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Perception of Self-Directed Learning Among Undergraduate and Postgraduate Students at Shaikh Zayed Hospital, Lahore

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ABSTRACT

Objectives: The main objective of this study was to examine changes in the perception and practice of self-directed learning by students in medical schools as influenced by different demographic factors. In general, the study aimed to assess disparities in SDL perceptions in gender, education level, and age, which would have implications for targeted educational designs and support structures that encourage SDL among students at various stages of their studies in medicine. **Material and Methods:** A total of 150 students from the Shaikh Zayed Hospital participated in this study. The sample consisted of males and females, with all stages of medical education representing 3rd year=2%, 4th year=32%, last year=62%, and last year postgraduate=4%. The age distribution was mostly–21-26years, with concentrations at age 22 (36 %) and age 23 (32 %). Data were collected using a structured questionnaire specifically designed to assess students' perceptions of self-directed learning and were analysed for trends and patterns. **Results:** The results pointed out a gender distribution showing an edge towards males with a significant representation of final-year students. The age data mentioned that most students belonged to the early twenties. The demographics indicate that SDL perceptions would vary with the stage of medical education and age. Final-year students might require SDL differently than their counterparts in the earlier years. **Conclusion:** This suggests that the perceptions of SDL, on the part of the students, differ by educational level and age. The closer an end-year student is to entering the profession, a person's SDL needs can differ from those of junior colleagues. The outcomes provide support for targeted SDL in response to differences in individual developmental stages and levels of educational readiness.

INTRODUCTION

Self-Directed Learning (SDL) refers to an educational model within which the learner himself has the responsibility of diagnosing his learning needs, establishing learning objectives, finding relevant resources, selecting and applying strategies, and evaluating outcome of learning (1). The SDL approach emphasizes freedom and learner responsibility, enabling self-motivation, thus learner self-regulation and control (2).

Research has proven that SDL is a vital factor in developing lifelong learning skills. In the rapidly changing world, this is a must. As traditional models of education often fail to equip students with the ability to face the complexities of real life, SDL enables the learner to cope with uncertainty and change (3).

Besides, SDL emerges in digital and information age development where availability of immense volumes of information requires learning professionals who are adept at managing and critically thinking over contents (3). Effective SDL fosters the development of higher order thinking skills that include critical thinking, solving

problems and the integration of knowledge through domains (3-7).

In addition, SDL is consistent with current learning objectives such as student-centeredness, individualized education, and building self-efficacy (8). According to Brockett and Hiemstra, in 1991, the instruments that would be used to measure the perception of students toward SDL need to be developed because it is the perceptions that are needed to have supportive learning frameworks. Therefore, SDL is an empowering approach for the learner to take control of learning towards the acquisition of the skills required to succeed not only personally but also in the professional front in an ever-changing world.

Self-directed learning (SDL) is the process of education which consists of the individual's process wherein he or she, taking the initiative, takes action to identify their need, set goals, access, select, and enact his or her own plans as well as assess outcome results. This method will call for learner autonomy in regard to responsibility so the person can take charge of education.

Increased adherence to self-directed learning from educators creates a growing urge to find out the sources of perceived support for student SDL. To this aim, developing instruments that highlight these perceptions is important since Brockett and Hiemstra described in 1991 (Brockett & Hiemstra, 1991). The present study targets the construction of such a tool in order to get and analyze the perceptions regarding the environment that supports students toward SDL.

