Chapter 13
Screencasts and Learning Styles

Rui Alberto Jesus
CESPU, Instituto de Investigação e Formação Avançada em Ciências e Tecnologias da Saúde, Portugal

ABSTRACT

Learning styles appear to explain something that is obvious: people learn in different ways. In this chapter, the emphasis is on the different sensory modalities by which students prefer to perceive stimuli from the outside. Professors can use several didactic materials to deliver instruction to their students (particularly in e-learning). One of these is screencasts, which are digital recordings of computer screen output, including audio voiceover. If well-planned and recorded, screencasts can include text, images, diagrams, audio, video, and simulations, thus aiming to reach several learning modalities. This chapter explores the relation between screencasts and sensory preferences (measured by the VARK questionnaire) in a sample of nursing students. The data was analyzed with descriptive and inferential statistics methods. The majority of these students were multimodal (61.4%), as opposed to unimodal (38.6%), and screencasts were found to be more appealing to the former, and face-to-face classes were more appealing to the latter.

INTRODUCTION

Many people have heard about learning styles. Besides the criticism about the instruments that detect and classify these preferred learning modalities, learning styles appear to explain something that is obvious: people learn in different ways.

In broader terms, people have different personalities, different ways of processing information, and different sensory preferred modes (among others factors), that influence how each person relates to a learning environment.

In this chapter, the emphasis is on the different sensory modalities. Individuals perceive stimuli from the outside through the five senses, but each individual may have one or two of these senses more accurate than others. As such, he tends to acquire information more through that sense. This preference for a sensory modality has been investigated to explain the success or failure students have to assimilate certain learning content (e.g.: more orally or more in written form).

DOI: 10.4018/978-1-5225-7365-4.ch013

On the other hand, professors can use several didactic materials to deliver instruction to their students (particularly in eLearning). Text, images and diagrams, audio, video, simulations are all valid means to deliver pedagogical information. But which of these means suites best a particular learning style?

This chapter discusses the contribution of screencasts as one possible solution to that problem. A screencast is a digital recording of computer screen output, including mouse movements and clicks. Also known as a video screen capture, screencasts can include audio narration to explain the process that is being documented by the screencast. If well planned and recorded, screencasts can include text, images, diagrams, audio, video and simulations, thus aiming to reach several learning modalities, including the preferred one of a particular student.

BACKGROUND

What Are Learning / Cognitive Styles?

One of the pioneers of the term 'cognitive styles' was Gordon Allport (1937), which defined them as the usual or typical way of an individual processing information. In other words how he perceives, thinks and remembers information, and how he uses it to solve problems. Since then, there have been many researchers who have dedicated themselves to study this concept, with the consequent identification of different cognitive and learning styles. For example, the work of Messick (1976) identified 19 different dimensions of cognitive styles (field dependence versus field independence, global versus analytic, inductive versus deductive, visualizer versus verbalizer, etc.), some of which are referred in the Additional Readings section.

Before moving on, it should be clarified that in this chapter, like in most of the area's texts, the terms 'cognitive styles' and 'learning styles' are used to describe the same concept, although the first one is more used in the context of academic research, while the latter one is more related to their practical applications. Moreover, the term 'cognitive styles' is more connoted with a bipolar characteristic (e.g.: a student is either inductive or deductive), while the term 'learning styles' does not require the existence of two poles (e.g.: one student may be visual and kinesthetic at the same time).

The VARK Model of Learning Styles

During the 1980s, and in informal conversations with college students, Neil Fleming realized that many of them attributed their learning difficulties, to the way learning content was presented. Some students said they had more difficulties with content presented orally; others, with written texts; some more, with ideas that were presented in graphical form; and others with subjects that were presented without any connection to practical applications. This finding led the author to focus on the sensory modalities as a dimension of learning styles with some prominence in relation to the other dimensions (Fleming & Mills, 1992).

In addition, the author found some basis for this assumption in his research in the neuro-linguistic programming area, which years before, had already identified three different sensory modalities – aural, visual, and kinesthetic – described below: