	Disagree	Strongly Disagree
<i>I solve problems using a plan</i>					
<i>I prioritize my work</i>					
<i>I do not manage my time well</i>					
<i>I have good management skills</i>					
<i>I set strict time frames</i>					
<i>I prefer to plan my own learning</i>					
<i>I am systematic in my learning</i>					
<i>I am confident in my ability to search out information</i>					
<i>I set specific times for my study</i>					
<i>I am self-disciplined</i>					
<i>I am disorganized</i>					
<i>I am methodical</i>					
<i>I can be trusted to pursue my own learning</i>					

3. Self- control

Item	Strongly Agree	Agree	True Sometimes	Disagree	Strongly Disagree
<i>I am able to focus on a problem</i>					
<i>I prefer to set my own learning goals</i>					
<i>I am responsible</i>					
<i>I have high personal expectations</i>					
<i>I have high personal standards</i>					
<i>I have high beliefs in my abilities</i>					
<i>I am aware of my own limitations</i>					
<i>I am logical</i>					
<i>I evaluate my own performance</i>					
<i>I prefer to set my own criteria on which to evaluate my performance</i>					
<i>I am responsible for my own decisions/actions</i>					
<i>I can find out information for myself</i>					
<i>I like to make decisions for myself</i>					
<i>I prefer to set my own goals</i>					
<i>I am not in control of my life</i>					

2. Desire for learning

Item	Strongly Agree	Agree	True Sometimes	Disagree	Strongly Disagree
<i>I need to know why</i>					
<i>I critically evaluate new ideas</i>					
<i>I learn from my mistakes</i>					
<i>I am open to new ideas</i>					
<i>When presented with a problem I cannot resolve, I will ask for assistance</i>					
<i>I like to evaluate what I do</i>					
<i>I do not enjoy studying</i>					
<i>I have a need to learn</i>					
<i>I enjoy a challenge</i>					
<i>I want to learn new information</i>					
<i>I enjoy learning new information</i>					
<i>I like to gather the facts before I make a decisions</i>					