

3.0 A Statement of Teaching Philosophy

My first taste of structured teaching in medicine came when I was chief resident in Internal Medicine in Ottawa. I had completed my four-year undergraduate medical program, and was in my third year of specialty training. The chief resident was responsible for facilitating “morning rounds”, a daily discussion typically surrounding the patients that were admitted to hospital the night before. A large group of medical students, residents and faculty physicians attended these sessions, many of whom would ultimately care for these patients during the day. As I now look back on how I approached those rounds, I realize that long before I even consciously knew that I had a teaching philosophy, I taught, and still teach today, using two basic principles: “keep it light”, a principle applying to teaching process, and “keep it simple”, a principle that relates to teaching content.

My participation in both faculty development sessions and the Masters in Medical Education program at the University of Calgary have led me to frequently be asked the question, “What qualities are important to be an effective teacher”? This is offhand a difficult question to answer, but in a nutshell, I have always felt that the best teacher is fundamentally a “real person”, with whom you would enjoy interacting, whether in a teaching environment or a social situation. This “real person” therefore must be genuine, approachable, humble, non-judgmental, and ideally, be able to inject a sense of humor in any interpersonal situation, including teaching. By virtue of these important qualities, the teacher is able to conduct the educational session in a light, engaging and motivating manner.

“Keep it light” is a principle that guides all my teaching events. It relates not only to injecting humor into teaching, but more importantly, is a conscious attempt to break down the professor-student hierarchical relationship, in order to foster a comfortable atmosphere, which allows for frank discussion and questioning. While this principle seems perhaps to relate better to small group teaching, it can be effectively used in any format, including lecture-based. I frequently interrupt my lectures with a five-minute “break”, where students can confer with their neighbors over a hypothetical case, while I mingle in the classroom answering questions and clarifying important teaching points. I have also tried to adhere to this principle in designing courses. During the final year of medical school training (known as the clerkship), students will rotate through many disciplines, including a three-month experience in the field of Internal Medicine. While I was director of the Internal Medicine clerkship, I created a seminar series on medical emergencies that included a fun, interactive team game (Medical Jeopardy). This game not only led to some fun moments, it also created important teaching moments that were spawned not only by the content of the question, but the open process by which the course was delivered. Section 6.1 presents favorable student feedback on these sessions.

The second principle, “keep it simple”, is one that was always an intuitive component of my teaching, but in recent years, as I learned about important educational principles such as the “cognitive load theory”, it has also become a component of my research in medical education. Cognitive load theory fundamentally states that effective teaching begins with an understanding

of the limited capacity of human working memory, especially when faced with complex information processing. These limits will vary depending on the level of the trainee. Being an effective teacher is about recognizing the educational level of your trainees, including their prior knowledge and experience, and placing yourself at that level as the starting point for the content and teaching strategies to be utilized. At the undergraduate medical education level, activating prior student knowledge may sometimes require using analogies from the non-medical world, or seeking examples from their own life (e.g. “has anyone had a fever before?”).

Another important strategy to simplify teaching, which served as the foundation for my masters in medical education, has to do with a cognitive organizational strategy that we have termed “diagnostic classification schemes”. Studies in many fields, including medical education, have shown that novice learners tend to have poorly organized or ‘dispersed’ knowledge. With time, as expertise develops, knowledge is organized in more discrete, packaged networks. In medical education, when a novice learner is confronted with a patient having, for example, chest pain, a large number of diagnostic possibilities exist. A diagnostic classification scheme for chest pain would organize the possible causes of chest pain into smaller “bundles” or “chunks”, such as grouping them into cardiac causes, pulmonary causes, and musculoskeletal/dermatological causes. This technique, which mimics what experts tend to do, was found, in papers that I was involved with as well as others, to be a useful method of organizing knowledge and problem solving. The smaller and more manageable sets of diagnoses (cardiac, pulmonary) reduce the cognitive load in learners, especially the more fragile novice learners who desperately need an organizational scaffold on which to attach their knowledge. This teaching philosophy has culminated in recent years in the creation of the “University of Calgary Black Book”, a text book containing diagnostic classification schemes for all the ways a patient can present to a physician. As the faculty editor for this student-led initiative, it was very gratifying to see the commitment of our student body to a teaching philosophy that I had espoused for so many years. I am especially proud that this book is now in its fifth edition of publication from the student body, and will be launched electronically as an “app” in the coming year.

As is the case for my “keep it light” philosophy, “keep in simple” can be applied to all educational events, including lectures, as well as small group and bedside teaching. During lectures, I always present an organizational scheme or structure for the topic at hand, and insist on presenting a maximum of four or five key points, which I do not hesitate (nor apologize for) repeating several times during and at the end of the session. This is a similar process to what I do in small group teaching. I have also attempted to bring this philosophy to my curricular development efforts. The curriculum that I helped to implement at the University of Calgary, starting August 2006, was an attempt to simplify the acquisition of material in the first two years (pre-clerkship) of medical school. This curricular modification attempted to demonstrate another of my important educational philosophies: reiterating and reinforcing key educational material, whether in a lecture or throughout a curriculum, is important for maximizing learning. Reiterating non-critical subject matter may require an apology, but this is never required when reiterating core educational material.

