Original Article

Assessing the Curriculum Viability Inhibitors in an Undergraduate Medical Curriculum from the Perspective of Teaching Faculty

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Abstract

Objective: Curriculum viability refers to the sustainability and effectiveness of an educational curriculum. This study was done to assess curriculum viability inhibitors in an undergraduate medical curriculum at the University College of Medicine and Dentistry, Lahore, Pakistan.

Methodology: This qualitative exploratory study was conducted from November 2023 till March 2024, including 8 faculty members with more than 5 years of experience from both the clinical and basic sciences of undergraduate MBBS program at UCMD. The questionnaire filled in before conducting FGD contained 6 viability inhibitors, which included Educational Program Inhibitors; Disciplinary Cultural Inhibitors; Social Interaction Inhibitors; Institutional Policies Inhibitors; Communication Practices inhibitors; and Faculty Involvement Inhibitors. There were total of 25 items collectively under these six inhibitors. The FGD that followed was conducted for two hours, involving two main interviewers, two observers and one interpreter for recording the data.

Results: All of the 8 participants of the cohort unanimously agreed that there were no issues in the educational program and the curriculum was designed according to the major outcomes of the institute and was being followed in letter and in spirit. However, they highlighted 3 out of 25 items which according to them were not effective. First two items belonged to institutional policies inhibitors (item 12, and 15), and one belonged to faculty involvement inhibitors (item 25). The data underwent rigorous thematic analysis, involving the meticulous manual examination of transcribed data.

Conclusion: While the faculty was generally satisfied with the curriculum, minor challenges exist that can be addressed through collaborative SWOT analysis meetings with stakeholders. The report emphasized the importance of continuous improvement and stakeholder engagement for a sustainable and responsive curriculum.

Keywords: Curriculum viability inhibitors, undergraduate, medical curriculum, Focus group discussion.

Introduction

A curriculum is a standards-based sequence of planned experiences where students practice and achieve proficiency in content and applied learning skills. It acts as the central guide for all educators as to what is essential for teaching and learning, so that every student has access to rigorous academic experiences.[1] University College of Medicine and Dentistry has implemented Integrated Modular Curriculum since 2015. Although regular program evaluations and faculty feedback have been conducted since its implementation nine years ago, the curriculum's viability had not been assessed until this research was undertaken.[1] Curriculum viability refers to the sustainability and effectiveness of an educational curriculum.

It means that the distinctly articulated content and skills can be taught and learned without rushing through the timeframes available during the academic year.[2,3] Usually major components of curriculum viability include: the alignment of knowledge and skills a student is acquiring with educational objectives and goals; flexibility and adaptivity of curriculum to new innovations; ideas, and pedagogical advancements; relevance to need of time; cultural and social sensitivity; engagement and motivation of students and faculty members; assessment and evaluation; professional development of faculty, and Integration of feedback mechanism.[2,4] Curriculum viability plays a crucial role in ensuring that educational programs remain effective, relevant, and responsive to the evolving needs of students, educators, and society.

Curriculum viability is determined by assessing alignment with educational goals, relevance to learners, effectiveness in achieving desired learning outcomes, adaptability to different contexts, appropriateness of assessment methods, resource requirements, feedback mechanisms for improvement, long-term sustainability, standard compliance, and consideration of cultural and ethical factors. Educators can establish whether a curriculum effectively serves the requirements of learners, complies with educational standards, and is long-term sustainable by assessing these elements. This thorough evaluation assures that the curriculum is effective, interesting, and conducive to significant learning opportunities. This study was a small part of evaluating the curriculum's viability by conducting a qualitative analysis that gathered the perspectives and viewpoints of faculty members to gain insights for further improving the curriculum's effectiveness. The aim of this study was to assess the undergraduate medical curriculum at University College of Medicine and Dentistry, determining its alignment with the evolving demands of medical education and healthcare practice. Additionally, the

study sought to identify any factors impeding its viability from the faculty's perspective, using six specific viability measuring parameters.Hematological Analysis.

Methodology

A qualitative exploratory study was conducted (mme02230001/ammarb12c2a2f), utilizing Focus Group Discussions to examine the factors inhibiting the viability of the curriculum. The structured questionnaire contained the following six inhibitors: i. Educational Program Inhibitor ii. Disciplinary Cultural Inhibitor iii. Social Interaction Inhibitor iv. Institutional Policies Inhibitors v. Communication Practices inhibitors vi. Faculty Involvement Inhibitors. There were a total of 25 items collectively under these six inhibitors.

