PARAMETERS ASSESSED FOR QUALITY AND MANAGEMENT OF MODULAR SYSTEM BY THE STUDENTS OF FIRST AND SECOND YEAR MBBS

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ABSTRACT

OBJECTIVE: To assess the quality and management of the modular system in the first two years of Islamic international medical college Rawalpindi.

METHODOLOGY: Based on convenience sampling, 180 students of first and second year MBBS of Islamic International medical college Rawalpindi were given proforma at the end of each module and evaluated by the evaluation committee.

RESULTS: First year students, showed agreement for objectives of the module, integration of theory & practical's, and for grasping of the module. They were dissatisfied with the time management of the topic completion. Second year students were dissatisfied with integration of theory & practical's. Students of first year strongly disagreed (11.2%) that assessment reflects the objectives in contrast to 2nd year (8.8 %). Captivation of interest of module content agreement was 44% for 1st year student's vs 29.7% for 2nd year. Strong agreement for the reflection of objectives was 20.5% of 1st year students vs 1.1% for 2nd year students. Second year was satisfied with the PBL content (20.6%). Strong agreement was shown by 12.2% of 1st year students as compared to 5.5% of 2nd year that it encouraged the thinking process.

CONCLUSION: Overall students are satisfied with the modular system. First year students are not satisfied with the time management of the topic completion, content of the module and assessment reflecting the objectives. Second years students were more satisfied than 1st year students except for integration of theory & practicals. Efforts are needed to address the students concerns regarding modular system.

KEYWORDS: Modular System, Quality, Management, Proformas.

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INTRODUCTION

Twentieth century, was the century of evolution of medical education and organization of medical schools. Abraham Flexner[1], in 1910 published his report on medical education in the United States and Canada and subsequently led to major transformation of medical education in United States. Ever since the publication of Flexnor report, efforts have been made to revitalize the medical education and changes in the curriculum have been made to meet the needs of the future doctors.

The conventional system of medical education has been criticized for a variety of reasons which include: irrelevant information that is being taught in the basic sciences, students are not motivated, and study program is overloaded.[2] Integrated teaching system was introduced for the first time in Cleveland USA in 1952[3]. Integrated system can be either vertical or horizontal. In this college traditional method of teaching was replaced by vertical modular method. In this method integration between basic sciences and clinical medicine is done. The Basic Medical Science Faculty has to work in collaboration along with teachers from the clinical sciences to design a system based integrated curriculum for the first two years of the MBBS class.[4]

All over the world integrated curriculum has been adopted and performance of students is improving. All curricular planners are sensitive to the time constraints of developing a viable course program that does not overburden students and still preserves ample time and opportunities for appropriate student learning[5]. Preferably, there is more time devoted to learning those skills needed most often for patient care and less time devoted to learning those skills rarely needed for patient care or that fall outside of a chiropractor's scope of practice[6]. The goals are for students to learn and be able to apply the disciplinary content, develop critical thinking abilities, and acquire skills of life-long learning, communication, and team building[7]. PBL has been widely used in recent years in medical and related areas of professional education. In those settings each small

group typically has its own faculty facilitator[8]. PBL can be successfully adapted for teaching undergraduate and graduate basic science students, in part by having multiple groups meet in one room with a roving facilitator[9].

Keeping the importance of development of integrated curriculum this study was designed to take feedback from students of Islamic International Medical College (IIMC), Rawalpindi to assess the quality and management of the modular system by using different parameters. We included two classes; first year and second year MBBS in this study and evaluated the outcome of modules being taught to them.

METHODOLOGY

Design: Proformas were distributed at the end of each module and then evaluated by the members of evaluation committee and discussed with the students and the faculty concerned with that particular module.

Participants: 90 students of first year and 90 students of second year MBBS of Islamic International Medical College, Rawalpindi (IIMC).

Sampling: It was convenience sampling. One of the authors took informed consent from the students.

Inclusion Criteria: Medical students of first and second year MBBS

Exclusion Criteria: Students suffering from any kind of:

- Psychiatric illness
- Chronic medical illnesses

The guide booklet for the specific module specified the task force members, rationale of the module and the goals to be accomplished along with the topics and content of the subjects plus teaching methodology of the module. Methods of evaluation of the module consisted of continuous assessment, written test and OSPE (on spot practical examination). Text books and reference books specified at the end of the booklet. Based on this guide booklet the specific evaluation proforma was designed; including the year, name (optional) and gender of the student.

