

Analysis of Learning Styles in Learning Objects (LSiLO) Related to Socioeconomic Stratum in a Colombian Public University

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Abstract. The Francisco de Paula Santander - UFPS is an affordable public higher education institution located on the Colombia-Venezuela border in the state of Norte de Santander. Approaching 86% of alumni entering our Computer Science program come from low income families (socioeconomic stratum 1 and 2). These students had zero knowledge of the English language and their PC knowledge is limited to office utilities and social networking, and as a consequence the Internet is seen as a means of entertainment rather than a learning tool. Additionally, we recognized that each and every student has their own learning abilities, level of knowledge and has a unique way of learning. A learning style (LS) includes every kind of learning characterized by a single person. In this study we selected a topic and built using four different learning objects (LO) corresponding to four LSs (Active, Reflexive, Pragmatic and Theoretical). This work was developed to analyze the usage level of learning styles aided by LSiLO, to generate the programming skill set required by alumni on our courses, looking at the differences between socioeconomic stratum and hence find out which of them is favored by the application of LSiLOs. To evaluate effectiveness two kinds of instruments were used. On one hand quantitative tools were designed in order to measure skill generation and knowledge appropriation. On the other hand, we developed qualitative assessment tools (Likert scale) to gain individual perception of how students interacted with the LO. The results of this study bring us to realize that considering learning styles is beneficiary for low-income students, given that it allows the student to learn in a much more comfortable way, without feeling the need to adapt to a professor's teaching style, and hence letting the student learn by themselves.