MATERIAL AND METHODS

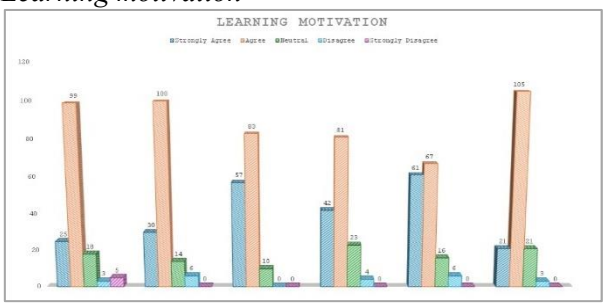
This cross-sectional descriptive study assessed perceptions of self-directed learning (SDL) among medical students at Shaikh Zayed Hospital, Lahore, over six months (January to June 2023). Participants included 150 undergraduate (3rd to final year) and final-year postgraduate medical students, selected via convenience sampling. Data were collected using a structured, self-administered questionnaire evaluating key SDL components like motivation, goal-setting, and reflective practices. The study adhered to ethical principles, receiving IRB approval and obtaining informed consent from participants. Data were analysed using SPSS version 25, with descriptive statistics summarising the demographics and SDL perceptions. Chi-square and t-tests were used to assess the associations. Limitations included potential selection bias from convenience sampling and response bias in self-reported data.

RESULTS

To analyze learning motivation, a questionnaire was sent to a cohort of learners, eliciting responses to six statements representing different aspects of their motivation. The results provide insights into learners' self-awareness, persistence, and attitudes towards continuous improvement. Below is an elaborate analysis of each statement.

Figure 1

Learning motivation



Statement: "I know what I need to learn." Responses: 25 strongly agree, 99 agree, 18 neutral, 3 disagree, and 5 strongly disagree. The majority of learners (72.6%) indicated they were aware of their own learning needs, either through strong agreement or agreement. This indicates a high level of self-awareness and the ability to describe personal learning objectives, essential for effective self-directed learning. A minority (5.4%) disagreed or strongly disagreed, suggesting that some learners might benefit from specific interventions to better identify what they must learn (Figure 1).

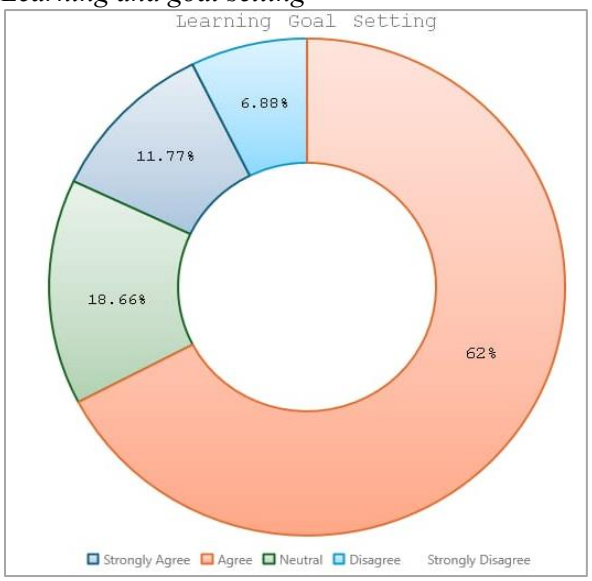
Statement: "Regardless of the results or effectiveness of my learning, I still like learning." Responses: 30 strongly agree, 100 agree, 14 neutral, 6 disagree, and 0 strongly disagree. The majority enjoyed the learning process itself and did not place excessive emphasis on outcomes. This reflects intrinsic motivation, which is a strong indicator of lifelong learning potential. The proportion of disagreements was negligible at 4.1%. It can be concluded that most learners have a positive attitude toward the learning process (Figure 1).

Desire for Continuous Improvement

Statement: "I strongly hope to constantly improve and excel in my learning." Responses: 57 strongly agree, 83 agree, 10 neutral, 0 disagree, and 0 strongly disagree. All respondents expressed a desire to improve continuously, with 61.1% strongly agreeing. This reflects a strong commitment to personal growth and long-term success in education (Figure 1).

Figure 2

Learning and goal setting



Statement: "My success and failures inspire me to continue learning." Responses: 42 strongly agree, 81 agree, 23 neutral, 4 disagree, and 0 strongly disagree. A significant proportion of students indicated that both success and failure motivated them to continue learning. While 3.4% disagreed, these learners might benefit from strategies to use feedback from their learning experiences constructively (Figure 1).

