

Interactive and engaging teaching of chemistry to Pharmacy students

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First year chemistry subjects are some of the most complex, conceptually difficult units in the Bachelor of Pharmacy degree. What makes them even more challenging to students is that these are among the first subjects most of them encounter after leaving high school. Hence, not only do they have to deal with new and difficult content, but also in a new setting. We strongly believe that to be well received and appreciated, the content has to be delivered in an **engaging** and enjoyable manner. This presentation will illustrate the innovative and exciting approaches and techniques used to demonstrate to students how the “abstract” science, which they learn in class, relates to “real life” (it will include three-dimensional animations of drug molecules, mini-movies, cartoons, web-based materials and everyday- and “current affairs”-based examples, to name just a few). Nothing beats this approach for motivating students to learn! All these tools are designed and implemented to assist students in mastering difficult, and often – intangible, concepts. Our motto is “flexibility and variety”, and our aim is to develop the complex material from a reasonable standpoint and to make it relevant and stimulating, while maintaining the academic rigour.

We strongly promote **interactive** teaching of chemistry where one-way flow of information is extremely well integrated with short discussions and problem-solving sessions. In this presentation we will demonstrate animated worked examples, which let students test their understanding of the lecture material as they go along as well as freshen up the reception of the material due to the change of pace. The problems are available to students well in advance, and many of them do indeed attempt problems prior to lectures, which often stimulates their curiosity with respect to the taught material.

The best opportunities for interactive teaching are, of course, in a small group setting. We actively avoid tutorials being simply mini-lectures and incorporate problem-solving sessions, small group activities, and individual presentations into our tutorials. The tutorial classes are designed with the student-centred attitude in mind: students receive answers (but not solutions!) to numerical problems, so that they can self-assess their progress before they turn up to class and thus make their time in class more productive. We have found that student confidence builds up as a result of the utilisation of these techniques as well as on the account of a casual and informal atmosphere we endeavor to create. This presentation will address a variety of innovative flexible teaching techniques to stimulate student involvement, participation, and the development of problem-solving skills we implement in our tutorial classes.

Finally, the quantitative outcomes and qualitative comments, collected from students *via* MonQueSt and Unit Evaluations, will be presented, which substantiate how all these approaches help us influence, motivate and inspire students to learn.