

# Exploring the Curriculum Viability Inhibitors in an Undergraduate Dental Curriculum at Dental College HITEC-IMS

SAMAN MALIK<sup>1</sup>, SYEDA KAINAT FATIMA<sup>2</sup>, SHAFIQ MALIK<sup>3</sup>, FAIQA HASSAN<sup>4</sup>, M.BILAL DAUD<sup>5</sup>, MUHAMMAD FAROOQ<sup>6</sup>

<sup>1</sup>Assistant Professor, Oral Biology, HITEC-IMS Dental College, Taxila Cantt.

<sup>2</sup>Biostatistician, Dental college HITEC-IMS

<sup>3</sup>Post grad MHPE student. Riphah International University

<sup>4</sup>HOD, Assistant Professor, Oral Medicine, HITEC-IMS Dental College, Taxila Cantt.

<sup>5</sup>Post grad MPhil student: Riphah International University

<sup>6</sup>BDS MCPS Assistant Professor Oral Medicine Avicenna Dental College, Lahore

Correspondence to: Saman Malik, Email: [Somey\\_hassan@hotmail.com](mailto:Somey_hassan@hotmail.com), Cell: 0312-3456303

## ABSTRACT

With recent advancement in medical education importance is given to evaluation, which has been included as a part of curriculum planning and implementation. By finding out the factors that inhibit the successful implementation of curriculum better outcomes can be achieved. A mixed method study was carried out at Dental college HITEC IMS. The study was conducted in two phases. In the 1<sup>st</sup> phase the quantitative assessment was carried out to find out the success of curriculum and identifying the factors that hindered in its success. In the second phase group discussion for amending the inhibitors was carried out. This study on a validated questionnaire that was prepared on scoping review and Delphi study. Under six themes inhibitors were found in five themes. No inhibitor was found under the theme of educational program. This study has helped us to pick up the inhibitors of curricular success so that we can look into possible solutions to improve the quality of curriculum of dental college. We look forward to help other institutes who are facing the same issues in their curriculum quality by suggesting solution options obtained from focused group discussion.

**Keywords:** Curriculum viability, curriculum inhibitors, dental curriculum

## INTRODUCTION

What is curriculum? Most of us are of the opinion that it's a syllabus. But in actual its overall learning experience of student in an institute. (Egan 1978) it's a dynamic entity and includes, aim and objective, content mode of teaching and assessment and evaluation. (Kern et al. 1998)

In order to determine the curricular success, an institution must self-evaluate themselves to bring about improvement in the quality standards of medical education and for future safe practice of medicine by their graduates. (MacCarrick, Kelly, and Conroy 2010) Certain accreditation bodies exist that provides quality check criteria's for medical educational standards success but most of them haven't included the inhibitors in their standards such as WFME in relationship with World Health Organization provides a complete quality standard framework for institutional self-evaluation. (MacCarrick et al. 2010). In literature many inhibitors have been identified such as lack of social interaction among faculty and students, teachers not willing for integration, low quality assessments, poor policies but all these inhibitors are not part of quality standard evaluation criteria. (Khan, Spruijt, Mahboob, Eraky, et al. 2021). Delphi study was the only study available in literature that was based on opinion of educational experts in which inhibitors were also included along with the curricular standards for institutional self-evaluation. (Khan, Spruijt, Mahboob, Eraky, et al. 2021)

Our aim was the same to study the inhibitors along with the standards to evaluate the educational and curricular quality of our institute i.e., Dental college HITEC-IMS. This was done through a validated questionnaire based on Delphi study.

## METHODOLOGY FOR COLLECTING ANALYZING DATA AND REPORTING THE RESULT

A mixed method study was conducted at dental college HITEC IMS to check the curriculum viability factors through a validated questionnaire based on literature review.

**Setting:** Bachelor's of Dental surgery is a four-year program and its curriculum consists of two phases. 1<sup>st</sup> phase (1<sup>st</sup> and 2<sup>nd</sup> year) includes knowledge of basic sciences and the 2<sup>nd</sup> phase (3<sup>rd</sup> year and final year) is based on clinical sciences and their application.

