Sample Statement of Teaching Philosophy

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When I started my teacher training at university in England my view of teaching, was as of a transmission of knowledge, a reflection of the teaching that I had myself received in both school and university. My Biology tutor, however, was adamant that I abandon the 'chalk and talk' approach to teaching and instead consider actively involving students in their own learning. This tutor was active in promoting the adoption of the Nuffield approach to teaching which was then coming into vogue in British schools. This approach focused on the process approach to teaching with an emphasis on students working as scientists in the laboratory. When, therefore, I undertook my one-term teaching practice I decided to use the Nuffield approach in deference to my tutor. I have to say that I was not prepared for the response from students which was overwhelmingly positive! My teaching experience was, as a result, changed forever and I have remained convinced since then that good teaching has to involve students actively in their own learning. Not only did the students benefit enormously but also enjoyed taking Biology. In fact the students were so enthusiastic about Biology, something which had not occurred in that school before, that many devoted hours to their homework (writing up their laboratories) even to the point that other teachers complained that students were not doing their homework! Even the parents coming to Parent-Teacher Nights asked what was going on since they had never even heard the subject mentioned at home before! The Nuffield-approach to Biology teaching worked so well that I adapted the approach to my teaching of other classes for which there was no such curriculum. For my students their learning was not only educational but highly interesting. When I moved to teaching at the university-level it was difficult to adapt the same approaches to teaching at that level especially with large classes, but I have always been committed to the principle of involving students in their own learning.

Throughout my teaching career I have always looked for better ways of teaching. I subscribe to a number of pedagogical journals (American Biology Teacher, Journal of College Teaching etc.) and regularly read a number of others (The Teaching Professor, College Teaching etc.). I also read a number of books on teaching at the college-level in search of ideas that I can use. I find that the pedagogical journals have supplied me with some of the most useful ideas that I now use in my teaching such as the two-minute pause, microthemes, multiple term tests etc. I also try to attend a number of teaching-oriented conferences each year in an attempt to locate better ways of instructing. As an example I attended the National Association of Biology Teachers Annual Convention in Las Vegas in 1981 and went to several sessions dealing with the use of computers in teaching at the college-level. These talks convinced me that computers did have a role in teaching – I had been skeptical at that point in time – and so upon my return from the conference I embarked on incorporating computers in my teaching, and seventeen years later I am still using computers in the teaching/learning process. More recently I attended a National Science Teachers' Association Regional Convention in Denver and at a talk there I was first introduced to the idea that writing about a subject could improve a student's learning of the subject. A talk at another American Biology Teachers' Convention introduced me to the learning cycle which I have now started to use in my teaching. If one is genuinely interested in improving one's teaching, it is of paramount importance to give oneself the time to read such journals and to plan to attend teaching-related conferences. Moreover conferences allow you the opportunity to

network with colleagues, and I still maintain links with people that I met many years ago at conferences.

One of the characteristics of a good teacher is that he or she is fair minded in their dealings with students. I have always been guided by this principle and am always open to students challenging the marks I have given them on tests and assignments. I have always endeavoured to give students as much feedback as possible on tests and assignments. Since this is difficult to do with written assignments in large classes, I give each student a feedback form which gives them information on their writing style, spelling, accuracy of information etc. The students not only appreciate such feedback but also use these forms as guides for writing assignments in other courses they take subsequently. In order to give students as much feedback on how they were doing in their courses I used to give weekly tests when class sizes were small and would go through the test with students who were not performing well on tests. As class size increased I began to employ technology (e.g., Computer-Administered Testing) to assist in this process so that students would not have to spend long periods between evaluations. With the advent of the World Wide Web I am now embarking on the process of having optional weekly multiple-choice tests on the Internet which students can take on a weekly basis for self-assessment of their understanding of the course.

Since 1981 I have actively espoused the use of technology in teaching as and when it is appropriate and have been an acknowledged leader in this area at Memorial. I was the first to introduce computer-administered testing, computer-assisted learning units, completed computer-mediated courses, electronic bulletin boards, and more recently web-based courses. In nearly all of these cases I have found that students greatly benefitted from such uses of technology and have, where possible, incorporated these as permanent additions to my approach to teaching. While a number of my colleagues have treated some of innovations with great suspicion (technology will lead to fewer teaching positions etc.) I realized a long time ago that what is important is not one's teaching but the students' learning. While most university professors view teaching as performing in front of students in a classroom, I regard my role as that of facilitator, that is to facilitate the student learning of a subject and this can often be done in situations where there is no instructor in the classroom. I have shown consistently that students can learn better in a variety of ways that do not necessarily involve live instruction (e.g., PSI – personalized system of instruction, CAL, correspondence courses, web-based courses). I regard it as sheer arrogance when professors feel that students only learn they are physically taught! Nothing could be further from the truth.

In recent years I have become aware of the fact that students learn in a great variety of ways and there is a burgeoning literature on the whole area of learning styles. While there is no widespread acceptance of any theory of learning styles it is nonetheless important to recognize that students learn in very different ways, and often in ways which are in direct contrast to the teaching style of the instructors. It is important, therefore, to try making one's teaching accessible to the widest variety of student learners. Because most teachers tend to favour their own learning styles the teaching of most lecture courses tilts heavily toward the small percentage of students who are intuitive, verbal, deductive, reflective, and sequential learners. This imbalance puts a large percentage of the student population at a considerable disadvantage. According to Felder (1993) such problems could be minimized and the quality of science education significantly enhanced if instructors modified their teaching styles to accommodate the learning styles of all the students in their class. For instance it would be possible to accommodate the visual learners in a class by making extensive use of sketches, diagrams, computer graphics and physical demonstrations in

addition to oral and written explanations in lectures. In my own lectures, therefore, I am trying to incorporate some of these ideas to better accommodate the learning styles of students which are very different from my own.

I also try to take account of the findings from the research which suggest that over half of our entering university students are still operating at the concrete level of operational thought as originally hypothesized by Piaget. I, therefore, try to incorporate concrete examples in my teaching (i.e., using molecular models to show what amino acids look like, showing pictures and slides and even conducting simple demonstrations in the classroom) as a way of ensuring that as many of these 'concrete' students benefit from my teaching.

I have tried out a number of innovations during my teaching career at Memorial and, in most cases, have also tried to assess their impact. My training as a scientist and the curiosity to find out if a certain technique has worked, has motivated me to carefully design experiments to test whether these innovations have had the desired effect. Not only did I want to know whether the innovation had been worthwhile, but I recognized that it would be important to gather data if I was to have any chance of persuading others to implement such approaches. I have, therefore, collected data, analyzed it using the appropriate procedures, and drawn conclusions from these experimental designs. Not all of these innovations have worked and these have forced me to re-assess their use in the teaching/learning situation. Another aspect of the scientific pursuit is the publication of results so that they can be brought to the attention of a wider audience. It has been immensely pleasing to have received so much feedback to my published articles, and covering each of the inhabited continents!