Educational Knowledge Transfer in Indigenous Mexican Areas Using Cloud Computing

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Abstract : This work proposes a Cooperation-Competitive (Coopetive) approach that allows coordinated work among the Secretary of Public Education (SEP), the Autonomous University of Querétaro (UAQ) and government funds from National Council for Science and Technology (CONACYT) or some other international organizations. To work on an overall knowledge transfer strategy with e-learning over the Cloud, where experts in junior high and high school education, working in multidisciplinary teams, perform analysis, evaluation, design, production, validation and knowledge transfer at large scale using a Cloud Computing platform. Allowing teachers and students to have all the information required to ensure a homologated nationally knowledge of topics such as mathematics, statistics, chemistry, history, ethics, civism, etc. This work will start with a pilot test in Spanish and initially in two regional dialects Otomí and Náhuatl. Otomí has more than 285,000 speaking indigenes in Queretaro and Mexico's central region. Náhuatl is number one indigenous dialect spoken in Mexico with more than 1,550,000 indigenes. The phase one of the project takes into account negotiations with indigenous tribes from different regions, and the Information and Communication technologies to deliver the knowledge to the indigenous schools in their native dialect. The methodology includes the following main milestones: Identification of the indigenous areas where Otomí and Náhuatl are the spoken dialects, research with the SEP the location of actual indigenous schools, analysis and inventory or current schools conditions, negotiation with tribe chiefs, analysis of the technological communication requirements to reach the indigenous communities, identification and inventory of local teachers technology knowledge, selection of a pilot topic, analysis of actual student competence with traditional education system, identification of local translators, design of the e-learning platform, design of the multimedia resources and storage strategy for "Cloud Computing", translation of the topic to both dialects, Indigenous teachers training, pilot test, course release, project follow up, analysis of student requirements for the new technological platform, definition of a new and improved proposal with greater reach in topics and regions. Importance of phase one of the project is multiple, it includes the proposal of a working technological scheme, focusing in the cultural impact in Mexico so that indigenous tribes can improve their knowledge about new forms of crop improvement, home storage technologies, proven home remedies for common diseases, ways of preparing foods containing major nutrients, disclose strengths and weaknesses of each region, communicating through cloud computing platforms offering regional products and opening communication spaces for inter-indigenous cultural exchange.

Keywords : Mexicans indigenous tribes, education, knowledge transfer, cloud computing, otomi, Náhuatl, language

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