

STAFF' PERCEPTION OF THE PROBLEM-BASED LEARNING APPROACH

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Abstract: PBL has been implemented for more than 15 years in Egypt now, but research about PBL perception in Egypt are still scanty, as PBL approach is still not that common till now. So, this paper gives an insight to our tutor's perception of hybrid PBL that is used at Mansoura Manchester Medical program and their suggestions to improve the conduction of PBL. Mansoura Manchester program is considered a pioneer to initiate PBL based program in middle east, although that we need to get our tutors regular feedback to learn from our experience and how to improve ourselves. This research was conducted by giving a questionnaire, including closed and open-ended question, to all tutors of semester 4 at academic year 2019-2020. The tutors perceived the PBL approach positively with some concerns about students' knowledge deficiency in basic science and the need of cases to be updated. Further research should be conducted on different years of the program and using other method rather than questionnaires, moreover, a series of research should be conducted after addressing the points of improvement to assess the success, to follow up and maintain quality of our educational system.

Keywords: Mansoura Manchester program, hybrid PBL, perception, self-directed learning, tutors.

I. INTRODUCTION

Educationalist considered PBL as a student-centred approach in which teachers are more facilitators of learning rather than disseminators of information i.e., instructors who would help development of students' intrinsic attention to the subject, indorse groupwork and support students to be self-directed learners [1]. (63)

PBL tutors must find the appropriate balance between allowing students to discuss issues on their own and intervening in group interactions [2]. (64) Also, they should encourage students to develop classroom norms and ground rules for group work, as establishing attendance policies, the scheduling of due dates, and the consequences for rule violation [3]. (65). A tutor acts as a guide to scaffold students' learning, particularly in the problem analysis and reporting, as well as facilitate students' inquiry paths as they make sense of their ideas through discussion and sharing [4].⁽⁹⁾

Mansoura Manchester Medical Program (MMMP) at Mansoura University, Egypt was funded in 2006. It adopts an integrated curriculum consisting of modules as functional units, in ten semesters, mostly applying the hybrid PBL approach, in which the PBL is the main backbone of the system although it is aided with multiple lectures throughout the course. At 2006, the application of PBL based system was considered a huge challenge for students, tutors and even logistics. After more than 15 years, the application of PBL approach at MMMP needs an overlook to evaluate our staff perception of PBL approach.

II. MATERIAL AND METHODS

This study is a cross sectional type investigating tutors' perception of the PBL approach in MMMP. We used a questionnaire which was distributed electronically to all tutors of semester four, 28 in number, at the academic year 2019- 2020. It consisted of 24 closed ended questions rated using a 5-point Likert scale and three open ended narrative questions. The questionnaire was divided to 5 parts; the first one formed of 16 items, measuring both 1st and 2nd PBL session conduction and students' participation, the second part consisted of three items, asking about tutors' perception of staff training to conduct the PBL appropriately, the third one consisted of two items, measuring the tutors' evaluation of the timetable and student's assessment, the fourth part consisted of three items, asking about the tutors' feedback and evaluation of the PBL logistics. Those questions were followed by 3 narrative open-ended ones aiming to discover tutors' opinion about pros, cons of PBL system and their suggestions to improve it. The questionnaire was developed, after an extensive literature review using the web-based search engines PubMed, Medline, and Google scholar. Using key words 'problem-based learning', 'hybrid PBL', and 'PBL and tutor role'. Data analysis was done by statistical package of social sciences "SPSS" version 23. Quantitative variables were summarized in number and percent.

