Foundations – supporting FY medical students @UNSW

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The Foundations Course (subject) occurs in the first eight weeks of the first year of the undergraduate Medicine program at the University of New South Wales (UNSW). It is part of an integrated curriculum which spans six years. It has been designed to orientate and support first year medical students to the medicine program.

The Foundations course addresses all six organising principles outlined by Kift (2009);[1] transition, diversity, design, engagement, assessment and evaluation and monitoring.

Transition

The Foundations course has been designed to support students with the transition from high school to university and more specifically, to a medical program. The aim of many of the learning activities in the Foundations course is to provide students with exposure to the learning environments they will encounter throughout the program. A number of the learning activities explicitly explore both student and faculty expectations and responsibilities of this and other courses they will complete as part of the program. For a number of students, some of these are completely new. Time is spent discussing the difference between how they have been learning until now and how they will learn in this course and subsequently, the entire medical program. Specifically, some of the learning activities allow them to begin to develop skills in small group work, peer teaching, and self-directed learning. Students also encounter key learning environments, including the library and online learning environments as well as the different laboratories. Importantly, they experience the range of assessment tasks they will encounter in the first two years (Phase 1) of the Medicine program.

Diversity

The design of the course is attuned to student diversity, including those students who do not come straight from high school or from within Australia. The course uses a full range of teaching styles, consistent with the styles that are used subsequently in the Medicine program. These include small group tutorials, practical classes and formal lectures, as traditionally used in higher education. There are also facilitated small group teaching sessions, known as Scenario Group Sessions (SGSs), which involve 13 to 15 students and a facilitator. The latter is typically a member of the teaching staff in the Faculty of Medicine, who has specific expertise in one or more of the following content areas: medical practice, medical education, basic biomedical science, or in the social and behavioural aspects of medicine. Students have two SGSs per week during Foundations and subsequent courses in the first phase of the program.

*****The design of this course is the product of many minds. Those closely involved in the design and implementation over the six years of its existence include: Associate Professor Andrew Collins, Sophie di Corpo, Associate Professor Brian Freeman, Professor Michael Grimm, Dr Peter Harris, Professor Nick Hawkins, Associate Professor Tessa Ho, Associate Professor Philip Jones, Suzanne Mobbs, Sybil Perlmutter and more recently, Associate Professor Renate Griffith and Dr Maria Sarris. Dr Chris Hughes and Dr Chinthaka Balasooriya have also contributed to a number of the learning activities.

[1] Kift, S. 2009, Articulating a Transition Pedagogy, FYE Curriculum Design Symposium, February 2009, Queensland University of Technology (QUT), Kelvin Grove Campus.

The goal of these SGSs is to allow students to identify and pursue their own learning needs, both as individuals and as part of a small group. It is also a chance for them to integrate and apply knowledge they have gained in other learning activities. The SGSs also provide the students with a connection to a member of the faculty teaching staff whom they can contact and who knows them well. All the facilitators in the Foundations course are experienced facilitators and understand their role in supporting and nurturing these new students.

Scaffolding of academic skills has also been specifically incorporated into the course through a number of learning activities and assessments. Two lectures are given on academic skills and these are explored further through learning activities in the SGSs. Students are also given the opportunity to 'trial' each of the assessment tasks. In addition, each year a study group is formed, with the assistance of staff from UNSW's Learning Centre, to support students who need to review or build their skills around assignment writing, reflection, oral presentations or referencing for example. Students may self select for these study groups which meet outside of scheduled course times, or may be invited by their facilitator to attend. In addition, a peer mentor program has been established by students whereby students in later years team up with first year students to support them with their transition to university.

Design

The design of the course reflects the principles underpinning the program, which is outcomes-based and built on adult learning principles as described by McNeil, Hughes, Toohey and Dowton[2] (2006). The design of the course introduces and scaffolds new medical students as they engage in the scenario-based independent and collaborative learning approaches that characterise the program. The Foundations course is built around two scenarios, each designed with specific learning goals in mind. Both scenarios provide a context for medical practice and allow students to explore a health issue from a number of different perspectives. All the learning activities and assessments are based on these two scenarios. Infection and immunity in medical students is the first scenario, based on the Faculty's Immunisation Program for 1st year medical students, while the second scenario involves a patient with stomach pain. The scenarios and associated activities support students' learning. For example, the stomach pain scenario has the following aims:

- to show students how knowledge derived from a wide variety of disciplines is used by a medical practitioner in effective clinical practice;
- to give students an understanding of the diversity and scope of individual disciplines within the Faculty; and
- to allow students to develop specific academic skills, including report writing and reflective writing, as well as presentation skills, peer teaching and peer feedback.

In addition to introducing students to the learning processes and environments in the program, the course is designed to introduce students to the disciplinary basis of medical practice. Several learning activities seek to provide students with an insight into the way in which disciplinary knowledge both underpins, and is integrated within, effective medical practice. The Foundations course is also designed to introduce students to the scope of the Australian healthcare system and introduces them to the concept of the integrated model of health, highlighting the idea that while medicine is traditionally taught from the one aspect, typically a reactive/individual one, the Medicine program at UNSW seeks to more adequately address other areas of health care delivery.

[2] McNeil, H. P., Hughes, C. S., Toohey, S. M., and Dowton, S. B (2006) An Innovative Outcomes-Based Medical Education Program Built on Adult Learning Principles. *Medical Teacher* 28(6):527-534.

This concept forms the focus of the group project, one of the forms of assessment for the course and program. The other important aspect of the design of the course which scaffolds students' learning is how the graduate capabilities underpin the assessment. This is described in more detail below.

