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Original Research Article

Medical students' perspectives about traditional and integrated learning programs at University of Bisha, Saudi Arabia

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ABSTRACT

Background: Students' approaches to learning are central to the process of learning. There is strong debate about the efficiency of traditional learning programs (TLP) and integrated learning programs (ILP) in medical schools. TLP is easy for the students being passive learners and for the tutors playing the role of sage on the stage. ILP is mainly student-centered. It is essential to know the perspectives of medical school students about both programs as they used to apply TLP in the 1st year and started ILP in the 2nd year.
Methods: This study adopted a quantitative research methodology. We addressed the 3rd-year medical students at the College of Medicine, University of Bisha, KSA. An online survey using Google forms was applied for data collection. The study was performed from August 2019 to June 2021.
Results: Agreement with the integrated program (80.8%) exceeded the traditional (48.5%) especially in improving communication skills, dealing with new technologies, reinforcement of competencies in the research field, and to lesser extent for its suitability to be applied in medical schools nowadays, development of desired doctor skills to deal with patients and for provision of good approach for medical practice, and lastly for its suitability to identify and deal with the community needs. There was no statistical significance between the 2 programs regarding support of professionalism values. The disagreement of ILP (19.2%) was much lower than TLP (51.5%).
Conclusions: Integrated learning program becomes an innovative tool for learning in medical schools with excellent compliance among medical students.

Keywords: Integrated learning, Saudi Arabia, Traditional

INTRODUCTION

Knowledge and skills transfer is the role of any education system and educational institutes are important tools for achieving social goals.[1] Students' approaches to learning are milestones for the learning process. There is a clue that how students perceive the learning environment has a great impact on the learning approaches. Nevertheless, the relationship between the learning environment, the way in which it is perceived by students and students' learning approaches is not clear.[2]

Nearly all medical and pharmaceutical education schools around the world were adopting the lecture-based, teacher-centered traditional pedagogy.[3] This approach relies mainly on rote learning of the basic science subjects in order to pass the exams. This approach gives little or no attention to the practical applications of the gained knowledge. Little interaction in the traditional lectures decreases the students' attention and engagement with inside the classroom.[4] The passive learning methods are not only lectures but also reading, audiovisual, and demonstration as well.[5] Forgetting the basic knowledge of

learners in clinical years is one of the major shortcomings of the traditional learning program (TLP).[6]

In contrast, the competency-based curriculum involves students' engagement in different learning activities which enhances the development of Bloom's high-order cognitive skills.[7,8] Problem-based learning (PBL), case-based learning (CBL), and team-based learning (TBL) are examples of active learning approaches.[9] The active integrated learning program (ILP) becomes the preferable approach for the faculty and the medical school administrators as it engages the students in small groups working to solve real-world cases or problems. This will stimulate the high-order skills (HOS) of the students like analysis, synthesis, evaluation, and application. This will ensure better collaboration of basic science knowledge and the clinical application of such knowledge to build the desired future physician.[10]

Although there is high student engagement in the active learning approach, there is still contradiction about it. The University of Virginia applies the active learning approach in the preclinical year, but the official reports denoted that many students didn't attend these activities with other students experienced poor attention when attending these classes. Many students indicated that their benefits from the learning activities were below their expectations.[11] It is noteworthy that the students participating in PBL and CBL showed a high level of enjoyment and engagement in small group discussions, but many reports proved no difference in the actual knowledge gained in comparison to the traditional approach.[12,13] Some studies reported the students' feedback about the active learning approach as some students reported the feeling of poor preparedness when participating in PBL-based curricula, another study showed the students reported increased confidence, improved communication skills, greater interaction between classmates, and improved clinical reasoning and decision-making by active learning but on the other hand the students reported negative attitudes towards CBL as it requires them to spend much more time and effort to reach the desired knowledge with no belief that CBL prepares them well for exams.[14] In addition to the previous studies, some medical education literature failed to find the positive effect of active learning on the exam score.[15,16]

So, this study aimed to evaluate medical students' perspectives about the traditional and the integrated learning programs in the College of Medicine- University of Bisha- KSA.