Eight faculty members were selected via purposive sampling and invited for a focus group discussion. These faculty members encompassed both basic and clinical sciences, and had already an experience of 5 years and hence were well familiar with the questionnaire. Their names were coded to conceal their identity (Table: 1)

Table 1: Coding of Participants

CV 1	Professor	CV 2	Professor
CV 3	Associate Professor	CV 4	Associate Professor
CV 5	Assistant Professor	CV 6	Assistant Professor
CV 7	Assistant Professor	CV 8	Senior Demonstrator

The session commenced with participant introductions, fostering a sense of inclusivity, and ensuring that everyone had a clear understanding of the topic under discussion. A comprehensive grasp of the subject matter was vital for productive engagement. The questions posed during the discussion were thoughtfully designed to delve into the underlying reasons for the inhibitors with suboptimal scores, identified through phase one of the study. This exploratory approach aimed to uncover the root causes of curriculum challenges and pave the way for potential solutions and improvements.

Participants were requested for formal consent of their participation. They were asked to introduce themselves and the moderator started with an opening statement on the importance of the focus group discussion and curriculum viability. The questions asked were divided into two sets. The first set was regarding the whole questionnaire and all six inhibitors. The second set related to the three items which according to participants were below par in University College of Medicine and Dentistry's Curriculum. The first set was semi structured questions just to identify which of the above-mentioned factors were below par and second set was open ended to identify the reasons why these factors were significant according to faculty members and how can these factors could be improved.The primary recording app was Otter.ai which was transcribing the group's discussion as well. The FGD that followed was conducted for two hours, involving two main interviewers, two observers and one interpreter for recording the data. Transcribed data was sent to participant to reduce observer bias. Throughout the FGDs, co-moderators played an active role in facilitating the conversation, observing participant contributions, and meticulously taking notes. These notes were a secondary source of information for transcription, which later proved invaluable in synthesizing the insights gathered and formulating a course of action. Thematic analysis was performed on transcribed data, themes were carved out of it which were sent to two renowned medical educationists in order to ensure dependability.

Results

The questionnaire filled in before conducting FGD contained 6 viability inhibitors, as shown in Table-1 below;

Table-2: Showing Six Viability Inhibitors and 25 Items in Total

1-Educational Program (EP) Inhibitor	
1	The contents I teach are relevant to the intended learning outcomes of the curriculum (e.g., doctor as a professional, leader, communicator, researcher, etc.).
2	In my institution, the content taught in one course/module helps the students to understand the related concepts in other courses/modules.
3	The curricular content taught in my institution contributes to making students good doctors.
4	I use different assessment tools to assess knowledge, skills, and attitude in a course.
5	I construct assessment items according to the blueprinting for an exam.
6	The contents I teach are relevant to the intended learning outcomes of the curriculum (e.g., doctor as a professional, leader, communicator, researcher, etc.).
2-Disciplinary culture (DC) Inhibitor	
7	The attendance of faculty on campus is strictly monitored through biometric thumb impressions.
8	Students are fined if they do not adhere to institution policies.
3-Social interaction (SI) Inhibitor	
9	My institution offers formal opportunities for enhancing social interaction on educational issues among students.
10	My institution provides interactive online discussion forums.
11	My institution has meeting places for students and teachers for interaction.
4-Institutional policies (IP) Inhibitor	
12	Faculty can appeal against institutional decisions without any fear.
13	My institution's decisions are based on defined policies and procedures.
14	I have been provided with a clear job description.
15	My institution gives awards for educational innovation (e.g., development of a new assessment tool, teaching method etc.)
16	My teaching and research activities are considered equally important for my promotion.
5-Communication Practices (CP) Inhibitor	
17	In my institution, there are no restrictions on the use of social media such as YouTube, WhatsApp etc. for educational purposes.
18	In my institution, regular faculty meetings are held at the departmental level where everyone has the right to voice their concerns.
19	In my institution, the curriculum managers clearly communicate educational changes to the faculty.
20	In my institution, the faculty share strategies for effective classroom management among themselves.
21	In my institution, the faculty share their experiences of various instructional designs (e.g., 4C ID, Gagne 9 events) amongst them.
22	My institutional management shares the educational courses/modules in the curriculum with the faculty.
6-Faculty involvement (FI) Inhibitor	
23	I am invited to the meetings in which curricular issues are discussed and decisions are made.
24	My suggestions to update a course/module are given due consideration by committees that make curricular changes.
25	I have the authority to update the content of course/module in the curriculum based on students' feedback.