**Participants:** For both qualitative and quantitative assessment, only faculty was chosen as a sample. Aimed at quantitative assessment a questionnaire was disseminated among senior faculty, professors, lecturer and demonstrators who were part of

college for more than a year.

For quality assessment a focused group was conducted among six senior faculty members, two members from basic sciences, three from clinical sciences and one from medical education department.

**Material:** A validated questionnaire was distributed among 56 faculty members of Dental college out of which 45 responded. Questionnaire was based on 25 items which came under the headings of Educational Program, Disciplinary culture, social interaction, Institutional policies, Communication Practices and Faculty involvement. Faculty has to score each item on 5 points Likert scales: 1 = strongly disagree, 2 = somewhat disagree, 3 = neither agree nor disagree, 4 = somewhat agree, and 5 = strongly agree. Based on the responses received by the participants, curriculum inhibitors were identified and questions were prepared for focus group discussion. Agenda points of this focus group discussion was to obtain opinion from senior faculty regarding solution of these inhibitory factors.

**Procedure:** The study was conducted in two phases. In the 1<sup>st</sup> phase the quantitative assessment was carried out to find out the success of curriculum and identifying the factors that hindered in its success. In the second phase group discussion for amending the inhibitors was carried out. 1<sup>st</sup> part of study took 2 weeks and 1 week was for planning and deciding the amendment needed for its success. Study was conducted after ethical approval from ethical committee of dental college.

The quantitative questionnaire was prepared on Google Forms and distributed among the faculty through a link shared in WhatsApp groups. Out of 56 participants 45 responded. Disclosure of identity was optional. Faculty was given a time of one week which was later extended to two weeks and a reminder was sent after every 3<sup>rd</sup> day.

For focused group six faculty members were invited to the conference room. They were all provided with the agenda points one week before the meeting and were told the purpose of meeting i.e., how to address the curriculum inhibitory factors. These faculty members have also filled the questionnaire. All six members of focused group discussion were senior faculty members (above assistant professor level) and were part of the institution for more than a year. Agenda points of focus group were based on the questions on curriculum inhibitors obtained through the questionnaire. Faculty was told to come up with the possible solutions of these inhibitory factors. All the important points and solutions discussed in the meeting were noted on paper for

amendment in curriculum.

## RESULTS

Based on results of 1<sup>st</sup> phase (questionnaire based survey), out of 45 faculty members that responded to our questionnaire, 66.7% were of basic sciences and 33.3 were of clinical sciences. 51% were lecturer and PG trainees, 8.9% were lecturer, 26.7% were assistant professors, 8.9% were associate and 4.4% were of professor level. Almost 40

% of the faculty had more than 5 years of experience that responded to the questionnaire. Only 22.2% of the faculty hadn't have any qualification in the field of medical education. 31% had attended medical education related workshops, 28% of faculty had done certification courses and 8.9% had done MHPE degree and diploma degree respectively. 43% of students were involved in curriculum development but only 13% were the coordinators. Out of 26 questions under six headings, inhibitors were found under 5 themes, with 8 subthemes. According to faculty perception no

major curriculum inhibitor was related to "educational program".

Under the heading of "disciplinary culture" most of the faculty (35%) reported that institutional policy regarding disciplines is not up to the mark and is one of the factors that hinders in curriculum success. Other four themes under which faculty showed some negative responses were social interaction, institutional policies, faculty involvement and communication practices.

The inhibitors were determined by calculating the frequencies (percentages) of questions on which faculty had marked "disagree or somewhat disagree".

**Focused group discussion:** After the results were analyzed focus group discussion was carried out to determine why there are inhibitors in institutional curriculum and how we can improve the curriculum by eliminating them. Out of 26 questions under six headings, inhibitors were found under 5 themes, with 8 subthemes. Faculty was asked question on these themes and sub themes.

