The Problem of the Use of Learning Analytics in Distance Higher Education: An Analytical Study of the Open and Distance University System in Mexico

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Abstract : Learning Analytics (LA) is employed by universities not only as a tool but as a specialized ground to enhance students and professors. However, not all the academic programs apply LA with the same goal and use the same tools. In fact, LA is formed by five main fields of study (academic analytics, action research, educational data mining, recommender systems, and personalized systems). These fields can help not just to inform academic authorities about the situation of the program, but also can detect risk students, professors with needs, or general problems. The highest level applies Artificial Intelligence techniques to support learning practices. LA has adopted different techniques: statistics, ethnography, data visualization, machine learning, natural language process, and data mining. Is expected that any academic program decided what field wants to utilize on the basis of his academic interest but also his capacities related to professors, administrators, systems, logistics, data analyst, and the academic goals. The Open and Distance University System (SUAYED in Spanish) of the University National Autonomous of Mexico (UNAM), has been working for forty years as an alternative to traditional programs; one of their main supports has been the employ of new information and communications technologies (ICT). Today, UNAM has one of the largest network higher education programs, twenty-six academic programs in different faculties. This situation means that every faculty works with heterogeneous populations and academic problems. In this sense, every program has developed its own Learning Analytic techniques to improve academic issues. In this context, an investigation was carried out to know the situation of the application of LA in all the academic programs in the different faculties. The premise of the study it was that not all the faculties have utilized advanced LA techniques and it is probable that they do not know what field of study is closer to their program goals. In consequence, not all the programs know about LA but, this does not mean they do not work with LA in a veiled or, less clear sense. It is very important to know the grade of knowledge about LA for two reasons: 1) This allows to appreciate the work of the administration to improve the quality of the teaching and, 2) if it is possible to improve others LA techniques. For this purpose, it was designed three instruments to determinate the experience and knowledge in LA. These were applied to ten faculty coordinators and his personnel; thirty members were consulted (academic secretary, systems manager, or data analyst, and coordinator of the program). The final report allowed to understand that almost all the programs work with basic statistics tools and techniques, this helps the administration only to know what is happening inside de academic program, but they are not ready to move up to the next level, this means applying Artificial Intelligence or Recommender Systems to reach a personalized learning system. This situation is not related to the knowledge of LA, but the clarity of the long-term goals.

Keywords : academic improvements, analytical techniques, learning analytics, personnel expertise

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