Statement: "I enjoy finding answers to questions." Responses: 61 strongly agree, 67 agree, 16 neutral, 6 disagree, and 0 strongly disagree. More than three-quarters (77.2%) of respondents enjoy solving problems, indicating curiosity and active learning tendencies. However, 4.1% of disagreement suggests a need for more engaging teaching methods to foster a greater interest in exploration (Figure 1).

Statement: "I will not give up learning because I face some difficulties." Responses: 21 strongly agree, 105 agree, 21 neutral, 3 disagree, and 0 strongly disagree. The majority (84.8%) displayed resilience in overcoming challenges, a critical element for effective learning. A small percentage (2.4%) of dissenting responses indicates areas for intervention to enhance resilience (Figure 1).

Overall, the analysis reveals high motivation among learners. They are self-aware, intrinsically enjoy learning, strive for continuous improvement, learn from success and failure, enjoy problem-solving, and persevere despite difficulties. These traits are conducive to lifelong learning and adaptability in dynamic environments. Educators and policymakers must address the needs of minority groups with lower motivation or specific challenges to ensure inclusive growth (Figure 1).

The ability of learners to set and structure priorities for their learning goals was assessed through three key statements regarding goal setting and strategy selection. The results provide an integrated understanding of learners' capacity to design and control their educational objectives.

Statement: "I can proactively define my learning objectives." This statement captures the readiness of learners to take action in defining their learning needs.

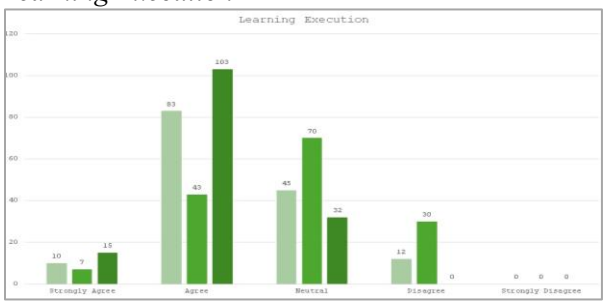
Statement: "I know which learning methods are appropriate for me to achieve my learning objectives." This gauges learners' awareness of effective strategies and techniques for achieving their goals. priorities for their educational activities.

Statement: "I determine my learning priorities." This evaluates learners' ability to set appropriate

Responses: 62% agree, 6.88% disagree, 11.77% strongly agree, and 18.66% neutral. Most learners agree they can proactively establish learning goals, use appropriate strategies, and set priorities, reflecting strong self-regulatory skills essential for effective self-directed learning. A smaller group (11.77%) strongly agreed, indicating high confidence in these abilities. However, 18.66% of neutral responses suggest these learners might benefit from additional support in developing effective goal-setting skills. A small minority (6.88%) disagreed, signaling a need for focused interventions to strengthen their ability to prioritize and strategize effectively (Figure 2).

Figure 3

Learning Execution



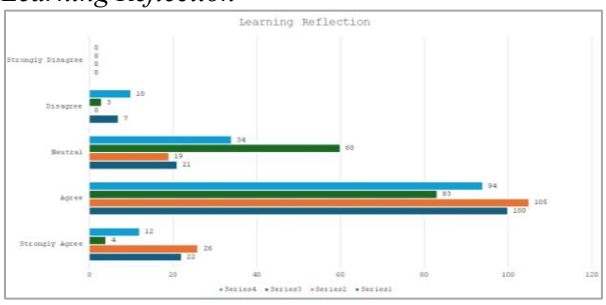
In conclusion, while the majority of learners feel confident in setting and prioritizing learning goals, educators and policymakers should provide targeted strategies to support learners with neutral or disagreeing responses. This would help ensure that all learners are well-equipped to manage their educational journeys effectively (Figure 2).

To evaluate learners' competency in implementing their learning strategies, responses to three significant statements were analyzed. These statements addressed the ability to act according to plans, manage time, and access resources. The results provide valuable insights into learners' proficiency in executing their learning strategies. Ability to Follow Learning Plans

Statement: "In class or on my own, I can follow my learning plan." Responses: 10 strongly agree, 83 agree, 45 neutral, 12 disagree, and 0 strongly disagree. A majority (67.44%) agreed or strongly agreed that they could carry out their learning plans, indicating a high level of discipline and commitment. However, 32.61% of neutral responses suggest that a significant portion of learners might face challenges in consistently adhering to their plans (Figure 3).