Table 1:

S no	Major headings of curriculum standards	Items on which faculty gave negative response	Percentage Of disagree	Percentage of neither agree nor disagree	Suggestions for improvement by focus group
1.	Disciplinary culture (DC)	Students are fined if they do not adhere to institutional policy	35%	26%	I think we need to take action against students who are violating the discipline and educational policies. Evaluation system and committees should be made for implementation of discipline.
2.	Social interaction (SI)	Online discussion forum	15.6	24.4%	Reinforcement to use official google classroom more frequently this year and onwards. Involving junior faculty too in these activities so that their perception improves.
		Meeting place for student teacher interaction	20%		Infrastructure should be modified to address this need.
3.	Institutional policies (IP)	Faculty can appeal against institutional decision without fear	37.8%	17.8	More frequent meetings with faculty and faculty feedbacks can help in bridging the communication gap and managing this issue
		Awards for educational innovation	28.9	28.9	As policy exists, it should be implemented. Certificates of appreciation, faculty Development programs should be sponsored.
4.	Communication Practices (CP)	Meetings for curricular issues are discussed and decisions are made	24.4	13.3	Subject expert's opinions should be given weightage. Junior faculty must be kept up to date regarding curricular decisions
5.	Faculty involvement	My suggestion for course/module are given consideration by curricular committee for curricular changes	24.5	13.3	Subject experts either of basic sciences or clinical sciences must be considered as a vital component of curricular committee and their suggestions should be sent to university for changes.
		I have Authority to change content of Module in curriculum	37.8%	20%	I think university must review and incorporate suggestions if they are made on previous surveys as it can benefit curriculum.

**Disciplinary culture (DC): Students are fined if they do not adhere to institutional policy:** When this agenda point was discussed, faculty showed two concerns.

No action is taken against students who are habitual bunkers and violators of dress code. If there are policies, they must be implemented as they groom students professionally. There must be professional evaluation system to monitor students longitudinally for four years.

**Social interaction (SI): Online discussion forum:** When this point was brought into discussion that why faculty has considered it as an inhibitor; faculty mentioned the difficulties that they faced during COVID as there was no such preexisting forum. There was no arrangement for online classes at institutional level. Such discussion forums are very much needed for this newer generation as they are millennial and tech savvy. Such forums improve communication skills, also results in exchange of ideas and peer learning. It was discussed that a step has already been taken for generation of this online forum by institution now. Faculty workshops have also been carried out so in next year evaluation this won't be considered as an inhibitor.

**Meeting place for student teacher interaction:** Although students were always welcomed in the office for interaction but there was no meeting place; Lecture halls are used for students mentoring session, it was discussed to convey this point to college administration.

**Institutional policies (IP) Faculty can appeal against**

**institutional decision without fear:** When this point was discussed, faculty attributed that mostly this fear belongs to junior level faculty members and they possess this opinion. So, regarding this departmental meeting should be conducted and faculty feedbacks should be taken more frequently to breach communication barrier.

**Awards for educational innovation:** When this point was raised for discussion, all were of the opinion that this is a very valid point and is much needed step for faculty motivation and professional development. Although policies are formulated but haven't been implemented. This agenda points needs discussion in institutional meeting. A letter of appreciation or certificate must be given frequently to teachers to boost up their moral and enthusiasm.

**Communication Practices (CP) Meetings for curricular issues are discussed and decisions are made:** Although academic council meetings are regularly held in college faculty it was pointed out that curricular issues may be the reason behind this aspect as an inhibitor in junior faculty as they are not involved in these meetings. And most likely there is a chance that agenda points of those meeting are not conveyed to the demonstrators by HODs. Minutes of meetings that are distributed in the departments are not read by junior faculty, so there is a need and it is suggested that HODS should have departmental meetings and issues should be discussed, their valid points be taken into account and should be discussed at institutional level meetings. Faculty feedback must

be taken more frequently to assess whether the members are satisfied with the decisions that are taken on their valid suggestions.