METHODS

The subjects

Participants are 3rd year medical students in the College of Medicine, University of Bisha- KSA in the academic year 2019 to 2020 (n=42 students) and 2020 to 2021 (n=40 students). The inclusion criterion included the 3rd year medical students who agreed to participate in the study and the exclusion criterion was the 3rd year medical students who refused to participate. All the 3rd year medical students were invited to share in this study. An acceptance to be enrolled was considered as consent.

The methods

An online survey was done for the 3rd year medical students in UBCOM using the Google forms. This includes a detailed questionnaire about both TLP and ILP in the college of medicine, University of Bisha. The questionnaire was exposed to a validation procedure that included its perusal by medical students, interns, and experts in the medical education field. The questionnaire was checked for item appropriateness and comprehensiveness (face and content validity). A five-point Likert scale (0=strongly disagree; 4=strongly agree) was adopted within the questionnaires. It took about 1 year to be accomplished.

Study design

The study design was quantitative research.

Statistical methods

The collected data were computerized and statistically analyzed using: Graph Pad Prism 5.01. Chi-square test that was used to compare the qualitative variables between groups. P values less than 0.05 was considered statistically significant; SPSS version 21, descriptive statistics was used; p value was used with 0.05 confidence level to reject the null hypothesis for analysis.

RESULTS

The total student population targeted was 82 students with 55 responding (67%).

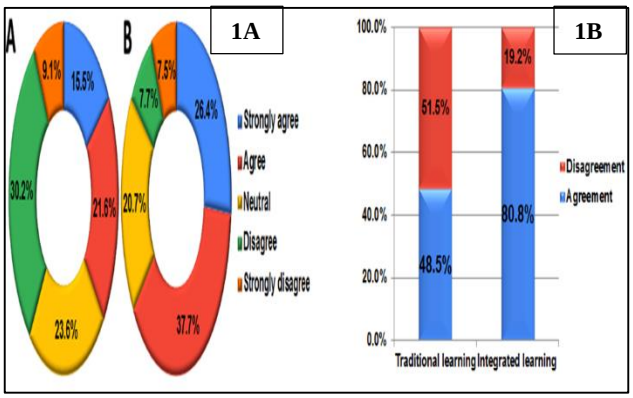

Figure 1: Collective responses: (1A) Percentages of different degrees of student satisfaction in traditional learning program (A) and integrated learning program (B); (1B) Percentages of the agreement and disagreement after exclusion of the neutral degree.

The students' responses were 15.5%, 26.4% strongly agree, 21.6%, 37.7% agree, 9.1%, 7.5% strongly disagree, and 30.2%, 7.7% disagree about different learning parameters established by TLP and ILP respectively (Figure 1A).

Collectively, agreement of the ILP exceeded the TLP and disagreement of the ILP was much lower than the traditional one as described in (Figure 1B).

Table 1: Summation and comparison of student consideration after exclusion of the neutral degree of satisfaction.

Topic	Agreement	Disagreement	Total	P value
Suitable for medical colleges nowadays	22 (33)	25 (8)	47 (41)	0.0011**
Suitable to identify and deal with the community needs	27 (34)	20 (9)	47 (43)	0.0416*
Improves communication skills	17 (38)	26 (8)	43 (46)	<0.0001***
Reinforces competencies in the research field	14 (36)	21 (9)	35 (45)	0.0004***
Improves skills in dealing with new technologies	21 (35)	28 (7)	49 (42)	<0.0001***
Support professionalism	20 (28)	15 (10)	35 (38)	0.1492ns
Has a good approach to medical practice	21 (37)	18 (8)	39 (45)	0.0086**
Develops the desired doctor skills to deal with patients	21 (41)	20 (8)	41 (49)	0.0013**
Total	163 (282)	173 (67)	336 (349)	<0.0001***

The values are presented as: traditional program (integrated program). P value <0.001: High significance (***), 0.01 >p value >0.001: Moderate significance (**), 0.05 >p value >0.01: low significance (*) and p value >0.05: non significance (ns)

