

Best practices adopted and followed by the Department of Medical Elementology & Toxicology (2017-21)

Name of the School, if applicable: School of Chemical and Life Sciences

Name of the Department/Centre/Cell/Section/Division/Unit: Medical Elementology & Toxicology

1. Title of the Practice:

Providing opportunity to students to develop analytical and communication skills.

2. Objectives of the Practice:

- a) To develop analytical skills to solve scientific problems
- b). To provide opportunity to develop writing and oral communication skills.
- c). To encourage students to develop inter-personal communication skills.

3. The Context:

- Toxicology is a research based interdisciplinary field, which involve gathering and analysis of complex in vivo, in vitro and in silico data. Analytical skills which include from collecting data to making rational decisions are critical to such a field.
- A diverse group of students from diverse background. Especially, as in undergraduate programme (B.Sc.) a majority of students from Hindi/Urdu medium take admission. They feel problems in initial stages, as teachers communicate and give instructions in English. In some cases it was observed through internal assessment that their performance in examination/evaluation is also impacted. Therefore, it was pertinent to provide students an opportunity to develop both analytical and communication skills by self- and cooperative learning.

4. The Practice:

- Each student of undergraduate and post-graduate programmes is provided a topic in the initial days of session. Students are given a time of 4-6 weeks to prepare. He/she is also required to make a write-up of 10-12 pages along with relevant bibliography. For each student a teacher is assigned as mentor to guide the student in preparing write-up and power point presentation. On the assigned day one or two students make presentation as seminar and also present their write-up to teachers. Students are given grade based on their performance. Their performance in question-answer (QA) session was also factored in. In some cases, students with weak analytical skills and language communication senior or peer students are assigned as mentors who work with teacher-mentor. In case teachers were not satisfied with the presentation in the first instance, the student was required to again make the presentation.

- In end semester of both UG and PG courses each student is compulsorily do a project work. In the project work, they are allotted a research problem. Each students produce original data, analyse the data and report them for publication in reputed journals

5. Evidence of Success:

It has been noted that students took up this exercise enthusiastically and some students showed brilliance in their presentation. This practice also incrementally improved performance of students in internal and term examinations. Good analytical and communication skill also helped student in campus placement interviews.

6. Problems Encountered:

Some students required additional efforts and showed hesitancy in presentation in public forum before their students and peers. Such students may need counselling.

7. Resources required:

No additional resources required.

8. Coordinator/In-charge/Group who has been assigned to the above Best Practice (optional)

- a) Name (s): Dr Haider Ali Khan, Associate Professor (2017-2020); Dr Basir Ahmad, Assistant Professor (UGC-Recharge Faculty)
- b) Designation(s): Dr Haider Ali Khan, Associate Professor (2017-2020); Dr Basir Ahmad, Assistant Professor (UGC-Recharge Faculty)
- c) Period/tenure involved in conduct of the best practice:
2017-20 – Dr Haider Ali Khan
2021 onward – Dr Basir Ahmad

Notes (optional)

Add-on sessions by language/communication expert may be helpful in proving the communication skills.