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Challenges faced by the faculty while implementing Assessment in an Outcome based integrated curriculum for MBBS

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ABSTRACT

Introduction:

Medical institutes all over Pakistan are shifting from traditional curriculum to outcome based integrated curriculum because of the myriad of benefits of the later one and advanced acceptance internationally. Without authentic assessment methodologies, outcome based integrated curriculum becomes more or less the same as traditional curriculum with more specified objectives and outcomes and integration of disciplines. This study explored the faculty's perceptions about the challenges they faced while implementing outcome based assessment practices.

Methods:

A qualitative phenomenology study design was chosen for this study. 14 faculty members were selected from Islamic International Medical College and University College of Medicine and Dentistry. The participants of the study were queried about their perceptions about the challenges encountered while implementing outcome based assessment practices in their institute for the first time. The data obtained from the individual semi structured interviews was then analyzed manually.

Results/Findings: Initially 48 nodes/codes emerged which were later condensed to 27 nodes. Similar nodes were grouped together under 15 nodes out of which six main themes emerged. The themes that emerged were: (1) Resistance to change, (2) Reluctance to implement, (3) Lack of infrastructure, (4) Modification in the assessment practices and format, (5) MCQs development- a tedious task, and (6) Standardization- an exhaustive process.

Conclusion: The study concludes the implementation of outcome based assessment methodologies as a collaborative process that needs collegial participation of all the faculty members of the institute to overcome the hurdles faced in the transition process.

Key words: Challenges, faculty, assessment, alignment, and outcome based integrated curriculum

INTRODUCTION:

Shift from traditional curriculum to outcome based integrated curriculum

To promote global health, medical institutes are adapting their curricula to educate students on current and future healthcare issues. This curriculum drift strengthens medical education and the healthcare system. (Kutalek et al., 2022; Sbaiti et al., 2024) The objectives of this shift include:

- Developing a roadmap for medical education in growing contexts
- Designing blueprints for producing compliant undergraduates
- Creating long-term solutions for the existing curriculum
- Developing professional values and ambitions in medical education
- Producing doctors who are lifelong learners, researchers, and leaders. These objectives can be achieved through advanced teaching methods, standardized learning outcomes and competencies, and aligned assessment methodologies.

Curricular drift in Islamic international medical college

In 2009, Islamic International Medical College (IIMC) transitioned from a traditional, discipline-based curriculum to an outcome-based, integrated one. The main goal of this change was to design a curriculum that focuses on objectives, outcomes, and competencies for producing "safe practicing Muslim doctors."

Curricular drift in University College of medicine and dentistry

University College of Medicine and Dentistry (UCMD) recently changed its curriculum from traditional, discipline-based to outcome-based, integrated. The main goal of this transition was to create a collaborative, evidence-based, student-centered learning environment to produce researchers, healthcare providers, lifelong learners, and critical thinkers.

This qualitative study aims to identify challenges faced by faculty in implementing assessment in an outcome-based, integrated curriculum. The results can provide a reference for medical colleges undergoing similar curriculum changes.

METHODOLOGY:

A phenomenological study was conducted at two private medical institutes: Islamic International Medical College (part of Riphah International University) and University College of Medicine and Dentistry (University of Lahore). Both institutes are recognized by the Higher Education Commission and use an outcome-based integrated curriculum.

The study was approved by the ethical review boards of both institutes, and informed consent was obtained from all participants. Anonymity, confidentiality, and privacy were maintained. Seven faculty members were selected from each medical college, including two heads of departments from basic and clinical sciences, two members from the medical education department/assessment committee, and the Dean/Principal of each institute.