Engagement
The learning processes and environments promote high levels of engagement and interaction, particularly around peer-to-peer collaboration. Learning activities in the SGSs require students to work in groups and/or pairs to complete a number of different tasks. These tasks range from exploring the characteristics of a TV doctor to participating in a mini debate to preparing possible exam questions to give their peers, to giving an oral presentation. These sessions have also been designed so that they are student led. Other examples of engagement include the 'Expert Tutorials'. The course is designed so not all students go to each discipline-based tutorial so peer teaching is particularly important and has been incorporated as part of the small group sessions. Students also need to undertake a group project as part of their assessment for this course. Included in this is a reflection on the group process itself. Students are given 'observer sheets' and asked to take on the role of observer for at least one of the group project meetings so they can analyse the group process.

Students adopt different approaches to learning during different parts of the course. These include:

- *A self-directed approach*, in which they identify the things they do not know, and work out how they are going to learn them. This involves the application of self-assessment through reflection.
- *A collaborative approach*, in which they work with their peers in small groups to achieve identified tasks. It also involves the giving and receiving of feedback to peers on performance.
- *A more traditional approach*, in which students are expected to demonstrate that they understand and are able to apply concepts and facts introduced to them in lectures, tutorials and practical classes and elaborated through their own study.

It is a requirement of the Foundations course that students actively engage in these different approaches to learning.

Assessment
The assessment processes in Foundations give students experience in the sort of assessments that will be used throughout the first phase of the program. While students receive feedback on all their assessment, and are required to complete them to pass the course, the grades and marks are not recorded providing students with the opportunity to trial the different assessments to explore their strengths and weaknesses in a safe environment. They also receive informal feedback on all the activities they engage in as part of the SGSs. Peer assessment is a significant part of their learning and activities have been designed to provide them with opportunities, both formally and informally, to give and receive feedback. An example of this is their assignment. Students are required to have a draft of their assignment reviewed by a peer and incorporate any changes made as a result of the feedback in their final assignment they submit for assessment.

As stated earlier, a set of graduate capabilities (eight) underpin the assessment for the course and the program. The graduate capabilities are a list of desired attributes that students have to develop through the Medicine program. As such, they form the goal of teaching and learning

activities, and the basis of the assessment system. A goal of the Foundations course is to introduce students to these graduate capabilities. At the end of the first phase of the program students must complete a portfolio, addressing how they have met each graduate capability. In Foundations, students complete a draft portfolio, addressing any two capabilities to give them some early feedback on this process. Included below is an extract from the Foundations Student Course Guide 2009 to illustrate how three (of the eight) graduate capabilities underpin the assessment.

> ***Self-directed learning and critical evaluation skills***
> A student-centred focus to work in Foundations will arise from the work done by you in the SGSs and in particular, through the relative freedom which you will have to identify and execute assignment tasks, both as individuals and as groups.
>
> Skills in self-directed learning will also be developed in SGSs. They will be further enhanced by the gaining of specific skills in information literacy and basic written communication. Through the use of the portfolio you will be encouraged to develop and demonstrate the capacity for effective self-reflection on your learning.
>
> You will begin to develop self-directed learning skills. These will include practice in the independent retrieval of information from text-based resources (books and journals), audio-visual and computer-based learning resources, and online data sources. You will also have opportunities to practice the assessment of the scientific credibility and utility of a resource.
>
> ***Effective communication with patients, team members, colleagues and the community***
> During Foundations you will experience and attempt to manage issues related to communication as they arise in small groups. Specifically, you will have opportunities to practice:
> - communication skills in presenting medical knowledge;
> - written presentation skills, including methods of referring to the work of others; and
> - oral presentation skills.
>
> ***Working as a member of a team:***
> You will practice participation in a variety of team-based learning activities. Opportunities will be provided to begin to develop skills in the following areas:
> - small group process skills;
> - group project skills;
> - peer education skills; and
> - peer feedback skills.

Evaluation and Monitoring

As already described, small group teaching is an integral part of the course. It is during these sessions that activities are designed to both evaluate and monitor student engagement in their learning. It is also during these sessions that faculty get to know the students so they can monitor not just their learning, but their overall well being. Attendance rolls are taken in these sessions. Other processes for evaluation and monitoring in the course include a weekly facilitator meeting during which facilitators of the SGSs provide feedback on the two sessions they have facilitated that week and raise any issues related to students and/or their learning. This allows issues to be addressed immediately and any changes to be incorporated.

Evaluations are also completed by each student towards the end of the course in the SGS to gain feedback on the scenario groups and facilitation. All students are also requested to complete an online course evaluation form at the end of the course. The feedback from the

course evaluations, facilitator meetings and any other informal feedback that may be collected, forms the basis of changes made to the course each year.

Other Publications that describe the program:

Toohey, S. and Kumar, R. K. (2003) A new program of assessment for a new medical program, *Focus On Health Professional Education: A MultiDisciplinary Journal*, 5(2):23 to 333

Watson, G. S., Moloney, P. J., Hughes, C. S., Mobbs, S. L., Toohey, S. M., Leeper, J. B. & McNeil, H. P. (2007) Development of eMed™ - a Comprehensive and Modular Curriculum Management System. *Academic Medicine* 82(4) 351-360.

Outline of the N&B session plan

Brief overview of Foundations course (5 mins)
What Why How

Discussion questions (10 mins)

1. Which aspects, if any of this Foundations course would be useful in your own settings and why?
2. What difficulties do you foresee and/or think we may experience with such a course?

Feedback from students and staff (5 mins)
What students tell us they like and don't like
What we find difficult
What we are targeting for change in 2010

Discussion questions (10 mins)

1. Any other ideas on how we will address this feedback?
2. Any other questions or comments?