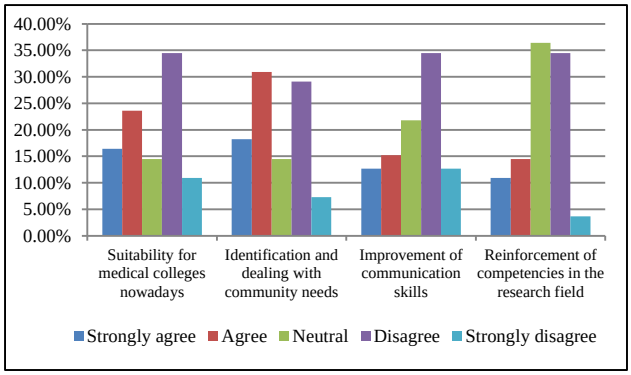

Figure 2: Students' perspectives about TLP to be suitable for nowadays medical colleges, deal with community needs and improvement of communication skills and reinforcement of research competencies.

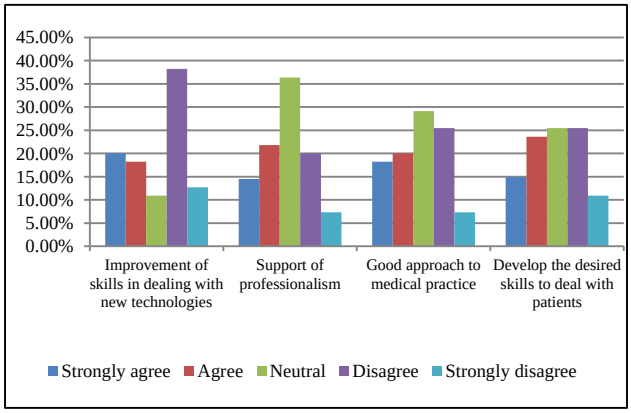

Figure 3: Students' perspectives about TLP to improve dealing with new technologies, support professionalism, provide good approach for medical practice and develop the desired medical skills to deal with patients.

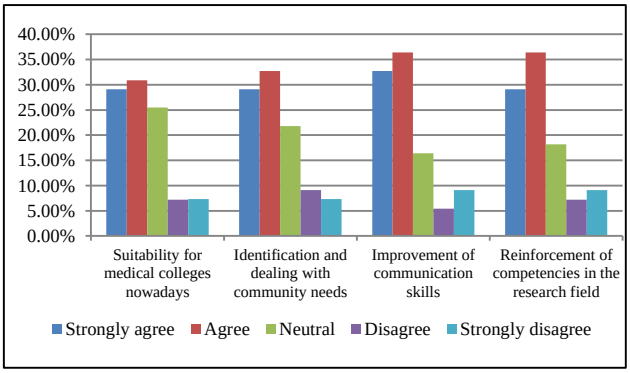

Figure 4: Students' perspectives about ILP to be suitable for nowadays medical colleges, deal with community needs and improvement of communication skills and reinforcement of research competencies.

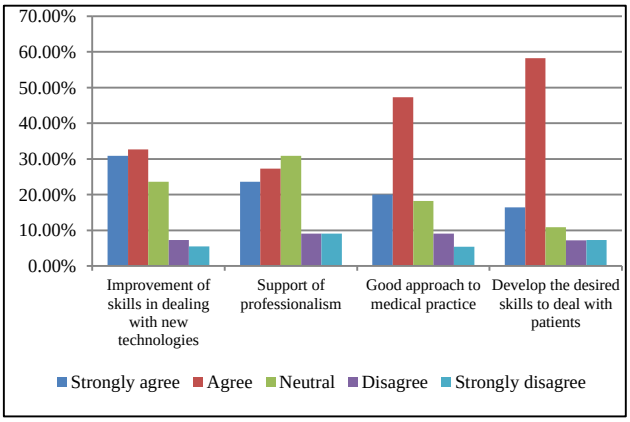

Figure 5: Students' perspectives about ILP to improve dealing with new technologies, support professionalism, provide good approach for medical practice and develop the desired medical skills to deal with patients.

