

## Chapter 12

# Autonomous Learning and Skill Accreditation: A Paradigm for Medical Studies

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### ABSTRACT

*This research article promotes Multimedia Learning in the sphere of Medical Education and Practice. It describes how learners can acquire educational experiences as e-learning experiences. Indeed, medical training seems to be the last frontier, not only for remote and distant learning, but also for any form of non-formal or non-typical education, at least in pre-graduate level. It seems that the main reasons for not having achieved on-line learning are the Complexity of the Content, and the Type of Learning, which are unique, in some sense set apart from the main paradigm for learning that governs most other sciences. Overall, these two factors, alongside the neurophysiological interaction of e-Learning users, require considerable resources to ensure a constant flow of accredited education. Can this be changed?*

## **INTRODUCTION**

Although learners flock massively into all forms of distant learning, autonomous teaching, and non-formal education, for some inherent reasons they seem not to rely, if not oppose, any deviation from the conventional character of medical training. It seems to be on the air a constant hesitation, alerting the minds of policy makers, that any experimentation in this field would derange the punctilious character of an education mechanism that accredits professionals to cope with the most precious human asset.

If an online BS in Medicine seems well beyond reach, for today's standards, executive sponsors may promote alternatively specific training courses, in affiliation with regional practice leaders, which facilitate the learning experience on specific topics. By creating Multimedia Learning modules and paradigms, they may well instruct by e-learning components groups up to 20 - 30 participants per course into real-life projects. These, apart from in situ education, usually offered by a lab, promote and raise completion standards for live e-learning components, self-paced projects that offer extensive networking and a team dimension that exceeds localization barriers.

The last factor is stringently connected with the cost of educational services, which constitutes regulating factor:

- In periods of economic crisis;
- In thematic units dealing with cognitive objects that are burdened with the cost of purchasing, maintaining and learning to operate expensive scientific equipment and instrumentation.

The authors of this article hand over their experience in the application of scientific knowledge for practical purposes, especially in technological frontiers in the fore coming world of augmentation, i.e. Bionics, Prosthetics and Implantations.

Thus, for properly instructing first or second cycle students, access to new medical technologies and instrumentation is required. However, collective admittance to such facilities is characterized by low availability and insufficient documentation. As a result, the certification and accreditation for satisfactory knowledge on relevant medical incidents is postponed to the next cycle, that of postgraduate studies or even further, to the stage of medical specialization.

It is evident though, that the rearrangement and delay in medical training is caused due to insufficient Educational Resources. Postponing to solve the problem does not unscramble the weak links of medical training, since it is not a matter of convenient or sufficient timing, but more of a topic for Asynchronous Interactions with a technology that is vaulting rapidly to new levels (Roblyer, 2003).

The authors of this chapter contribute to the operation of a rehabilitation unit, which benefits from the advances in Learning Intelligence. As they use Artificial Intelligence (AI) technologies for extending their methods of instruction, they experience and ardent shift from Traditional Classroom methodologies to Web / Virtual Synchronous Classroom settings (Naidu, 2005). The profit of such an approach lies not only in lifting geographic restrictions, but mainly in providing an increased set of education resources (from Limited Resources to Vast Resources).

This boost endorses an added value educational process, i.e. Learning Augmentation, on matters of bionic technology, Brain computer Interfaces, like Cochlear Implants, prosthetics in general, post-surgical training and rehabilitation for the proper re-admittance in schooling or society. The working experience of this unit produces many Learning Objects of Rich Content and the same time, provides a constant

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