Figure 4

Learning Reflection



Statement: "I am good at arranging and controlling my learning time." Responses: 7 strongly agree, 43 agree, 70 neutral, 30 disagree, and 0 strongly disagree. Only 33.13% of respondents agreed or strongly agreed, suggesting room for improvement in managing learning time effectively. A high percentage of neutral responses (46.36%) and considerable disagreement (20.54%) highlight a need for interventions to develop better time management skills among learners (Figure 3).

Statement: "I know how to find resources for my learning." Responses: 15 strongly agree, 103 agree, 32 neutral, 0 disagree, and 0 strongly disagree. The majority (83.46%) agreed or strongly agreed, indicating strong resource-finding abilities. The absence of disagreement demonstrates learners' confidence in locating the necessary materials and support for their educational pursuits (Figure 3).

In summary, while most learners exhibit strong resource-finding skills and a good ability to follow their plans, time management remains a significant area for improvement. Educators can help address this by providing tools and strategies to enhance time management capabilities (Figure 3).

Reflective learning assesses learners' ability to connect new knowledge to personal experiences, identify strengths and weaknesses, monitor progress, and evaluate outcomes. The responses to relevant statements provide insights into the effectiveness of learners' reflective practices.

Statement: "I can connect new knowledge with my personal experiences." Responses: 22 strongly agree, 100 agree, 21 neutral, 7 disagree, and 0 strongly disagree. Most learners (81.48%) agreed or strongly agreed, showing a strong ability to integrate new knowledge with prior experiences. A low percentage (4.67%) of disagreement suggests that reflective practices are generally well-adopted (Figure 4). relevant statements provide insights into the

Figure 5

Learning Collaboration

Statement: "I know my strengths and weaknesses in learning." Responses: 26 strongly agree, 105 agree, 19 neutral, 0 disagree, and 0 strongly disagree. A significant majority (85.37%) agreed or strongly agreed, indicating a high level of self-awareness regarding learning capacities. The absence of disagreement further reinforces this finding (Figure 4).

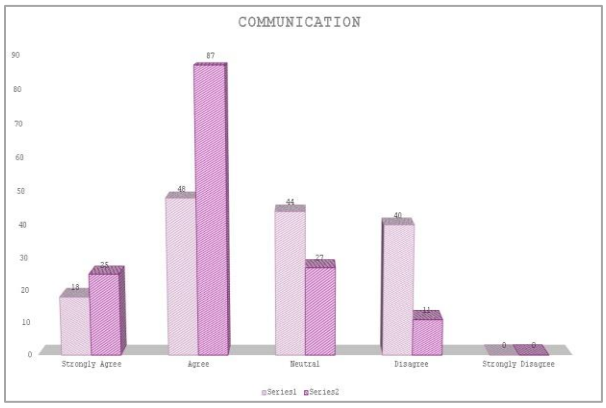
Statement: "I can monitor my learning development." Responses: 4 strongly agree, 83 agree, 60 neutral, 3 disagree, and 0 strongly disagree. While 58.34% of learners agreed or strongly agreed, a substantial proportion (40.26%) gave neutral responses, suggesting a need for support to improve monitoring practices (Figure 4).

Statement: "I can follow up on my learning results." Responses: 12 strongly agree, 94 agree, 34 neutral, 10 disagree, and 0 strongly disagree. A majority (70.73%) agreed or strongly agreed, indicating a good ability to evaluate outcomes. However, 22.67% of neutral responses and 6.67% of disagreement highlight room for improvement (Figure 4).

Overall, reflective practices are well-adopted by most learners, but there is scope for improvement in monitoring development and outcomes. Targeted support could help learners enhance these aspects of reflection (Figure 4).