The items for each viability inhibitor were graded on a scale from 1 to 5, with the following meanings: Strongly Agree (5), Somewhat Agree (4), Neither Agree nor Disagree (3), Somewhat Disagree (2), and Strongly Disagree (1).

All of the 8 participants of the cohort unanimously agreed that there were no issues in the educational program and the curriculum was designed according to the major outcomes of the institute and was being followed in letter and in spirit. However, they highlighted 3 out of 25 items which according to them were not effective. These three items along with themes are mentioned below in table 3. First two items belonged to institutional policies inhibitors (item 12, and 15), and one belonged to faculty involvement inhibitors (item 25). The data underwent rigorous thematic analysis, involving the meticulous manual examination of transcribed data. Raw data was systematically coded, a process that entailed categorizing information to unveil underlying patterns and relationships. This analytical method provided a structured framework for generating meaningful interpretations, allowing for the exploration of connections among diverse data elements. As the coding process unfolded, distinctive themes and sub-themes began to emerge, encapsulating the core findings and insights derived from the FGD. This in-depth analysis served as a powerful tool for gaining a deeper understanding of the curriculum viability challenges and potential solutions identified during the discussion.

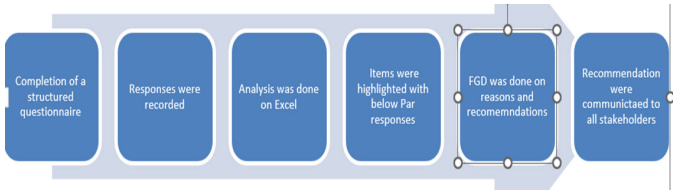

Figure 1: Overview of the Methodology for the Entire Process

Table 3: Showing items which were not effective.

Items	Themes	Representative Quotes
Faculty can appeal against institutional decisions without any fear (item number 12)	No proper protocol	"There is no method by which we can apply against any decision or issue. Even our Head of departments are not aware of any system of appeal"
	Repercussions	"I am honestly scared that since there is no system of confidentiality in place, so my complains are not anonymous and I will have to face the consequences of all these complaints. This stops me from even registering any of our departmental issues in any meetings"
	Not transparent	"I have my doubts on transparency of how conflict matters are dealt with because of biasness towards certain individuals."
My institution gives awards for educational innovation (item number 15)	No rewards	"There used to be a proper certificate and award for best module coordinator on annual dinner but now we are just expected to work without any reward or even appraisal."
	No awareness about changes	"I was among the team which created these modules but even I am unaware of which module is running right now because it has changed drastically."
	No positive discrimination	"We were even not appreciated for the efforts we put in for the development of modules. After all our hard-work other members of the committee were given the credit."
	No incentive	"All module coordinators used to get monetary rewards at the start of implementation of integrated curriculum. But it has stopped now. It used to be a major motivation to do extra task of designing a module and its time table"
	No faculty discounts	"We are forced to pay registration fees of different conferences arranged by institute but are not given any kind of discount."
I have the authority to update the content of course/ module in the curriculum (item number 25)	No Authority	"I feel like I have no authority to make any change in my own module. There is no flexibility. I am from clinical faculty and there are so many time when I have rare patients in OPD but I can't show my students because they have fixed learning objectives."
	No Flexibility	"It is said repeatedly to us that we have a student-centered curriculum but neither students nor faculty members are given any kind of flexibility in how they want to learn or teach"

Table 4: Showing Recommendations which can be Adopted to Remove these Deficiencies.

Themes	Sub Themes	Representative quotes
Transparent System	Written Protocol	"There should be proper written protocols for appeal and the system should be made public and displayed as well so that everyone is aware of it."
	Time limit for answering the appeal.	"I personally think most of our requests are not catered when required so I suggest setting a deadline to respond requests and appeals by concerned department and administration."
	Anonymous appeal	"Please make sure there is an anonymous system of appeal so that the method is transparent."
Voting System	Regular Faculty Meeting	"There should be regular faculty meetings which include all faculty members. Faculty members involved in meeting are mostly AP and above and that too in Board of Studies, where usually no change in decisions are made."
	Representation of Complete Faculty	"Committees usually formed are not complete representative of faculty members and often, similar faces are represented in all committees."
	Monetary Incentive	"High performer students and faculty members should be given monetary incentives. There are no bonuses and very less increments."