III. RESULTS

TABLE I: TUTORS' PERCEPTION OF PBL SESSIONS

Variables	Agree		Uncertain		Disagree	
	No	%	No	%	No	%
Students can extract the objectives by themselves.	24	85.7	3	10.7	1	3.6
Tutors often led the students to reach the objective if they miss it	22	78.6	4	14.3	2	7.1
I stick to the previously determined objectives only	17	60.7	8	28.6	3	10.7
If students extract an extra objective, I tell them it is out of our scope	12	42.9	6	21.4	10	35.7
Students divide the objectives among the group	20	71.4	4	14.3	4	14.3
Tutor provides the students with the opportunities to integrate newly acquired knowledge with previous knowledge	26	92.9	1	3.6	1	3.6
Student actively participate during sessions	26	92.9	1	3.6	1	3.6
Student always on time to each session.	24	85.7	3	10.7	1	3.6
Student attended every session	21	77.8	4	14.8	2	7.4
Students come to the 2nd PBL session prepared	23	85.2	3	11.1	1	3.7
Students are engaged in active discussion during presentation of the objectives	20	74.1	6	22.2	1	3.7
Student can clarify difficult issues during 2nd PBL.	23	85.2	3	11.1	1	3.7
The 2nd PBL session is essential and gives extra information to students	25	89.3	1	3.7	1	3.7
Tutors appreciate if students brought to the session extra information related to the objectives of the case which are not covered during lectures	25	92.6	1	3.7	1	3.7
It is important to provide lectures to students between the 2 PBL sessions	24	88.9	2	7.4	1	3.7
Give more opportunities for students to search themselves instead of providing all the information during lectures	23	85.2	3	11.1	1	3.7

Table 1 shows that most of the tutors shared in this study perceived both PBL session positively regarding students' participation, attendance, confirmed that students get extra information in 2nd PBL, and it allows them to build on their previous knowledge.

TABLE 2: TUTORS' TRAINING

Variables	Agree		Uncertain		Disagree	
	No	%	No	%	No	%
PBL orientation before participation	27	96.4	0	0	1	3.6
Orientation to PBL advantages before participation	27	96.4	0	0	1	3.6
Trained to run PBL session before participation	27	96.4	0	0	1	3.6

Table 2 shows that most of the tutors were oriented and trained to conduct PBL before they actually participate in it.

TABLE 3: TIME ALLOWED FOR PBL SESSIONS & FEEDBACK.

Variables	Agree		Uncertain		Disagree	
	No	%	No	%	No	%
Allowed time for both PBL Sessions is satisfactory	27	96.4	0	0	1	3.6
Students have enough time	26	92.9	1	3.6	1	3.6
There are marks on student participation in PBL	25	89.3	0	0	3	10.7

Table 3 shows that most of the tutors said that PBL time is satisfactory and there are marks allocated for students' participation.

TABLE 4: PBL Logistics.

Variables	Agree		Uncertain		Disagree	
	No	%	No	%	No	%
The number of students is suitable for small group teaching	25	89.3	2	7.1	1	3.6
There is adequate infrastructure in rooms of PBL	26	92.9	1	3.6	1	3.6

Table 4 shows that most of the tutors said that PBL logistic are suitable and adequate.

TUTORS' SUGGESTIONS

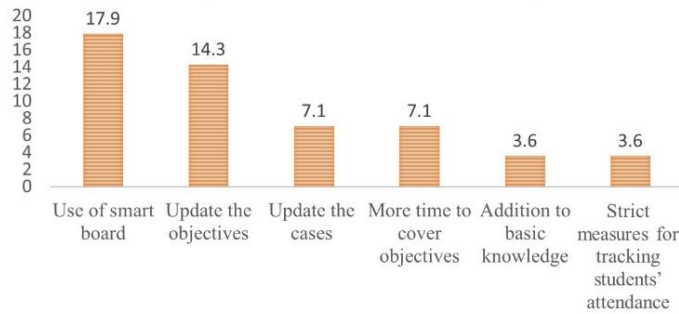


Fig. 1: tutors' suggestion to improve PBL sessions.

POSITIVE ASPECTS

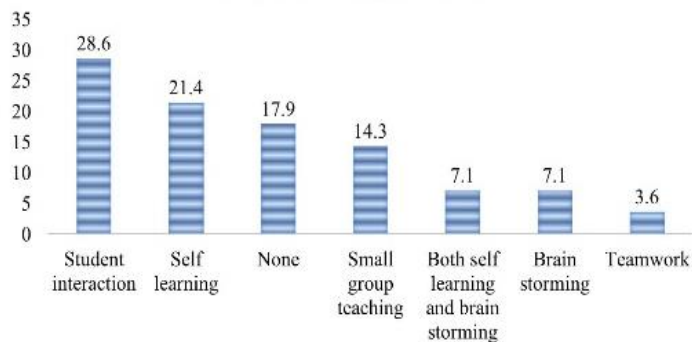


Fig. 2: positive aspects of PBL.

