

Our Experiences in Initiating Implementation of Electives at a Bilwal Medical College, Liaquat University of Medical and Health Sciences, Jamshoro, Sindh Pakistan

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ABSTRACT

Electives supplement to the core curriculum of undergraduate health professions education, thereby enriches personal and professional development of undergraduates in diverse areas. Electives provide an opportunity for transformative learning. This paper describes the implementation of electives at newly established Bilwal Medical College for Boys, a constituent college of Liaquat University of Medical Health Sciences, Jamshoro, Sindh, Pakistan. Firstly, concrete policy for electives was developed by health professions educationist. Then Committee for the implementation of electives was constituted. Subsequently, feasible and achievable implementation plan was formulated focusing on the activities to be done before, during and after the placement of students for electives in different departments and process of implementation. The first batch of students studying in fourth year of MBBS attended the electives. With keen involvement of all stakeholders such as, students, faculty, administration, parents and collaborating departments and their faculty, the program was successfully implemented. Thorough supervision and monitoring during placement contributed toward the success of program.

Keywords: Electives, health professions education, undergraduate



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INTRODUCTION

Electives appear to be a supplement to the main curriculum both basic and clinical sciences in health professions undergraduate study [1]. Electives help in enhancing personal and professional development of undergraduates in diverse areas. Elective permit the students to think of a career beyond examinations and offer students a stimulus to think laterally and creatively besides laying down the foundation for future professional pathways. Also, electives let the students to match their aspirations with the ground reality in a field of their dreams being a health care professional [2,3]. Yet, there is no consensus definition

of an “elective”, but the term infers a period of time during undergraduate study within which there is a significant element of student choice [1,4]. Electives offer opportunity for transformative learning even though there is a risk of exposing students for doing electives in other institution where medical college has no option of to supervise [3,4]. Though the electives are heterogeneous in terms of activities, settings, timings etc. but there are key principles to follow as per AMEE Guide No. 88 such as defined educational objectives; detailed pre-departure preparation for example communication to hosting institutions,

deliberation on conflict resolution and ethical challenges; monitoring and supervision during placement, at host institution and from parent institution; doing project work activity, if helpful to the host; inclusion of reflective practice, before, during and after the placement [4]. Globally, electives are part of undergraduate curricula in majority of medical schools [2]. Till year 2011 electives were not the part of undergraduate medical curriculum in Pakistan. The electives were included in curriculum of MBBS (Bachelor of Medicine & Bachelor of Surgery) revised in 2011 by Pakistan Medical & Dental Council (PMDC) and Higher Education Commission (HEC), Islamabad Pakistan [5]. Since then some of the medical colleges have incorporated electives in their undergraduate medical curriculum. But electives are still considered as a new entity in majority of medical colleges in Pakistan [2]. Pakistan Medical Commission (PMC) in 2021 has integrated electives in Standards/Framework/Guidelines for development of Competency-Based Medical and Dental Curriculum [6]. The Bilawal Medical College for Boys, a constituent medical college of Liaquat University of Medical Health Sciences (LUMHS), Jamshoro was established five years back. It enrolled 4th batch of undergraduate medical students in academic year 2021-22. The undergraduate program is of 5 years with two years

preclinical and three years clinical. Also, one-year house job (internship) is mandatory requirement to get license for practice. BMC has started implementing electives from year 2022. This article describes our experiences of implementing electives at BMC.