	Faculty Discounts	"Faculty should be given discounts on conferences, certificates and post-graduate courses. If faculty members are giving so much time to the institute, institute should also sponsor their CPD events."
		"Annual dinner should restart a section of best module coordinator, like before."
Public Appreciation	Highlighted on big occasions and public platforms.	"Module coordinators and academic teams should be given enough autonomy to make changes in the curriculum how they deem fit, with approval of curriculum committee."
Provision of proper Guidelines	Autonomy	"FDP is arranged for faculty but the workshops are same and usually during the times when faculty can't attend."
Trainings	Training of Module Teams	

Discussion

This qualitative exploratory study was undertaken at the University College of Medicine and Dentistry to assess the undergraduate medical curriculum, determining its alignment with the evolving demands of medical education and healthcare practice. The study sought to identify any factors impeding its viability from the faculty's perspective, using six specific viability measuring parameters. Calculating curriculum viability involves assessing its alignment with educational goals, relevance to student and societal needs, feasibility within available resources, and effectiveness in achieving learning outcomes. Additionally, it aims to evaluate adaptability to evolving trends and sustainability over the long term. By incorporating stakeholder input, ensuring accessibility, and maintaining compliance with regulatory standards, institutions can enhance the quality and relevance of their curriculum. Continuous quality assurance and improvement mechanisms are essential for maintaining viability and meeting the needs of students and society effectively.

The questionnaire utilized identified six major inhibitors that an institution might encounter, which could obstruct the smooth implementation of the curriculum(Tabel 2). Educational program inhibitors relate to issues within the educational program itself. It may encompass problems with curriculum design, content, or delivery. Issues such as outdated materials, inadequate teaching methods, or a lack of alignment with educational goals can fall under this category.[5] The participants of the cohort agreed that there were no issues in the educational program and the curriculum was designed according to the major outcomes of the institute and was being followed in letter and in spirit. The disciplinary culture inhibitor was concerned with the overall culture and attitudes within a specific academic discipline. It referred to resistance to change, traditional practices that hinder innovation, or a lack of interdisciplinary collaboration.[6] All of the participants agreed that the attendance of faculty was correctly being monitored through biometric thumb impression and that the students were fined for disciplinary actions and practices. In literature it also shows that student's attendance is directly related to leadership and discipline.[7] Social interaction inhibitors pertained to the extent and quality of social interaction among students, faculty, and other stakeholders. In studies, it shows that problems with social interaction can negatively impact the learning environment, as collaboration and peer support are essential in education.[8, 9] Institutional policies inhibitor encompassed the rules, regulations, and guidelines set by the educational institution. This inhibitor included issues such as rigid policies that hinder curriculum adaptation, inadequate support for faculty, or unclear evaluation procedures.[10] Most of the disagreement was shown in this inhibitor, as the faculty members were either unaware of or disagreed regarding the freedom of appeal against institute policy and if there were awards for educational innovation at their institute.[1] A study conducted in Pakistan by Wajid et al. (2019) shows that they have clear cut institutional policies to work upon that enhance students' learning environment.[11]

Effective communication is essential for the smooth functioning of educational programs. Communication practices inhibitors encompassed problems with information flow, transparency, or the exchange of ideas among faculty, students, and administrators. As per study done in 2023, effective communication has positive impact in digital world and educational systems.[12] The majority of faculty members agreed that there was no issue in communication of content or policy with faculty or students and there is proper mechanism for management and dissemination of information.[13] Faculty inhibitor relates to the level of engagement and participation of faculty members in curriculum development and delivery. Insufficient faculty involvement can lead to a lack of commitment, innovation, and responsiveness to student needs.[14,15] The cohort agreed that they were invited to meetings to discuss issues in curriculum and their suggestions were welcomed but when it came to making changes in the curriculum and being autonomous in decision making, the participants showed resentment.

Limitations

The major limitation of this study was that curriculum viability was assessed using feedback from only a small cohort of faculty. A comprehensive evaluation should have included alignment with educational goals, learner relevance, effectiveness in achieving outcomes, adaptability, assessment methods, resource requirements, feedback mechanisms, long-term sustainability, standard compliance, and cultural and ethical considerations. We plan to conduct a case study to assess the curriculum's viability from multiple perspectives.

Conclusion

Overall, faculty was very satisfied with the curriculum. No inhibitor as a whole was identified to be present in University College of Medicine and Dentistry. Only three items were deficient. The reasons were identified and recommendation were made to improve these 3 items as well.

Conflict of Interest: The authors declare no conflict of interest.

Authors' Contributions: AQ and QL wrote the manuscript and conducted the FGDs; GA and MM were the observers, took notes, and helped with the thematic analysis and literature search;

KM did the interpretation, transcription and thematic analysis, and gave intellectual input to the manuscript; RAK supervised the project, transcription and thematic analysis and gave final approval to the manuscript.

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