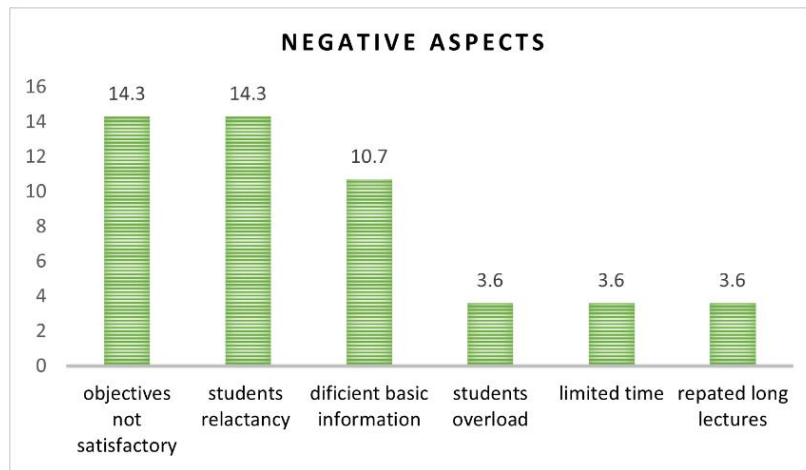


Fig. 3: Negative aspects of PBL.

Fig.1 shows multiple tutors' suggestions to improve PBL, Fig 2. shows the tutors' perception of PBL positive points while Fig. 3 shows the tutors' perception of PBL negative points.

IV. DISCUSSION

Most of tutors shared in this study reported active students' participation in discussion which was supported by Spronken-Smith & Harland, as they said most of their teaching staff were satisfied with students' interest and enthusiasm [5]. (240). On the other side, our tutors also said they often lead the students to reach the objective if they missed it, confirmed they stuck to the previously determined objectives and said that students divide the objectives among them. Our tutors also stressed on the importance to provide lectures to students between the two PBL sessions but on the contrary and they said we should give students more opportunities to search by themselves instead of providing all the information in lectures. Pervious answers revealed that our tutors are doing more active share in the PBL process than what they should as the PBL approach depends mainly on student's active role and tutors are more guiding and facilitating the process.

Moreover, most of tutors confirmed that students could extract the objectives by themselves, said they provide the students with opportunities to integrate newly acquired knowledge with previous ones, appreciate if students brought to the session extra information and confirmed that 2nd PBL session is essential and gives students extra information. These findings could be explained in the light of O Doherty et al., study who said that tutors' perception of how to facilitate the PBL impacts their practice. As our medical schools' faculties have mainly lecture-based experience, certainly, they would be uncomfortable with their changed role in the PBL process, even some tutors are challenged with this new role [6]. (238) In Wood and Tanner study, they pointed that tutor should inspire intellectual activities, as creating connections with pervious knowledge, providing feedback to students, and directing them to monitor their own learning [7].. (198)

Although, PBL changed deeply the classical teacher's role, tutors still have a vital role in the successful PBL implementation through their perceptions, attitudes, and behaviour in their groups, as they must be prepared and trained before its implementation [8].. (32) Additionally, our students and tutors are still more accustomed to the traditional teacher-based system of passive learning, shifting them into a different paradigm of teaching and learning will face resistance and the mindset changing of tutors will need a lot of time and persistence [9].. (241). In our study, most of tutors were oriented and trained to run PBL session before their participation. Despite this, many of the questionnaire's answers revealed inadequate implementation of the PBL approach which might be explained as the teachers will not understand the PBL approach completely till they are involved in designing a problem-based learning task, which will directly impact their level of implementation [8].. (32) Moreover, PBL structure differs from traditional methods as there is no structured plan, but the teachers should be prepared to deal with what might come up in session [10].. (242). So, faculty training program should be tailored according to the needs of the tutors to familiarise them with their role as facilitators [11]. *. We suggested to conduct a training program to faculties focusing more on the practical aspect as role player and common problem that tutors face during PBL.