I. ELECTIVE POLICY

Pakistan Medical Commission's Accreditation Standards 2021 for Medical & Dental Colleges up to 100 admissions per year mentions that document on College's policy on electives for students and record of student selected electives is needed. PMC puts electives in essential type of activity in this document [7]. For the implementation of electives at BMC, process of developing policy started in 2021 as there was no documented concrete policy for the electives implementation at LUMHS. Director Medical Education BMC (Principal Author) developed Policy for the implementation of electives for undergraduate medical students in June 2021 following points written in mentioned document of PMC. The elective policy of BMC document contains definition of electives, objectives of electives, duration of electives, time of electives in phase of MBBS curriculum, elective a compulsory part of course, departments for electives (where electives to be done), structure of electives, electives slabs, template to be used for the

Table 1| Elective Slabs

Slab one	Slab two
<i>Pre-Clinical and Para-clinical</i>	<i>Clinical</i>
Experiential learning in any laboratory Pathology, Microbiology, Biochemistry, Molecular Biology, Genetics, Immunology.	Hospital Experiential Learning Emergency care in emergency Intensive care in ICU or HDU Outpatient/inpatient care any of the clinical sciences departments/Sections
Other experiential learnings Pharmacovigilance and clinical pharmacology	Other experiential learnings Infection Control Program Activities in Hospital
Research Activities Students initiated research Participation in faculty research Surveys: Community or epidemiological	Research Activities Students initiated clinical research Participation in faculty clinical research
Community Experiential Learning School Health Program Immunization Program Maternal and Child Health Program Other National Health Programs such TB Control, Tobacco Control	Community Experiential Learning Care at Rural Health Centre level Care at Basic Health Units Care at Specialized clinics in community such as Diabetic Clinic
Others Bio informatics Artificial Intelligence in Healthcare	Others Rehabilitation and palliative Care Sports Medicine Clinical Ethics CPR

implementation of electives, obligation of faculty members/mentors, obligation of in-charge of elective program, reflective report on electives, and evaluation of electives program. The electives slabs are given in Table 1. The policy document shared with Principal BMC and Vice Chancellor of LUMHS. After approval, principal constituted the committee for implementation of electives (CFIOE) at BMC in first week of October 2021.

II. Implementation of Electives at BMC Director Medical Education (Principal Author) shared Elective Policy of BMC with CFIOE in its first meeting held in first week of October, 2021. The CFIOE in-charge and members were oriented about the policy in detail and its implementation process. Subsequently, the CFIOE chalked out the plan of activities to be done for the implementation of electives before, during and after the placement of students group. The plan includes all essential elements as documented in the literature [8].

A. Activities done for the implementation of elective before the placement.

1. Development of specific learning objectives (SLOs), activities, logbook, and grouping

Based on the feasibility, the CFIOE sorted out 10 electives to be done in Slab-I i.e. in preclinical and para-clinical field and 10 electives to be done in Slab-II i.e. in clinical field from Elective Policy document (Table-2). Subsequently SLOs and daily activities to be done in particular elective and logbook of individual elective were developed. Assessment was planned on the last day of placement in each elective. Through random selection 100 students were divided in 20 groups; each group comprised of 5 students. Each group had to do two electives, each one of 2-week (14

days); one from Slab-I and other from Slab-2. The selection of elective from each slab by each group was planned through randomization and the entire implementation had to be completed in two rounds; each round of 14 days (2 weeks).

2. Facilitation Teaching/Learning, Supervision & Monitoring With the consent of Head of Department where groups to be placed, internal supervisor will be selected and one of the member/associate member of CFIOE act as an external supervisor. The internal supervisor acts as a preceptor; orient the students, teaches students, facilitates their skills learning, supervise activities, fill the logbook, take attendance and assessment and certify the students. While the external supervisor ensures that students reach on time, attend daily activities, planned activities occur on time, assessment done at the end and resolve conflict if any develop during implementation.

3. Collaboration with the departments where students to be placed for electives Members of CFIOE visited each department, presented request letter from the Principal to the head of department (HoD) for placement of students for doing electives and discussed with HoD in details about the planned elective. Each HoD consented for extending cooperation and nominated one relevant faculty member of department as an internal supervisor. On the second visit, members of CFIOE met internal supervisor in identified departments. To achieve the specific objectives of individual elective, the activities drafted in log book were finalized after discussion with internal supervisor of the individual department where students will be placed.