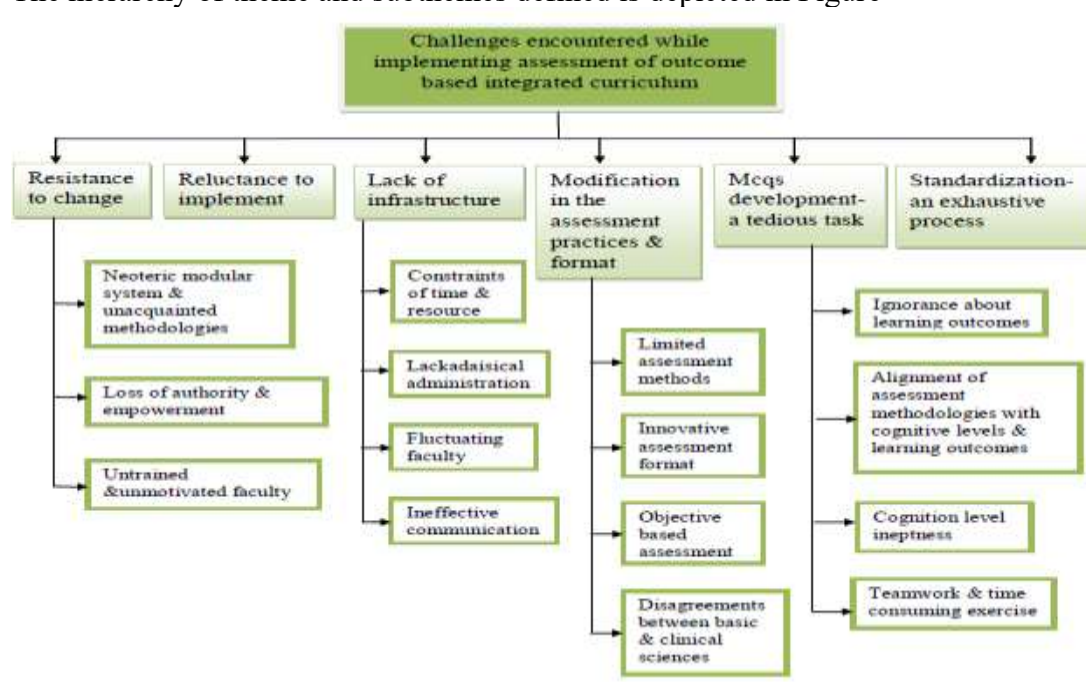
Semi-structured interviews were conducted at both institutes. Appointments were made with faculty members two weeks in advance, and a reminder call was placed the day before to confirm availability. The interviews were recorded on mobile phone voice recorders, assigned codes, and transcribed promptly.

A thematic analysis of the data was conducted using Atlas ti software and manual analysis. All transcripts were carefully read, and important information was highlighted to create 48 nodes, which were later condensed to 15. These were used to define six major themes of challenges or issues related to outcome-based assessment identified by faculty.

RESULTS:

Of the 14 faculty members, 6 were male and 8 were female, with work experience ranging from 3 to 18 years. Only faculty who had witnessed the transition from traditional to outcome-based integrated curriculum were interviewed

The hierarchy of theme and subthemes defined is depicted in Figure



Theme 1: Resistance to change

a. Neoteric modular system

The major challenge encountered was the resistance offered by the faculty to the innovations in the assessment practices. Faculty members were of the view that resistance mainly was faced because of the introduction of the new modular system as initially the assessment strategies weren't changed and students were assessed on previous tools like MCQs, SEQs, VIVA and OSCE.

b. Loss of authority & empowerment

Another important reason faculty resisted to the change in curriculum and assessment was because they felt that their authority and command over their subject domain has been taken control over.

c. Untrained & unmotivated faculty

Most of the faculty in both the institutes at the time of introduction of the outcome based integrated curriculum lacked the basic understanding about its teaching and assessment methodologies. Senior faculty members with experience of 10-15 years were the ones that had major disagreements with the medical education department.

Another important issue mentioned by one of the participants relates with the use of latest technology for assessment purposes. She mentions it to be quite a challenging task to make the faculty fluent with the technological advancement.

Theme 2: Reluctance to implement

Initially, there was resistance to the new teaching and assessment methodologies, despite recognition of their importance in medical education. One participant mentioned that many of the faculty who were unwilling to implement the outcome-based integrated curriculum and its assessment methodologies were those doing masters in health professional education at the time

Theme 3: Lack of infrastructure

Participants of the study during their individual interviews frequently mentioned the lack of basic infrastructure at the time of the development and implementation of outcome based integrated curriculum. Synthesis of their perception about this resulted in further subthemes as follows:

a. Constraints of time and resource

Several participants shared their viewpoints regarding the challenges they encountered in terms of time and resource insufficiency at their workplace. Initially the assessment items were made a day before the combined block assessment in much little time with not enough resources due to which the faculty used to feel reluctant and overburdened.

b. Lackadaisical administration

Just like the teaching faculty the administration staff also posed some threats to the innovations in curriculum and assessment.

c. Fluctuating faculty

One of the participants of the study highlighted an essential domain during the interview that was related to the junior teaching staff like demonstrators and lecturers that keeps on switching their jobs. It was difficult to train those faculty members and even more difficult to train the new ones when the previous ones left.

d. Ineffective communication

Two participants shared their opinions regarding the communication gap between the teaching and administrative faculty which if minimized can solve many problems. The participants believed that the change has to be communicated to all the stakeholders of the institute before its actual implementation.