**Faculty involvement My suggestion for course/module are given consideration by curricular committee for curricular changes:** Faculty agreed upon the formation of ground rules at university level and subject specialist of basics and clinical sciences were to be involved in university curricular meetings. One of the reasons behind this inhibitor was that university doesn't give weightage to opinion of faculty of affiliated colleges, 2<sup>nd</sup> suggestion given was that curricular committee must have representative of basics and clinical sciences of every affiliated college. It was decided that there must be frequent curricular academic meetings and valid suggestion should be officially forwarded to university with justifications. It should be considered as peer learning.

**I have authority to change content of module in curriculum:** Faculty agreed that during the current year this inhibitor will improve as university has given the leverage to faculty to change/shift the block content. During the discussion on this point faculty explained that with this authority content changes based on previous surveys can benefit the curriculum. With this integration improves. Also, the university has taken a step to involve the college curricular representatives in university academic council meetings through Zoom video links, so a step is taken and things will improve eventually.

## DISCUSSION

The study was conducted to measure the perception of teachers regarding curricular inhibitors in an undergraduate Dental college. Aim of the study was to determine the factors that are making the curriculum unsuccessful at HITEC Dental college. There have been several predefined quality standards available in literature, among them WEFME being the most acceptable one for institutional self-evaluation.(Khan et al. 2019).These standards define the criteria's for the quality improvement of medical education.(MacCarrick 2010).In literature standards are available for achieving the quality but these accreditation standards doesn't include the inhibitors.(Khan, Spruijt, Mahboob, Eraky, et al. 2021).Delphi study included both standards and inhibitors, "inhibitors" which were largely ignored by other accrediting bodies.(Khan, Spruijt, Mahboob, Eraky, et al. 2021) So, we held this study on a validated questionnaire that was prepared on scoping review and Delphi study.(Khan, Spruijt, Mahboob, Al Eraky, et al. 2021).Under six themes inhibitors were found in five themes. No inhibitor was found under the theme of educational program. For the success of educational program, the aim objectives content, modes of teaching and assessment methods must be in line with the institutional outcomes, mission and vision. (Sae-Khow 2014). Most of our faculty was of opinion that what they are teaching and assessing is in line with institutional aims and outcomes. Under the theme of disciplinary culture two inhibitors were found.61% faculty was of the opinion that one of the reasons of failure of curricular success is that institution fails to stick to disciplinary policies. Many disciplinary policies exist on paper but action is not taken accordingly at Dental college HITEC-IMS. Literature review also shows that lack of policies and failure of its implementation is an inhibitory factor in the success of curricular quality. (Bendermacher, Wolfhagen, and Dolmans 2017) Non availability of online discussion forum was also found to be an inhibitor (40% disagreement) at HITECdental college. It is provided in literatures that use of technology driven online communication modalities for online learning is very important determining factor in curricular success. (Khan et al. 2019)20% faculty agreed that one

of curricular inhibitory factor in the institute is lack of proper place for student teacher interaction. Study conducted earlier by RAK reported that social interaction plays an important role in curricular success either with students or among faculty members. So the study reported social interaction as a curricular inhibitor when the crucial factors involved in curricular success were explored. (Khan et al. 2019)

Under institutional policies heading 55% and 58% reported the inhibitors were they fear to appeal against the institutional decision and there are no awards and incentives for faculty respectively. Literature study shows that creating a good communication environment can be a contributing factor in the quality of curriculum. (Bendermacher et al. 2017) Further under communication practices and faculty involvement, faculty involvement in course designing and changes were thought to be inhibitors by 37% and 57% of the faculty. A study conducted earlier reported that lack of faculty involvement in decision making impedes the quality of curriculum. (Bendermacher et al. 2017)(Khan et al. 2019) In another published study, data was collected to ranks the quality standards and inhibitors ,lack of involvement of faculty in decision making, lack of policies and procedures, communication and lack of social interaction were considered important factors that impede the quality of curriculum. (Khan, Spruijt, Mahboob, Eraky, et al. 2021)Our faculty also thought these factors to be inhibitors of the curricular success.

This study has helped us to identify the inhibitors of curricular success so we can look into possible solutions to improve the quality of curriculum of dental college. This study will also help other institutes who are facing the same issues in their curriculumquality to look into it and implement the solution options obtained from focused group discussion.

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