- The students were asked to answer the questions on proforma. The following key was given to help select the number that most closely reflected on each statement:

1. Strongly Agree with the statement
2. Agree with the statement
3. Neither agrees nor disagrees
4. Disagree
5. Strongly disagree with the statement

In this study we concentrated only on the following part of the proforma:

Part (A) which was to be filled by the students; included objectives whether stated clearly or not, management of reading content, classroom environment, module informative or not, content of this module understandable or not, time for completion of topic, depth of content and combination of theory and practice, ***plus*** parameters what we wanted to assess for the quality and management of the system i.e. provision of student guide, learning objectives (LO'S) on time, interactive and innovative activities used by the teachers during the lectures which helped in their learning, objectives were covered properly, formative assessment was arranged or not**.**

RESULTS

This study was conducted on 90 students of 1st year MBBS and 90 students of 2nd year MBBS. Table 1 shows the mean response score of 1st year MBBS students regarding various parts of the module in response to various questions. It shows that for objectives of the module, integration of theory & practical's, and for grasping of the module they *agree* with the statement. They could not decide for the environment of the classroom, presentation and depth of the module, and were totally dissatisfied with the time management of the topic completion**.**

Table 2 shows the mean response

TABLE I: RESPONSE SCORE OF 1ST YEAR MBBS STUDENTS REGARDING VARIOUS PARTS OF THE MODULE (N=90)

Part of Module	Minimum Score	Maximu Score	Mean Score$
Objective	1.00	4.00	2.1333
Content	1.00	5.00	3.0556
Classroom	1.00	5.00	2.4111
Module	1.00	5.00	2.0778
Presentation	1.00	5.00	2.9667
Time	1.00	5.00	3.5333
Depth	1.00	5.00	2.9111
Theory/Practical	1.00	5.00	1.9326

$1: Strongly Agree with the statement; 2:Agree with the statement; 3:Neither agrees nor disagrees; 4:Disagree; 5:Strongly disagree with the statement

TABLE II: RESPONSE SCORE OF 2ND YEAR MBBS STUDENTS REGARDING VARIOUS PARTS OF THE MODULE (N=90)

Part of Module	Minimum Score	Maximum Score	Mean Score$
objective	1.00	5.00	2.4333
content	1.00	5.00	2.8111
classroom	1.00	5.00	2.6000
module	1.00	5.00	1.8778
presentation	1.00	5.00	3.0778
time	1.00	5.00	3.3889
Depth	1.00	5.00	2.9778
Theory/practical	1.00	5.00	3.8556

$1: Strongly Agree with the statement; 2:Agree with the statement; 3:Neither agrees nor disagrees; 4:Disagree; 5:Strongly disagree with the statement

TABLE III: RESPONSE RATE (IN %AGE) OF 1ST YEAR MBBS STUDENTS REGARDING MANAGEMENT OF THE MODULE (N=90)

Management of the module	Strongly agree	agree	Neither agree nor disagree	Disagree	Strongly disagree
Handbooks helped	17.8	51.6	10.8	18.7	1.1
preparation of teachers	14.4	67	6.5	7.7	4.4
module content captivated interest	13.3	44	12.3	20.2	10.2
reflects objective	20.5	40.3	10	18	11.2
teachers used interactive and innovative methods	7.8	27.5	42.6	16.5	5.6
Content sufficient for PBL	6.7	31.9	31.6	19.8	10.0
encouraged thinking and perspective	12.2	33	19	28	7.8

TABLE IV: RESPONSE RATE (IN %AGE) OF 2ND YEAR MBBS STUDENTS REGARDING MANAGEMENT OF THE MODULE (N=90)

Management of the module	Strongly agree	agree	Neither agree nor disagree	Disagree	Strongly disagree
Handbooks helped	19.8	54.9	8	10	7.3
preparation of teachers	7.7	53.8	10	20	8.5
module content captivated interest	5.5	29.7	21	38.3	5.5
reflects objective	1.1	14.5	26	49.6	8.8
teachers used interactive and innovative methods	7.7	23.2	36	24.3	8.8
Content sufficient for PBL	20.6	23.5	25	20	10.9
encouraged thinking and perspective	5.5	28	17	41.8	7.7

score of 2nd year MBBS students regarding various parts of the module in response to various questions. This table shows that there is not much difference between their response and that of first year students in all questions, except for the integration of theory & practical's where they were very dissatisfied.