Figure 6

Combination



Learning collaboration explores how students interact with others to improve their educational skills and develop mutual understanding. Responses to two key statements highlight learners' perspectives on interaction and cultural exchange.

Statement: "My interaction with others helps me plan for further learning." Responses: 14 strongly agree, 79 agree, 46 neutral, 7 disagree, and 3 strongly disagree. A significant number of learners (61.33%) agreed or strongly agreed, indicating the value they place on cooperative learning. However, 30.46% neutral responses suggest that some learners may not fully utilize collaborative opportunities. A low percentage of disagreement (8%) reflects a minority who may prefer independent planning (Figure 5).

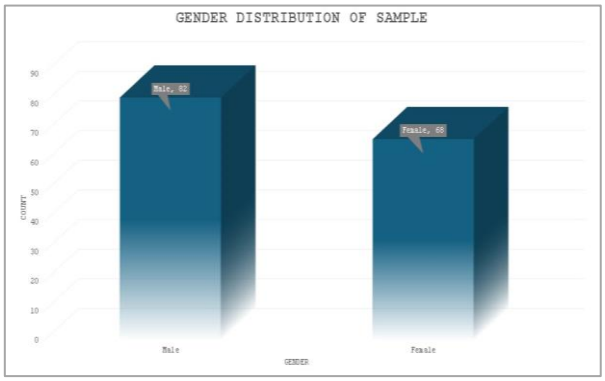
Statement: "I want to learn the language and culture of those with whom I often communicate." Responses: 14 strongly agree, 86 agree, 39 neutral, 8 disagree, and 4 strongly disagree. Most learners (66.67%) expressed interest in learning the language and culture of their frequent interlocutors, reflecting openness to cultural exchange. Neutral responses (26%) suggest a portion of learners may remain indifferent, while a small minority (8%) expressed disinterest (Figure 5).

In conclusion, learners value collaboration and cultural exchange, but efforts should focus on encouraging neutral and disagreeing groups to recognize the benefits of these interactions (Figure 5).

Statement: "I can communicate messages effectively in oral presentations." Responses: 18 strongly agree, 48 agree, 44 neutral, 40 disagree, and 0 strongly disagree. The results show mixed perceptions. While 39.34% of respondents agreed or strongly agreed, 29.71% disagreed, indicating challenges in oral communication. Neutral responses (30.95%) reflect uncertainty or varied experiences with oral presentations (Figure 6).

Figure 7

Gender Distribution



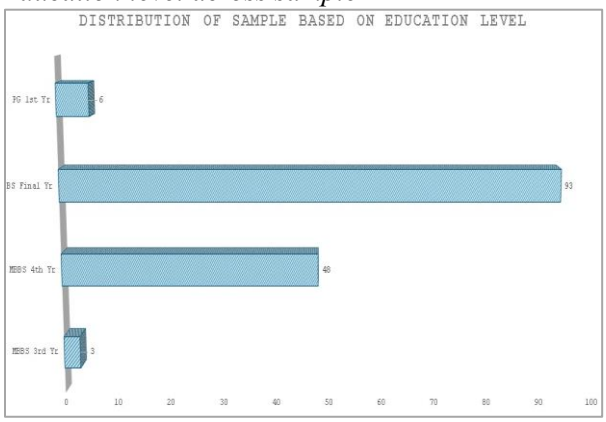
Statement: "I can clearly communicate messages by writing." Responses: 25 strongly agree, 87 agree, 27 neutral, 11 disagree, and 0 strongly

disagree. A majority (67.81%) felt confident in their written communication skills. Neutral responses (16.27%) and a small proportion of disagreement (15.92%) indicate room for further development (Figure 6). In summary, while most learners are confident in their written skills, oral communication presents a greater challenge. Interventions can help learners enhance their oral presentation abilities (Figure 6).

The sample comprises 150 respondents, with 82 males (54.67%) and 68 females (45.33%). This distribution indicates a slight male majority (Figure 7).