Table-2 | Electives Placement selected for the students

Electives & Placement in Slab-One	Electives & Placement from Slab-One
Hematology Tests (Laboratory)	Emergency Care (Emergency Department)
Thalassemia Care at center	Intensive Care (HDU/ICU)
Bone Marrow Examination	Physiotherapy Care at Center
Microbiology Tests (Laboratory)	Minimal Invasive Surgical Care.
Histopathology Tests (Laboratory)	Endoscopy Procedure at Endoscopy Suit
Blood Transfusion (Blood Bank)	Immunization of Children.
Fine Needle Aspiration Cytology	Care of TB patients under TBCP (Center)
Molecular Tests (Laboratory)	Rehabilitation Care (Center)
X-Ray interpretation (Radiology)	Hemodialysis care (Hemodialysis unit)
Ultrasound observation (Radiology)	Health Care at Basic Health Unit/Rural Health Centre.

HDU- High Dependency Unit, ICU- Intensive Care Unit, TBCP (TB Control Program)

4. First Orientation Session

Students of first batch then in third year MBBS were oriented in second week of November 2021. They were communicated about the importance and significance of electives, objectives of electives, slabs of electives, name titles of electives, duration of electives, time of electives in phase of MBBS curriculum, places of placement, etc. and CFIOE clarified the queries raised by the students. They were informed that you will be placed for elective in early months of fourth year.

5. Consent from the students In the light of one of the queries of the students “can we do the electives in other institutions?”; the consent form was developed to take consent from the individual student whether he wishes to do electives in BMC organized electives program or outside with the condition that medical colleges and its affiliated hospitals must be recognized, accredited and endorsed by PMC (Formerly PMDC) and included in the list of World Directory of Medical School (WDMS) preferably recognized, accredited and endorsed by World Federation of Medical Education (WFME) and Foundation for Advancement of International Medical Education and Research (FAIMER). The consent was taken from the students, around 45% of the students consented to do the electives in BMC organized electives program.

6. Inclusion of Electives in Academic Calendar LUMHS

As BMC is a constituent college of LUMHS, so, BMC has to follow the Academic Calendar of LUMHS. The Directorate Academics LUMHS scheduled the Electives during summer vacation in academic calendar of 2021-2022, in the Holy month of Ramdan. Due to the Ramdan the time duration of each elective was made 10 days instead of 14 days as each student had to complete two electives during summer vacation. Accordingly, activities of each elective sorted out.

7. Information to the parents

As the implementation program was scheduled in academic calendar during month of Ramdan, so, the parents were informed about the electives program through letter that “The Pakistan Medical Commission has made “Elective Program” essential for every student during study of MBBS. The Elective Program for students of 4th year MBBS (first batch) for Bilawal Medical College will start from 4th April, 2022 and complete on 23rd April 2022. Attending the elective classes regularly is obligatory for every student and the record will be kept in student’s profile as proof to present PMC.

8. Revised Implementation Plan

Based on the consent data, a plan for implementation was revised. Seven groups were constituted and seven subjects/departments of LUMHS Jamshoro were selected for the electives; 1) Adult physiotherapy and rehabilitation, 2) Radiology, 3) Endoscopy, 4) Emergency care, 5) Pediatrics rehabilitation, 6) Hemodialysis and 7) Minimal Invasive Surgery. Students were divided into seven groups; each group to attend one elective in round one and two. Each round was of 10 days. The revised plan with schedule shared with students who consented for doing electives in BMC organized program at their WhatsApp group.

9. Second Orientation Session Students who consented for doing electives in BMC organized program called for reorientation three days before the start of implementation and briefed in detail about their placement in electives during both rounds of electives. Selection of electives was done by students’ groups in both rounds by draw. The final placement schedule of electives of both rounds were presented to the students (Table-3).

