



# “Iron Sharpens Iron...” Experiential Learning Strategies in Chiropractic Education

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## ABSTRACT

**Objectives:** To discuss the imbalance of classroom and experiential education in chiropractic education and to uncover ways to enhance chiropractic education through increasing empirical learning.

**Discussion:** Experiential learning completes the task begun in the classroom. However, most chiropractic colleges have allowed the didactic portion of their curriculum to outpace the clinical/empirical portion of a student’s education. This has the potential to leave students with plenty of factual knowledge, but with limited experience in the practical application of this knowledge.

**Conclusion:** Clearly a more diverse clinical experience is needed, as well as more interactive learning processes to round out a chiropractor’s education. This can be accomplished by expanding the chiropractic clinical experience to include rotations in multidisciplinary healthcare facilities. Maximizing the exposure of chiropractic students to patients of varying backgrounds, ages, and states of health will broaden and deepen the chiropractor’s application of knowledge. (J Chiropr Humanit 2006;13:21-6)

**Key Indexing Terms:** Chiropractic; Education, Professional; Clinical Clerkship; Internship, Nonmedical

## INTRODUCTION

Educationally equipping students to become doctors is a labor that is challenging and rewarding. The evolution of chiropractic education has created a system that on the surface appears to mirror the education of medical doctors in many ways.<sup>1</sup> The chiropractic curriculum has a comparable amount of classroom hours in basic sciences and clinical knowledge and a significant

amount of hours dedicated to clinical ‘internship.’ In reality, however, chiropractic education is skewed toward the classroom and weak in the clinic. Virtually all of a chiropractor’s learning takes place in the classroom, whereas the clinic clerkships have, until recently, been mostly an insipid application of the classroom knowledge. Chiropractic students typically see a limited number of generally healthy younger patients in an outpatient college clinic.<sup>2</sup> This is contrasted by the medical student’s exposure to a wide variety of conditions and patients during rotations through various specialty clinics and hospital wards.

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Source of support: none declared

Paper submitted August 22, 2006, in revised form September 9, 2006.

Having an educational model that is weighted toward classroom-based knowledge risks producing fact-spewing robots, rather than the sensitive, compassionate, caring and skilled doctors we desire.

To provide students with a broader understanding of clinical practice, chiropractic education needs to create an expanded and diverse network of clinical clerkships, internships, and residencies. Preferably these clinical opportunities will be in hospital and specialty care centers where the chiropractic student will be exposed to a wide variety of patients, conditions and diagnostic processes.

Clinical clerkships, internships and residencies are not the only venue for empirical learning. There are several methods that can also convey didactic (lecture and textbook based) knowledge into practical deductive reasoning skills. Examples of non-clinical methods of interactive learning include mentorships, journal clubs, technique clubs, adjusting labs, task-based learning,<sup>3</sup> and simulation centers.

## **DISCUSSION**

### **Didactic Versus Empirical Learning**

Compare a student who has read about sustained clonus to a student who has felt and seen sustained clonus and then had a neurologist explain the significance of this finding. Who would be more amply prepared to identify an upper motor neuron lesion? Who would a patient rather trust with his examination: a doctor who received lectures on the characteristics of a cancerous lymph node or one who has actually felt cancerous lymph nodes under a master's tutelage? Who would be the better

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chiropractor: one who learned to adjust from a handful of technique instructors in technique labs or one that worked under a variety of master clinicians in a clinical setting? When it comes to mastering a subject, hands-on experience completes the task that classroom teaching begins.

To become an “A” student, a student needs to be correct 90% of the time. The flip side of this statement is that an “A” student can be wrong one in ten times. Consider the “C” student who has been wrong up to 30% of the time! Who would like to go to a doctor who is wrong 10-30% of the time? The didactic portion of a doctor's education is important, but by its nature it is inadequate to prepare students to become doctors. To fill in the gap left by the didactic portion of a doctor's education, an interactive intellectual exchange and a robust clinical clerkship is required. This clinical exposure should expose the student to a variety of doctors, patients and conditions. Where the classroom teaches an individual student vocabulary and facts, the interaction of clinical clerkships educates doctors on how to apply this knowledge.

Medical students learn the basics of medicine in the classroom, and then through clerkships in various clinics they continue to learn through observing various specialists, interaction with patients, and interacting with other providers. This very diverse, enriching, and enlightening experience

stands in contrast to many chiropractic students' clinical experiences. Chiropractic interns work predominately in student clinics recruiting and treating their own patients, patients who for the most part are healthy. This model does not create the academic diversity required to round out a doctor's education.<sup>2</sup>

### **More is Caught Than Taught**

In education it is safe to say that "more is caught than taught". Certainly students learn more practical knowledge through experiential learning than in the classroom,<sup>4</sup> but students just as often learn unintended lessons from their educators. For example, a student may learn more about how to comfort patients and dispel the patient's anxiety by watching a clinician, than the actual technique the instructor had attempted to teach. Students are always watching and learning.

Much of the learning experience of clinicians takes place in an empirical "hidden curriculum".<sup>5,6</sup> This hidden curriculum is found outside of the formal educational experience; it is found in observing faculty, mimicking role models,<sup>7</sup> in informal discussions and debate with fellow students. This hidden curriculum accounts for much of what shapes future health care providers. It is where future doctors learn how to share sympathy, sensitivity and empathy to their patients. To maximize the constructive potential for learning ethics, technique, and especially the intangibles (compassion, empathy, warmth, etc), we need to maximize the exposure of chiropractic students to those we most want to emulate. By exposing students to ethical, nurturing and accomplished chiropractors we will reap the rewards provided by the hidden curriculum.