Figure 8

Education level across sample



Respondents' educational backgrounds include 2% (3 respondents) in the 3rd year of medical studies, 32% (48 respondents) in the 4th year, 62% (93 respondents) in the final year, and 4% (6 respondents) in postgraduate studies. The majority (62%) are final-year students, reflecting their readiness for research-related surveys (Figure 8).

Table 1

Logistic Regression Table: Predictors of High SDL Readiness

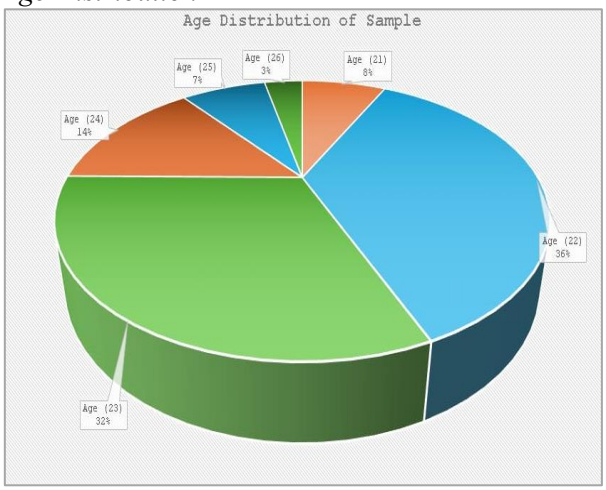
Variable	OR	95% CI	p-Value
Gender (Male)	1.25	0.95–1.65	0.087
Age (per year)	1.15	1.02–1.30	0.021*
Academic Level			
3rd Year (ref)**	-	-	-
4th Year	1.80	1.12–2.89	0.014*
Final Year	2.65	1.50–4.70	<0.001*
Postgraduate	1.20	0.67–2.18	0.556
Motivation			
High Motivation**	3.50	2.10–5.80	<0.001*
Time Management			
High Time Management	2.00	1.30–3.08	0.002*
Communication Skills			
High Oral Skills	1.15	0.80–1.64	0.388
High Written Skills	2.85	1.70–4.80	<0.001*

The age distribution shows a concentration in the early twenties: 21 years (8%), 22 years (36%), 23 years (32%), 24 years (14%), 25 years (7%), and 26 years (3%). The largest age groups are 22 and 23 years, typical for medical students nearing the completion of their studies (Figure 9).

This demographic profile supports the analysis of learning behaviors among advanced medical students (Figures 7–9.

Figure 9

Age Distribution



DISCUSSION

Thus, the findings of this paper highlight the dynamics between design of curriculum and teaching activity and students' engagement into self-directed learning, especially for students in a medical education set-up. Where a blended PBL hybrid curriculum exists, only about half the students seem to be in SDL. Such a picture indicates that despite the intent for PBL to be supportive of more autonomous learning, there could be a critical barrier it faces (13-16).

Traditional approaches remain deeply entrenched in the curriculum, which focus on summative assessments and rote memorization. Such approaches tend to subvert the principles of SDL because they do not leave room for students to exercise initiative and self-reflection. The dominance of traditional methods implies that SDL principles are yet to be integrated properly into the curriculum and into instructional practices.

Cultural factors, alongside students' backgrounds, immensely influence their

motivation as well as their capacity for SDL. Within educational traditions influenced by more hierarchical or didactic approaches, there has been less experience of learning where students take control, therefore students may prefer structure within guidance and clear instructor expectation rather than the open exploration and inquiry required by SDL (17-19).

This, in turn, necessitates the upgrading of student-centered approaches within traditional teaching approaches and PBL settings to become more constructivist-friendly in their approach toward human learning. This can be accomplished by upgrading the skills of tutors through training and capacity building that is geared to emphasize facilitation skills and an ability to foster an environment that promotes SDL. Tutors would play a key role in helping students go through the learning process.

To aid in SDL, assessment practice has to be developed. Such assessments have to measure the amount of knowledge acquired while facilitating and evaluating the SDL processes among students. Through ongoing formative assessments giving feed-forward, it might enable the students to have reflections about their learning experiences and, hence, learn which aspects need improvement in addition to finding strategies for realizing goals.