Theme 4: Modifications in the assessment practices and format

Assessment, a core component of outcome based integrated curriculum went through multiple changes in both the institutes. The faculty hesitated most when they had to make innovative MCQs according to learning outcomes and had to completely assess the students on those.

a. Limited assessment methods

Five participants of the study believed that the students should be assessed on all levels to assess their depth of learning. They are of the view that only MCQs, as a single assessment methodology cannot assess the student's knowledge completely. All the five participants voted for bringing back the seq component in the assessment of students.

b. Innovative assessment format

With the introduction of MCQs and seqs becoming obsolete, there came innovations in the assessment format as well. MCQs made were re checked by the assessment committee for accuracy and alignment with the learning objectives and cognitive levels. Six participants expressed their unpleasant experiences while filling in the long templates.

c. Objective based assessments

As all the assessment items in the outcome based integrated curriculum followed the learning outcomes, the assessment became more objective based and more transparent. One of the participant was actually in favor of assessments becoming more transparent and student friendly but had some apprehensions too.

d. Disagreements between basic and clinical sciences

Initially, there were major disagreements between the basic and clinical sciences departments when creating assessment items due to the clinical faculty's heavy workload and lack of time to attend assessment committee workshops. This resulted in poor quality MCQs that had to be redone.

Theme 5: MCQs development- a tedious task

As the assessment methodology in outcome based integrated curriculum shifted mainly to the MCQs, multiple workshops were conducted in both the institutes in which the faculty of every department was trained on MCQs development. But it was a long tedious journey along which came many hardships and challenges that are discussed in the following subthemes;

a. Ignorance about learning outcomes

Most of the faculty was initially unaware about learning outcomes. But with the passage of time and with the help of multiple workshops the faculty was finally trained to make learning outcomes and assessment items according to those particular learning outcomes.

b. Alignment of assessment methodologies with cognitive levels and learning outcomes

Another major challenge encountered while developing the MCQs was the misalignment between the cognitive levels, learning outcomes and assessment methodologies.

c. Cognition level ineptness

After the faculty was trained on making learning outcomes and aligning MCQs to those particular learning outcomes, another challenge of cognition level ineptness was faced in which the faculty preferred making low quality recall level MCQs instead of analytical ones as they were easier to make.

d. Team work and time consuming exercise

The one challenge that cannot be overlooked is the time, patience and motivation it requires to develop the mcq pool.

Theme 6: Standardization-an exhaustive process

MCQs must be standardized to be valid and reliable. Initially, faculty did not take the standardization process seriously and submitted poorly checked MCQs to the assessment committee, causing problems. Student participation is necessary for quality assurance in medical

education. Some participants mentioned that students were also involved in the standardization process.

Discussion

The data collected is discussed here in the light of six major themes formulated.

Theme 1: Resistance to change

In my study, 9 out of 14 participants (64%) mentioned faculty resistance, divided into three subthemes: unfamiliarity with the new modular system and methodologies, loss of authority and empowerment, and untrained and unmotivated faculty. 2 participants (14%) were unfamiliar with the new modular system, even when assessment tools were unchanged. 2 participants (14%) resisted the new techniques because they found module development daunting. 3 participants (21%) resisted due to lack of understanding of the new assessment methodologies and their role in the college's mission and vision. Similar findings have been identified in other studies where faculty expressed unease about new systems, perceived loss of control, and insufficient institutional support (Malik and Malik, 2021; Aziz *et al.*, 2023) and 3 participants (21%) in my study believed that lack of training and awareness about the new methodologies contributed to resistance

Theme 2: Reluctance to implement

While accreditation reaffirmation is important for medical institutes, it should not be the sole reason for faculty to engage in outcome-based assessments. Instead, they should be motivated by the benefits for student learning. (Abou Hashish, Alnajjar and Rawas, 2025) In my study, 2 participants (14%) were hesitant to implement new techniques due to lack of understanding and increased workload. These challenges were addressed through workshops

Theme 3: Lack of infrastructure

Seven participants (50%) identified a lack of necessary infrastructure as a challenge in the transition to outcome-based assessment practices. This includes sufficient time and resources, cooperative staff and administration, trained faculty, and effective communication. Two participants mentioned making assessment items quickly with limited resources, compromising quality. One participant mentioned a lack of resources for the transition. Similar challenges, including a lack of resources, support from leadership, and increased workload, have been identified in other studies as hindrances to the implementation of assessment methodologies. (Gopalakrishnan *et al.*, 2022)

Theme 4: Modification in the assessment practices and format

Limited assessment methods: Outcome-based assessments allow students to show progress through comprehension and application of course material, not just memorization. (Harden, 2018) 36% of participants protested the use of only multiple-choice questions (MCQs) as an assessment strategy, arguing that it does not fully assess students' knowledge and depth of learning. They suggested adding back a component to assess more learning outcomes.

