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Chapter 10

# Are Information Systems Students in Their Right Minds?

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*The "IS skills debate" still persists in being a commonly researched area. In this paper we examine the related issue of fundamental thinking styles and the implications for IS course design and delivery. In recent decades Sperry's work on "split brain"[1] patients has been hijacked by popular psychology. [2] The underlying thesis of many of the publications we surveyed reduces to "find out whether you are right or left brained and learn to draw on your whole brain". We decided that it would be interesting to carry out an initial investigation into the left-right brain orientation of our students and curriculum. Given the technical biases and associations of the Information Systems discipline, our initial expectation was to find a high degree of logical, left brained orientation in our student sample. We were surprised to find the contrary result in that right brained oriented students outnumbered left brained oriented students by 3:1, especially in view of the fact that our curriculum had a definite left brain bias. Our chapter outlines the left-right brain divide and questions the validity of this division from neurophysiological perspectives. We discuss the practical implications of the exercise; i.e. is it worthwhile trying to get student to change their mode of operation or is it more productive to have them control their own learning in an adaptive manner? Finally, we identify several areas for future research.*

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## INTRODUCTION

The skills required by Information Systems (IS) graduates has been a frequently studied topic (Latham, 2000; Snoke & Underwood, 1999, Standing & Standing, 1999). The debate usually centers on the relative importance, of technical skills, interpersonal and communication skills, and the depth of business knowledge and skills. The debate is complicated by the expectations of employers and how these differ from recent IS graduates (Latham, 2000). Additionally the fragmented nature of the IS profession contributes to this complication (Lee, Trauth & Farwell, 1995). The topic is of ongoing importance to IS Schools in universities which are trying to develop a more relevant curriculum so that their graduates will be highly rated by prospective employers.

This chapter, whilst recognising the value of the work in the IS skills area, investigates the "IS skills issue" from an alternative perspective. Many past studies have assumed that universities can respond to the changing requirements of employers by re-shaping the IS curriculum and teaching methods and thus significantly changing the nature of the end-product – the IS graduate! By examining the fundamental thinking styles of IS undergraduates we aim to address and make recommendations in relation to the appropriateness of IS course content and delivery styles and explain the major issues for IS education and practice.

The first section of the chapter provides a brief coverage of the thinking styles paradigm. This is followed by the description of a survey on the thinking styles of IS undergraduates. These are then related to the IS undergraduate major programme at our own university to determine any clashes between dominant thinking styles of undergraduates and thinking styles required by IS subject areas. Finally, we highlight issues that result from our study and make recommendations for IS course designers.

## LEFT AND RIGHT BRAIN THINKING

In 1963, neurosurgeons Joseph Bogen and Philip Vogel carried out a radical surgical procedure to control epilepsy in severely afflicted patients. This treatment was based upon work carried out by Roger Sperry and involved completely severing the corpus callosum, a cord of 300 million nerve fibres which connects the right and left hemispheres of the brain. Breaking the communication, which integrates brain operation, allowed virtually independent testing of brain hemispheres with a view to ascribing perceptual functions and thought processes to one hemisphere or the other.[3] Although severing the corpus callosum as a treatment fell out of favour due to the severe mental effects and advances in drug treatment (Ornstein, R., 1997, pp.65) it is still performed and patients may develop "split brain" syndrome as the result of illness. Sperry's view was that there were "two spheres of