The ILP showed more trust among the medical students than the TLP. They mainly agreed with ILP in improving the communication skills, dealing with new technologies, reinforcement of competencies in the research field with percentages 69.1%, 63.6%, and 65.5% respectively compared to 27.9%, 38.2%, and 25.4% respectively for TLP with high statistically significant difference between the 2 programs (Table 1, Figures 2-5).

The medical students chose the ILP as the preferable learning tool for its suitability to be applied in medical schools nowadays, development of desired doctor skills to deal with patients and for provision of good approach for medical practice with percentages of agreement 60%, 74.6%, and 67.3% respectively in contrast to 30%, 28.5%, and 38.2% respectively TLP with moderate significant difference between the 2 programs (Table 1, Figures 2-5).

Suitability to identify and deal with the community needs parameter was selected by the medical students to be reinforced by the ILP outcome with 61.8% agreement; however, 49.1% select the TLP to reinforce that parameter with low significant difference between both programs (Table 3, Figures 2, 4).

Professionalism is the only learning parameter that showed no significant statistical difference between both learning programs. 50.9% considered the ILP capable of establishing such value while 36.3% considered the TLP is the capable one (Table 1, Figures 3, 5).

DISCUSSION

The legacy curriculum relied mainly on lecture-based approach, rote learning with few activities.[17,18]

New approaches in medical education adopt self-regulated learning (SRL), learning by doing small group problem solving in order to stimulate the higher cognitive skills of the medical students to prepare them to be future professional physicians.[19] Nevertheless, some other researchers believed that ILP may or may not lead to learning enhancement in students.[20]

Studies have reached a consensus that the main influence of the students' learning is the students' perception of the educational context rather than the context itself. [21,22]

So, this study's results may help the medical education specialists to know more regarding the students' perspectives about the TLP and ILP.

The medical students chose ILP to be more effective than the TLP in improving their communication skills, dealing with new technologies and reinforcement of competencies in the research field with a high statistically significant difference between the 2 programs. This concurs with reports describing the positive effects of ILP on development of good communication skills to deal with peers, and instructors.[23,24] This is in congruence with a review study that revealed the importance of new technologies in the conduction of ILP activities like PBL.[25] The study results agreed with studies that revealed the importance of ILP in developing a future physician and researcher.[26,27]

The study revealed that ILP was the preferable learning tool for medical students due to its suitability to be applied in medical schools nowadays, the development of desired doctor skills to deal with patients and for provision of a good approach to medical practice. This is agreed by the study about the ILP stated that discussion groups, active participation in different learning activities and collaboration with classmates and teachers resulted in a higher retention of learning.[5]

Other authors proved that gaining clinical skills and retention of knowledge is achieved by removing the barrier between basic and clinical sciences. Physicians having updated knowledge, desired clinical skills and professional behavior are the needs of today's environment.[6]

Suitability to identify and deal with the community needs parameter was selected by the medical students to be reinforced by the ILP with 61.8% agreement; however, 49.1% select the TLP to reinforce that parameter with a low significant difference. This is concurs with some authors who have described ILP as having about 6 hrs per week for seminars of clinical skills training and community dimensions related to medical practice.[28]

Professionalism is the only learning parameter that showed no significant statistical difference between both learning programs. This reflects the value and the great importance of professionalism to be an important component in any learning program. Reports revealed that medical schools, "residency programs" and hospitals have hidden curricula for behavior, ethics, and professionalism. Positive role models support the values and characters of professional physicians while negative ones contradict the community and patient care values.[29]

The transition from TLP to ILP has many important challenges for both students and faculty in medical schools.[30] Deficiency of curriculum specialists and poor infrastructure prevent the transformation from TLP to ILP.[16]

CONCLUSION

ILP become the more suitable innovative tool for learning in medical schools with very good compliance among the medical students regarding development of communication skills, dealing with new technologies, research competencies, desired doctor skills to deal with patients with doctor's good approach to medical practice, identification and dealing with community needs in addition to raising the values of professionalism.

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