

Usability Testing of an Education Management Information System: The Case of the University of Colima

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EXECUTIVE SUMMARY

A usability study of the platform e-planea from the University of Colima in Mexico is presented. This system allows the gathering of relevant information regarding the institutional management indicators. The usability evaluation focuses on three modules of the platform: Annual Reports, Undergraduate Statistics and High School Statistics. The study consists of two evaluation phases: the first one used a heuristic evaluation, and the second one applied the System Usability Scale (SUS) and the Technology Acceptance Model (TAM). The results showed high user satisfaction.

CONTEXT

The University of Colima (<http://www.ucol.mx>) is an Institution of Higher Education with 72 years of history and is formed by 128 departments, 29 undergraduate schools with 14,244 students and 34 high schools with 11,801 students. It also offers 30 graduate programs serving 592 students.

The university has established throughout its existence various mechanisms for institutional evaluation and transparency. The main mechanism is to collect and analyze management indicators regarding education and management sectors, and aims to support the processes of strategic planning, resource assignment, monitoring, policy formulation and decision making.

This process is performed by the Department of Institutional Planning and Development (DGPDI for its acronym in Spanish). The DGPDI is composed by 1 department head and 13 planning advisors. Currently, the DGPDI carries out this task with the use of an Education Management Information System (EMIS) called *e-planea* (Magaña Echeverría, Santana-Mancilla, & Rocha, 2012) in order to allow fast and well-organized information visualization.

SETTING THE STAGE

Many efforts to optimize the quality of data and available information to improve the educational system and support decision-making have occurred for a long time in the University of Colima. The EMIS began with the rise of systems programming in the 80's with projects in many countries to compute the annual school census and other administrative routines (Cassidy, 2006).

There are evidences that the education planning allows a solid structure to expedite the establishment of goals and priorities, facilitates the creation of guidelines for the expansion of the educational system and prevents the neglect or misuse of resources (International Institute for Educational Planning, 2010).

The development of an EMIS has benefited the DGPDI, allowing this department to achieve the educational targets such as increase enrollment, decrease dropout rate and increase student academic performance with a rigorous monitoring and evaluation system. Like any software, the platform needs to follow the usability guidelines and have a high acceptance of use in order to avoid errors and changes with high cost in time and money.

Usability testing involves observing users as they perform a series of tasks intended to address specific functions or portions of a system in order to determine strengths and problems with the software. Another kind of usability test is the heuristic evaluation; this test was designed to find interface design problems and is

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