

# Chapter XIII

## Motivating Healthcare Students in Using ICTs

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### ABSTRACT

*Motivating and teaching healthcare students to use information and communication technologies represent a challenge. For the successful integration of healthcare and technology, there must be an investment in the organization, but particularly in its people. Motivation and a lot of practical work are mandatory for teaching informatics in healthcare. A practical knowledge of informatics is an investment for healthcare students that can improve their quality of study, work efficiency, and everyday life. In this article, four examples of connecting healthcare jobs with informatics are presented. Connecting healthcare students' work and everyday lives is an efficient way of motivating them to use information and communication technologies.*

### INTRODUCTION

The usage of modern information and communication technologies in healthcare became mandatory. Services and technologies like telemedicine, e-learning, medical and pharmaceutical databases, robotized tele-operating systems, computer-assisted radiology, and so forth can provide healthcare professionals with access to the latest knowledge and help them in their everyday work.

Working as a lecturer of informatics in healthcare at the College of Healthcare Izola, University of Primorska, I realized that the

majority of my students, particularly the older ones, are afraid of new technologies and try to avoid them. The causes can be the following:

- Inappropriate education in information technologies
- No opportunity to do practical work with computer applications and services like the World Wide Web and e-mail
- The opinion that healthcare specialists are not computer specialists
- The belief that they are too old to learn and use information technologies

- Not knowing that the usage of information technologies in healthcare can reduce costs, increase productivity, and help healthcare professionals stay focused on their patients

The research in computer applications applied to healthcare is intensified. The proper information system at the right time can be a competitive advantage. On the other hand, inadequate information systems can be disastrous to an institution. The development and implementation of information technology into an organization is no easy matter and, particularly in healthcare, where users of these systems may be patients, the successful introduction of systems may be difficult. Often this is not because of technological problems; typically, the technologies employed are relatively mature as they have been in service for some time and have been tested in commerce or industry (Fitch, 2004). For the successful integration of healthcare and technology, we have to invest in people and the organization. As a lecturer of informatics in healthcare, I have the opportunity to teach students to use information and communication technologies. Connecting their work and everyday lives is an efficient way of motivating healthcare students to use them.

In this chapter, some practical examples of the motivation of students in learning information and communication technologies, and using them in everyday life, are described. Motivation is an internal process that creates and maintains the desire to move toward goals (<http://www.psychadvantage.com/glossary.html>). Our aim is to transform students into advanced users, capable to use the computer and operating system, determine a simple bug, use the Internet and so forth, and apply their knowledge of information and communication technologies in healthcare.

## PRACTICAL EXAMPLES OF MOTIVATING HEALTHCARE STUDENTS TO LEARN ABOUT ICT

### Example 1: Von Neuman Model of the Computer with a Screwdriver and Medical Input-Output Devices

When we have a class full of healthcare students and we try to explain to them the Von Neuman model of the computer, we soon notice that 90% of them are not interested in the topic at all. First, we must motivate them by bringing in a personal computer and a screwdriver. Physical contact with the computer and its parts reduces the fear of the computer that some students have.

Then we try to link the model of the computer to the everyday life of a healthcare professional. After we explain what input and output devices are, we present them with the monitor, mouse, printer, keyboard, and other devices specific to healthcare and medicine, such as the following:

- Electrocardiograms (ECG or EKG)
- Radiography devices
- Ultrasound devices
- Laboratory devices

*Figure 1. Input-output devices that are specific to healthcare and medicine*



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