Innovative assessment format: As traditional assessment methods became obsolete, institutes made changes to their assessment formats. 43% of participants found filling in long templates for

each multiple-choice question unpleasant and time-consuming. In another study, an institute changed its student assessment procedures, policies, and format to align with outcomes defined in the curriculum. (Gupta and Srivastava, 2024) Faculty members struggled to create psychometrically sound outcome-based assessment tools and correctly aligned assessment formats, especially in areas where communication and advocacy were being assessed. (Dewi *et al.*, 2024)

Objective based assessments:

Outcome-based assessments offer benefits such as objectivity and transparency. (Alqahtani *et al.*, 2025; Nhan, 2025) 21% of participants appreciated these newer assessments as more transparent and student-friendly, but had reservations and lacked the knowledge and skills to make them more effective. They were also unwilling to receive appropriate training. (Tariq *et al.*, 2025)

Theme 5: MCQs development-a tedious task

As the transition from traditional curriculum to outcome based integrated curriculum was made, assessment methodologies also changed from traditional pencil-paper tests to MCQs assessing high cognitive levels and learning outcomes. (Keister and Brohm, 2025) This long tedious journey of mcq development came with many hardships that are explored in detail in this study as further subthemes given below:

Ignorance about learning outcomes: Learning outcomes can document, measure, and report students' learning and academic achievement. (AlAskari *et al.*, 2024) 36% of participants in a study mentioned that writing effective learning outcomes for the first time can be difficult for faculty members, who were initially unaware of them and how to formulate them.

Alignment of assessment methodologies with cognitive levels and learning outcomes

6 participants (43%) highlighted this significant issue of alignment in their respective interviews. The misalignment and poor fit between the assessment methodologies and student learning outcomes has also presented as the most glaring challenge in other studies (Khan *et al.*, 2025a)

Cognition level ineptness

21% of participants identified a challenge with making low-cognition level multiple-choice questions (MCQs) mostly on the recall level. Faculty members found it easier to make MCQs on the recall level than on the application and analytical level. The course learning outcomes were not given proper weight in constructing assessment items, which often ignored the analysis and evaluation level of Bloom's Taxonomy. It is recommended to develop assessment items that allow students to demonstrate deep understanding of core concepts. (Khan *et al.*, 2025b)

Teamwork and time consuming exercise

21% of participants shared experiences developing multiple-choice questions (MCQs) and the time it took to generate a pool. They believed that MCQ development is a teamwork process requiring time, motivation, cooperation, and grey matter. All faculty members should work together, as a single faculty member cannot provide all assessment items. This transition in assessment methodologies requires teamwork, commitment, support, and dedication from all faculty members and administration personnel. (Abdulghani *et al.*, 2015)

Theme 6: Standardization – an exhaustive process

(Saaiq, 2024) highlighted the challenge of setting standards for outcome-based, integrated curriculum assessments that are difficult to quantify. Decisions about formative or summative assessment formats, frequency, and standards also remain challenging. (Mushtaq *et al.*, 2024) One participant in a study explained the standardization process in detail during an interview.

Limitations

The study is delimited to only two medical institutes of Pakistan so its results are not generalizable and applicable to other institutes introducing outcome based assessment methodologies. Moreover, only qualitative method is employed in this study without using any quantitative tool. Further studies should be carried out across various medical institutes of Pakistan to explore more challenges and to confirm our findings.

Recommendations

Curriculum is constantly evolving in response to a changing world. Institutes that embrace this change will face challenges but also benefit from student progression internationally. Continuous improvement requires capturing, documenting, and addressing problems in real time. To overcome challenges, trust and engagement among faculty members should be increased.

Conclusion

This study presents the perceptions of internal stakeholders on the first-time implementation of assessment methodologies in an outcome-based, integrated curriculum. Such a program, integrating basic and clinical sciences and planning assessments based on defined outcomes, can be implemented with vision, passion, dedication, and resources. The assessment process should be collaborative, requiring all faculty members to participate and play appropriate roles, with administrative support for resource allocation and staff coordination.

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