SDL is crucial for medical education, preparing a student for lifelong learning and rapid adaptation to the evolution of medical knowledge and practice. In this regard, an educational institution should, above all, commit itself to a learning environment that nourishes and supports SDL by providing access to resources and creating opportunities for collaborative learning and fostering a culture in which independent thinking and self-regulation are valued and rewarded (18-21).

Besides the lack of SDL among these postgraduate virtual students, various significant barriers to SDL exist among them. Some of the barriers include information overload, mind wandering, role ambiguity, inadequate coping skills, heavy workloads, and insufficient writing skills. Some of these barriers ought to be recognized and put in place for better efficiency in virtual learning, more so for students who have their primary education through this modality. The removal of such barriers will enhance both the learning outcomes and general quality of education (22).

There is a concerning decrease in SDL readiness from admission to the final year of studies. Because SDL plays an important role in medical education, more SDL-promoting activities might be added to the current curriculum. The findings of this study bring to light the need for the development of SDL skills in medical students and how the curriculum, assessments, and cultural factors impact SDL readiness.

Most of the Indian medical colleges still exist in traditional delivery where didactic lectures, tutorials, and practical classes are dominant. Such existing approaches to teaching and learning may require changes if SDL has to be encouraged. Thus, faculty development becomes a vital link in bringing about these changes. Faculty will be trained, thus providing support for SDL to create a learning environment facilitating student self-management and skill building for lifelong learning (23-26).

The findings indicate that there are several factors that affect the SDLR of medical students. Further research in monitoring SDLR in postgraduate medical education may help understand how medical training cultivates lifelong learning among health professionals. Self-directed learning readiness and a positive perception of student-centered learning are the most important factors influencing student-centered behavior. Students from outside Java Island require more guidance to adapt well to the student-centered approach.

Survey results indicate high motivation levels. These reflect self-awareness, a love for learning, an interest in improvement, the capacity to learn from success and failure, and a desire to solve problems. They are all important attributes for long-term learning, ensuring that the learner is prepared to meet the changing nature of any environment. Educators and policymakers want to help each learner in the appropriate way. So, therefore, the needs of the minority who show less motivation or problems in these areas need to be addressed appropriately (28).

Overall, the general findings suggest that most of the students can set and prioritize their learning goals and are even confident in their ability to do so. However, neutral and disagreeing responses

provide some evidence of the potential need for additional support and resources. Educators and policymakers should consider how they might implement strategies that promote the goal-setting ability of all learners so they may be better equipped to take charge of their own learning journeys.

The analysis of learning execution clearly indicates that although many of the learners are confident enough to adhere to their respective learning plans and find all the resources they need to achieve their learning goals, the need for improvement of time management skills is significantly high. Thus, better time management strategies should also be developed, and this group of people should get additional support to improve learning execution in general. The balancing approach will ensure learners are effective in implementing their educational plans toward maximization of learning.

Analysis of learning reflection reveals that the majority of the students are able to relate new knowledge with past experiences and are aware of their strengths and weaknesses in learning. There is, however a need for monitoring the learning progress and evaluation of learning outcomes. Providing the students with more tools and strategies for tracking themselves over time and assessing their outcomes can further improve reflective learning for better and self-managed learning practices.

An analysis of learning collaboration shows that most learners perceive value in interaction while planning educational goals and demonstrate a high interest in the language and culture of their peers. However, neutral and disagreeing responses reveal opportunities for further development in collaborative learning environments and cultural exchange initiatives. Educational institutions can help learners reach their full potential and learn holistically and integratively by creating an inclusive environment, with support, which fosters the virtues of cooperation and intercultural understanding.

Generally, respondents have positive views of their abilities in writing, but oral presentation skills are seen differently. Opportunities in training and support for further development in oral communication may exist based on the findings. Both academic and professional settings require effective communication skills, as these directly contribute to the success of presenting ideas, working with other people, and achieving learning objectives. They may be used by institutions as a basis for designing communications skill development programs to meet diverse needs and generally enhance the effectiveness of learner communications.