Table 3| Final Placement Schedule of Electives in BMC organized program as per revised implementation plan

1st Round From 4th April to 13th April 2022		2nd Round From 14th April to 23rd April 2022	
Group A	Hemodialysis Center	Group A	Emergency Department
Group B	Pediatric Rehabilitation Center	Group B	Radiology Department
Group C	Adult Physiotherapy and Rehabilitation Institute	Group C	Hemodialysis Center
Group D	Radiology Department	Group D	Minimal Invasive Surgery Center
Group E	Endoscopy Department	Group E	Pediatric Rehabilitation Center
Group F	Emergency Department	Group F	Adult Physiotherapy and Rehabilitation Institute
Group G	Minimal Invasive Surgery Center	Group G	Endoscopy Department

B. Activities done for implementation of electives during the placement.

i. First Round of Placement

On first day of first round i.e., 4th April, 2022 students and team of CFIOE assembled in lecture hall of BMC early in the morning. Each assigned external supervisor (the member/associate member of CFIOE) took his/her group to place of the placement for doing elective. After mutual introduction external supervisor handed over group to the internal supervisor. Assigned external supervisor used to visit every day to assigned group during working hours for monitoring while Director Medical Education BMC used to visit each placement center every day for monitoring.

ii. Second Round of Placement

On first day of second round i.e., 14th April, 2022, each assigned external supervisor reached the place of placement and accompanied the students group for introducing to the internal supervisor. After that assigned external supervisor continued to visit every day to assigned group during working hours for monitoring while Director Medical Education BMC continued to visit each placement center every day for monitoring.

iii. Documents collection from departments

Individual external supervisor collected the attendance sheets of students group and log books and deposited to elective coordinator. Coordinator collected the certificates from the departments.

C. Activities done for implementation of electives after the placement.

a. Appreciation to Departments

CFIOE team visited to each department and appreciated the cooperation extended by the head of department, internal supervisor and his/her team. Certificate of Appreciation presented to each department.

b. Deliberation of CFIOE

CFIOE discussed and reflected on what went well, Area for Improvement and limitations

What went well?

- **Learning & Supervision:** Internal supervisor and his/her team of each placement area facilitated the learning of students under his/her supervision.
- **Teaching of skills:** Internal supervisor and his/her team of each placement area taught skills following specific learning objectives of

the subject as per verbal feedback received from the students.

- **Assessment:** Internal supervisor of each placement area took assessment of the students on the second last day/last day of the posting.
- **Monitoring:** Monitoring by the external supervisor of each placement area and overall monitoring by the Director Medical Education was satisfactory.
- **Conflict:** No conflict occurred at any of the placement areas.
- **Stay of students:** Stay of the students in hostels was well managed.

Areas for improvement

- **Arrival of students:** One or two students arrived 15 minutes late on some of the days at some of the placement areas.
- **Certificate:** Certificate from some of the departments received little bit late.
- **Selection Choice:** Students group selected elective through draw.

Limitations

1. We couldn't offer full freedom to individual student who consented to do the elective in BMC organized program to choose elective of his choice because of problem of monitoring of students as monitoring outside own college/university is challenging [3].
2. We couldn't take written feedback of the students and internal supervisor; if we would have taken feedback then that might have guided us in bringing the improvement for implementation in incoming batches.

CONCLUSIONS

Considering electives an important component of the undergraduate medical training, BMC organized electives program for its first batch of students in their fourth year of MBBS study. The program achieved its purpose with the development of tangible policy for electives, concrete, feasible and achievable implementation plan and involvement of all stakeholders such as, students, faculty, administration, parents and collaborating departments and their faculty. With smart and smooth process of implementation adopted before, during and after

placement of students for electives and meticulous supervision and monitoring during placement contributed toward the success of program.

Keeping limitations and lesson learnt in mind, it is recommended to the implementer of elective that 1) institution must sensitize all the faculty members about significance of electives, make aware students about the electives at the beginning of their professional education and start various elective

courses benefiting the students, 2) institution organizes the electives program in such a way that students are actively engaged, their expectations are met and they become satisfied and 3) institution must take written feedback from all stakeholder as to improve the practices with electives, core curriculum of the electives, teaching/learning and assessment methodologies used for electives.

ADDITIONAL INFORMATION AND DECLARATIONS

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