Most of tutors participated in this study agreed that time allowed for both PBL sessions is satisfactory, and stated there is marks on student participation in PBL. It has been explained as the length and quality of the PBL sessions is affected by the role and functioning of the tutors themselves [12]. [13]. (250, 251) their approaches to teaching [14]., (252) and the specialty

involved in the discussed case [15].. (253). The marks assigned for students' participation can be explained as there is consensus in the existing literature that it reinforces the learning motivation. Structuring the activities in the form of challenge, goal, feedback, concentration, and control has a higher stimulus on students' intrinsic motivation [16].. (191).

Most of tutors agreed that number of students is suitable for small group teaching and said that there is adequate infrastructure in rooms of PBL. Multiple factors have been recognized to affect PBL implementation related to students (numbers and engagement), tutors (style and commitment), curriculum integration, logistics (adequate infrastructure and human resource), coordination and monitoring of the programme [17].. (254)

Regarding the tutor's suggestions to improve the PBL process, some suggested to upgrade the PBL infrastructures as usage of smart boards. This could be difficult at the running time as the needed logistics, particularly laboratories and technology, are major challenges especially for developing countries and students could still use markers, flipcharts, white boards and flip charts in brain storming during the sessions [18].. (231)

Few tutors stated that the objectives are not satisfactory, said that students have deficient basic information and reported the presence of repeated long lectures. Similar concerns have been addressed before in literature, and it has been stated that the curriculum's goals should be clear enough from beginning and it is vital to ensure that hybrid PBL has not been shifted to a system in which the faculty end up doing all the work of a traditional subject as lectures and labs, plus the PBL sessions which will put an additional burden on them [19]. **. Therefore, schools should have a proper program evaluation system and a quality assurance system to inspect their curriculum periodically for signs of dysfunction to detect and imply the needed corrective actions [20].. (129).

Few tutors stated that students are reluctant to prepare objectives. Two problems have been identified facing PBL implementation in developing countries: the lack of resources and unwillingness to self-directed learning (SDL). The self-directed learning should be immersed in all activities as lectures and practical sessions. Faculty should give only general ideas not the full knowledge during lectures and practical sessions to decrease students' resistance to active learning. [21]. (258)

Regarding positive points of PBL, tutors mentioned student interaction, self-learning, brain storming, and teamwork. These results were supported by an older study by Musal et al., who said that the studied tutors confirmed that students gained multiple skills as clinical reasoning, problem solving, communication and self-directed learning skill [22].. (257) Also, increased intrinsic motivation of students, and integration of basic and clinical science [23].. (259)

Regarding the PBL negative points, few tutors reported that students have deficient basic information. This was supported by Cónsul-giribet who stated that newly graduated nurses lacked the theoretical basic science knowledge at the end of their PBL based program [24].. (260) and they thought this could affect their expertise and professional image. Moreover, Glew tracked graduates of PBL system, and they found they were inadequate in the basic science. To overcome this issue, he suggested a greater faculty input into deciding the core curriculum should be maintained and to assist in lecturing and tutoring for the clinical blocks [21].. (258)

V. CONCLUSION

The tutors who shared in this study perceived the PBL approach positively in general confirming that PBL stimulated critical thinking and self-directed learning of students. It also helped them to integrate information and develop teamwork skills. More emphasis that PBL should be conducted as a student led activity rather than staff led. Conducting a continuous faculty training program is a must, based on the faculty needs and combined faculty and students' feedback. The cycle of staff training and obtaining feedback from staff and students should be continuous and regularly conducted. The obtained feedback must be analysed and acted upon to maintain the program's quality and to check the improvement opportunities that should be addressed. Further research must be conducted on different years of the program and using other method rather than questionnaires. moreover, a series of research should be conducted after addressing the points of improvement to assess the success, to follow up and maintain quality of our educational system.

Limitation of the study:

This study was only conducted only on one semester, more studies needed to involve multiple semesters and use instruments other than questionnaires.

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