



Invitation to a lifelong learning experience

Invitación al aprendizaje vitalicio

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We live in an ever-changing world, in which knowledge experiences immense, exponentially increasing momentum. What is common knowledge today, might not have been known yesterday, and could be of no use tomorrow. Knowledge's average life could be defined as the time between the acquisition of knowledge and the time when at least half of it becomes obsolete. Average life of professional expertise would then be the time elapsing from the moment a subject completes professional training up to the time when the aforementioned training becomes only half as competent as when it started. Actually, during his first professional stage, the subject is inexperienced, and experience enhances any skill.

Just a few decades ago, a subject completing university training possessed the body of knowledge he would need during the length of his professional life. He would only occasionally return to formal education. This model is, nevertheless, now «extinct»: formal education, even at graduate level, cannot be expected to last and be sufficient for the whole length of a professional life.

Could we then surmise our knowledge has an expiration date? The answer would be negative, since knowledge does not evolve in a systematic and predictable fashion. Speed of change differs according to varied knowledge fields; it even varies within the same field.

In the field of dentistry, it would not be easy to establish the average life of knowledge. It nevertheless is obvious that our profession has radically changed since 1728, when Pierre Fauchard, the father of Modern Dentistry, published the textbook «The oral Surgeon, or Treatise on teeth» (*Le Chirurgien dentiste ou Traité des dents*), although some principles, like disapproval of thoughtless extraction of primary molars, are still valid.

A XXst century dentist did not feel compelled to incorporate great amounts of advances and changes from the moment he would finish formal education to the point of retirement. This is no longer the case for a

XXIst century dentist. A dentist graduated in the decade of the 1980's, has witnessed the introduction of light-cured resins, barrier devices for infection control, use of laser beams, digital radiology and photography, tooth whitening, self-ligating and bondable brackets, implant and mini-implants, to just mention but a few. He has also witnessed changes in thought approaches such as extension through prevention and minimally invasive dentistry.

Life-long learning exercise as a permanent life process might be the key to greater possibilities of preventing disease and improving health, as well as better patient care and competitiveness and success in the XXIst century. Young professionals must then, per force, be pro-active, and take responsibility of the direction and quality of their own learning processes. Therefore, there is the need of being able to learn as adults. Acquiring the ability of being able to learn in the future might then become more meaningful than acquiring possibly perishable knowledge in the present. The proficiency to become a life-long student and to acquire skills to practice dentistry based on evidence must be developed at the University. University curricula should thus include the preparation to learn and re-learn, the ability to efficiently handle information overload so as to identify what, where and when to learn, and even more, to be selective, to become demanding customers of knowledge, with the proficiency to assess it. In other words, to master the framework of critical thinking.

Critical thinking embodies a process of self-governing reflection. It is a cognitive behavioral attribute. It represents the ability to understand, appreciate and assess the meaning of facts, veiled

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and unveiled actions and intentions. This includes the capacity to doubt, judge and reach conclusions so as to act to that effect with meaningful and independent purpose and behavior. Under this light, reflection includes respect for diverging professional and scientific approaches.

In dentistry, as is the case in many other sciences, researchers have the responsibility of sharing results. Present bewildering technological development allows knowledge to become global in spite of possible delay periods or hindrances to their clinical application. It has become impossible to imagine a scientific and professional body of knowledge as a stable, unchanged resource for life. To become suitably updated has become a challenge. Let us visualize a patient arriving at the dentist's office after having conducted an internet research and demanding specifically «x» treatment. The dentist must possess solid knowledge bases so as to be able to decide, considering the diagnosis and specific circumstances, whether the requested treatment is indicated and ideal for that particular patient. The dentist must also be capable of persuading the patient to forego a treatment when the particular treatment he demands is not suitable.

Information handling is a complex process, since it is not an object that can be stored, possessed or transported, as would be the case of a document. Reliable knowledge cannot stem from intuition, revelation, rumor or imitation. Knowledge must stem from some form of systematic procedure. Knowledge acquired at University will become a basis, but must adapt to new factors and novel problems. We should learn how to assess changes in paradigms, as well as discern which principles remain and how to integrate new data or developments to pre-existing knowledge and skills.

Let us not forego our enthusiasm for the process of learning. Life-long learning and recognition of knowledge's evolutionary nature is important, but not more important than clinical judgment or clinical experience increasing with the passing of time, common sense and professional ethics.

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