### **Iron Sharpens Iron**

*"Iron sharpens iron, so one man sharpens another."*<sup>8</sup> This Biblical proverb reminds us that we develop mental sharpness through the friction that occurs when we rub against others. In the same manner that friction is required to sharpen iron, so it is with people: we grow sharp and more useful by rubbing against the abrasiveness of other people. Daily rubbing against others with different opinions will gradually work to remove our own abrasiveness and sharpen us. Subsequently, we often experience the greatest growth through exposure to the people in our lives we find abrasive.

The classroom portion of college favors linguistic<sup>9</sup> learners and may be difficult for an interpersonal learner or kinetic learner. The student with strong interpersonal or kinetic intelligence may be better suited for learning through daily interactions with other providers. A student with interpersonal learning skills may learn more from mutually respectful disagreements with other providers. This process is likened to sparring. When a boxer is preparing for a bout, he practices with sparring partners. Of course the higher the skill of the sparring partner, the greater the training benefit. The same is true in intellectual growth. The greater the knowledge of an opponent, the greater the intellectual challenge and, subsequently, the greater the training effect.

One of the best examples of intellectual sparring progressing scientific knowledge is the story of Orville and Wilbur Wright. These pioneers from a humble educational background did what the best educated and funded scientists in the world could not do - unlock the mystery of flight. It was their custom to challenge each other's ideas with vigor to search for weaknesses or flaws. Through this type of intellectual exercise

their theories developed. They relied on the other's strength to compensate for personal weaknesses. So strong was their familial bond that when one of the brothers assailed the other's idea, the one being attacked could intellectually compartmentalize the criticism and no resentment or grudge developed.<sup>10</sup> It is rare for anyone to attain the level of mature intellectual discipline that the Wright Brothers developed. They were supportive of each other even when they both felt that they were right. They were able to mentally separate intellectual discussion from friendship, personal value, and brotherhood. Their ability to defend a position with genuine passion while considering the other's point of view was essential to their success.

To obtain this level of maturity requires devotion to the greater good of obtaining knowledge over being right; to be more devoted to acquiring truth than winning arguments. In spite of how lofty and above petty jealousy we think we are, unless we are well grounded we are susceptible to resenting those who challenge our ideas. When engaging in intellectual discussion and debate, it is wise to lay down some ground rules and try to mentally compartmentalize intellectual criticism.

### **Experiential Learning Strategies for Life-Long Learning**

The American sage Eric Hoffer exemplifies the need for life-long learning when he penned, "In a time of drastic change it is the learners who survive; the 'learned' find themselves fully equipped to live in a world that no longer exists." To keep pace in the ever-expanding knowledge base of modern healthcare, doctors of chiropractic must continue to purposely gain knowledge. We need to create a generation of doctors who are 'learners' not 'learned'. Intellectual

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isolation is the enemy of progressive life-long learning. To continue to enlarge our knowledge we need to interact with other providers, both chiropractic and allopathic. This diverse exposure will develop diversified thinking.

One of the ways doctors stay intellectually sharp is by supervising students in their clinics. By having morning reports, with students presenting particularly difficult or interesting cases, the student and doctor use their critical thinking skills to improve care and professional knowledge. The students will learn from the experience of the doctor, while the doctor will stay sharp through interacting with the up-to-date knowledge of the student.

The journal club is a compulsory portion of most medical residencies.<sup>11</sup> Even though the word “club” implies voluntary membership, weekly attendance is not optional. Every week the residents pre-read a scientific journal article or a text chapter and then meet at the “club” to discuss the scientific merits, weaknesses, biases, and relevance (or lack of relevance) of the piece. Interaction and discussion is encouraged to help the residents learn not only from the article reviewed, but how to critically appraise all future articles. Journal clubs are instrumental in improving reading habits, understanding of biostatistics and epidemiology, and critical appraisal.<sup>12</sup> Continuing the journal club experience after

graduation is a great way to continue to learn while developing camaraderie with fellow chiropractors.

Mentorship seems to be the buzzword of the day, but what does it really mean? This word is used too lightly. A true mentor is someone who is intimately involved in another's life. To be a mentor is no small undertaking and this relationship should not begin without scrutinizing the relationship. If you are a mentor you should be selective in who you choose to mentor. This relationship may last a lifetime and choosing the wrong protégé can be a source of disappointment and frustration. However, selecting the suitable protégé will be one of the most rewarding experiences of your life.

In life it is the nature of most to seek the course of least resistance and to avoid contention. This may be the key to a quiet life, but it is not the way of growth and progress. To grow and develop we need to be challenged and to defend our opinions. It is easy for people to group together with like-minded folks and build on their like-mindedness until they are intolerant of outsiders with divergent views or ideas. Chiropractors should take these practical learning tools and apply them to their life long learning strategy. Interact with others, share opinions, listen to the opinions of others, and learn to love intellectual reasoning and debate.

## CONCLUSION

Students glean more from experiential learning than by rote. Experiential learning may take several forms: clinical clerkships, intellectual debate and discussion, mentorship, journal clubs, techniques clubs, task-based learning, scenario simulation, morning reports, case presentations, and

interdisciplinary case management. These tools can be used to create better-prepared chiropractors and to maintain life-long learning, but the keystone of experiential learning for future chiropractors is an integrated system of hospital-based or specialty clinic clerkships, internships and residencies. Maximizing the exposure of chiropractic students to patients of varying backgrounds, ages, and states of health will broaden and deepen the chiropractor's application of knowledge.

Organized chiropractic education has progressively improved and expanded since its inception – eagerly expanding the depth and breadth of chiropractic training. The next step in this evolution is the expansion of clinic interactions with patients and skilled frontline providers in diverse settings. This experiential learning experience will fill the gap between the classroom and real world clinical practice.

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