Tables 3 & 4 show the response rate of 1st year & 2nd MBBS students respectively, regarding management of the module. By comparing these two tables for assessing the quality and management of the modular system we can observe certain important points. Students of first year strongly disagreed (11.2%) that assessment reflects the objectives in contrast to 2nd year (8.8%). Captivation of interest of module content was agreed by 1st year student's i.e. 44% as compared to 29.7% for 2nd year. Strong agreement for the reflection of objectives was shown by 1st year students i.e. 20.5% as compared to 1.1% for 2nd year students. Concerning

the teaching methodology there was not much difference in the strong agreement for both the classes i.e. 7.8% for 1st year and 7.7% for 2nd year On the other hand, 2nd year was satisfied with the PBL content (20.6%) in contrast to 1st year (6.7%). Strong agreement was shown by 12.2% of 1st year students as compared to 5.5% of 2nd year that it encouraged the thinking process.

DISCUSSION

In the present day world of teaching medicine the scenario is changing all over the world and in Pakistan both in the private and public sector major reforms are being introduced at the undergraduate level. Pakistan Medical and Dental Council and Higher Education Commission have instructed the medical colleges to adopt the integrated system of education.

This system of education is supposed to make the future doctors self learners and thinkers from the very beginning of their medical education.[10] Different methods of modular systems have been introduced, but we have to assess their standard of assisting the students[11]. In this study it was seen that handbooks helped the students in understanding the content of module both for second and first year students. One of the important aspects of modular system is that the content should reflect the objectives of the module. In this study it was seen that the students were not satisfied with the fact that the content matched the objectives. For the 1st year students it was difficult to adjust because they cannot correlate the objectives and the assessment that they undertake at the end of the module. The curricula should be planned in such a way that its content should impact the students learning faculties' to their satisfaction. The training of faculty is a must for running an integrated system. Our faculty is not trained properly for the integrated system and it becomes difficult for them to integrate the objectives of the subject being taught into a more practical problem oriented assessment i.e. awareness of assessment, and assessment issues and priorities should be defined[12]. In this study it was seen that content of the module was also not captivating for the 1st year i.e. 13.3% in comparison to 5.5% of 2nd year. Nowadays the lectures have been replaced with interactive lectures. Only 7% of students both from first and second year were satisfied with the performance of teachers in making lectures interactive. Text should be supported with images, figures and videos and in this way made more interactive and captivating for the listeners[13]. For these purposes colleges should conduct specific workshops for the training of the faculty on these lines. Problem based learning is an integral part of integrated system. In this study it was seen that about 20.6% of second year students agreed that PBL tool was efficiently used but first year students disagreed with the fact. One of the drawbacks of assessment of the vertical integration modular system is that the problems vary from module to module. For some subjects the teachers of basic side are more prepared and in others the clinicians take over their subject more appropriately. So for the students to continuously adjust to the changing scenario from basics to clinical is uncomfortable. Institutions must aim for the horizontal integration which according to the study conducted by the Brynhildsen et al students scored horizontal integration significantly higher.[14] The basic aim of integration is to encourage critical thinking amongst medical students. First year students agreed that critical thinking was encouraged while only 5% of second year agreed with it.

Student's feedback is important in improving the teaching strategies, and they should be made more responsible for their learning and assessment outcomes. Restructuring of the system is required in our country's medical colleges that should provide electronic management systems, which can provide infrastructure for the facilitation of the administrative work of the faculty and administration[15]. The integration of subjects in medical schools should be taken as a responsibility and it requires some exhaustive efforts. In the absence of outcome measures, it is questionable whether conclusions of success are justifiable or whether the conclusions can be applied to basic science courses. When compared with conventional curricula, vertical integration has been shown to improve student attitudes toward basic science[16] stimulate profound rather than superficial learning and achieve equivalent competency with less instruction time.[17] While vertical integration may be beneficial in its own right, it does not address the problems of horizontal integration at the basic science level. Indeed, horizontal integration is necessary to take full advantage of vertical integration.

CONCLUSION

Overall students are satisfied with the modular system. First year students are not satisfied with the time management of the topic completion, content of the module and assessment reflecting the objectives. Second years students were more satisfied than 1st year students except for integration of theory & practicals. Efforts are needed to address the students concerns regarding modular system. Institutions must aim for the horizontal integration and should restructure the system in our country's medical colleges that should provide electronic management systems for quality assurance.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under

AR: Acquisition, analysis and interpretation of data, drafting the manuscript, final approval of the version to be published

KI: Conception and design, critical revision, Analysis and interpretation of data, final approval of the version to be published.

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