This demographic characteristic is very relevant for interpreting the results of the survey. In the given context, the prevalence of males, that they were final-year medical students for the most part, and a concentration in the early twenties provide the specific context and, thus, possible biases to the findings of the survey. Researchers and educators will find this useful for interpreting and applying the findings to the appropriate academic or professional setting.

Conclusion: While it represents a giant step toward fostering SDL, the shift to a hybrid PBL curriculum clearly points to more needs in the embedding of SDL principles within the general body of medical education. Institutions of learning can further improve the support mechanisms put in place and address these identified barriers in order to ensure that the students have every chance to become a self-directed learner, a critical factor for them in tackling the professional and personal worlds of their careers.

CONCLUSION

Changes into a hybrid PBL-based curriculum are a giant leap toward supporting SDL, while findings in this study unveil some of the most prominent barriers to be surmounted to achieve more SDL. Though PBL can encourage autonomous learning and critical thinking, only half of the students actually experience SDL, which shows more in-depth integration of SDL principles within curriculum design and teaching.

Teacher-centered methodologies are the most pervasive ones to date, which tends toward summative assessment and mere memorization. It consequently limits students' opportunity to take initiative and self-reflect the very goals of SDL. Moreover, students' backgrounds and cultural influence may affect their ability to learn through SDL. If their culture and tradition favor top-down and didactic orientation, they will not hesitate to look for guided teaching rather than open-ended

learning, further preventing the potential engagement in SDL.

Aligning approaches with better constructivist principles would include upgrading on student-centered approaches being used by traditionalists as well as within the PBL framework. An improvement form of competencies in the tutors will emerge by effective training whereby their skills and abilities toward creating a setting for SDL have to be developed, honed, and updated; another such aspect to achieve that might be fine-tuning of assessment along with the conducting of formative assessment so as to help them to engage in reflecting in the acquisition of the self-correction strategy to learning.

It pointed out significant barriers to SDL in virtual postgraduate students. Information overload and mind wandering appeared among top barriers toward SDL in them. Besides these, ambiguities related to role conflicts, a deficiency in developing coping skills, work overloads, and decreased skill for writing surfaced. Dealing with all of them is highly required in virtual learning and should also upgrade the general educational standard of quality.

The observed decline in SDL readiness from admission to the final year of study raises a question regarding the effectiveness of the existing curriculum in developing SDL. To this effect, there is a need for incorporating more curricular support for SDL. The faculty development required is training the faculty members on SDL support.

Further monitoring of SDLR in postgraduate medical education will be beneficial in determining how medical training develops lifelong learning among health professionals. Results from the survey show a high motivation level among the learners, characterized by self-awareness, intrinsic enjoyment of learning, a desire for continuous improvement, and persistence in the face of difficulties. These are important characteristics that would develop lifelong learning and ensure that the learners adapt and thrive in changing environments.

Although most students can state and rank their learning objectives, the learners who do not have self-confidence need more support and resources. The teachers and policy-makers should consider exploring ways of enhancing the skills of the students in goal setting as well as time management so that the execution of the learning process can be bettered and the learners should be able to implement their educational plans properly.

More analysis by the learning reflection shows that a greater number of tools and strategies are needed for learners to monitor their progress and evaluate their outcome for an effective and self-directed learning experience. Besides that, a collaborative learning environment and cultural exchange initiatives can enhance the experience of learning since the learner will come to have a better holistic and interconnected understanding of the subject matter.

Overall, the study revealed an overall opportunity in enhancing communication skills, mainly the skill of oral presentation among learners. The insights gained here will be important for training agencies in designing communication skill development programs to meet diverse needs with improvements generally in the effectiveness of communication.

The demographic characteristics of the sample population should be understood for the interpretation of the results of the survey and proper application in academic or professional settings. Thus, through the identified barriers and enhancement of support mechanisms, educational institutions can adequately prepare students as self-directed learners to meet the complexity of their professional and personal lives.

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