Design of an intelligent virtual collaborative learning environment

The education has taken a giant leap and paradigm shift from class room i.e. face to face (F2F) learning to e-learning. The goal of this study is to adapt a multi-channel based learning approach and to create framework that will improve learning processes using ubiquitous technologies that connect learners, teachers and the researcher community in a growing network of education environments, using communication devices such as WAP phones, Laptop/PC, Pocket PC and PDAs owned by a subscriber. One of the things that can widen the multi-channel learning approach in research community is interaction between teams within a university or universities/research institutions. Such synergy provides a basic platform for learning and also permits the sharing of costly equipment between geographically distant laboratories.

Today's educational system faces irrelevance unless we bridge the gap between how students live and how they learn. Modern learning environments with emphasis on learning skills provide students in remote locations access to scarce information for carrying out experiments. This collaboration, which is based on a virtual community service concept between teams, has put new requirements on e-Learning applications such as the need for an application to be developed once and run from any browser involving WAP Phones, Laptop/ PC, Pocket PC and PDAs, amongst others.

The objectives of this study are as follows.

- Check the feasibility i.e. checking readiness of learners to use the new web based learning pedagogy using knowledge acquisition technique
- Propose conceptual framework
- Develop prototype application that will improve intelligent learning processes using multi-channel collaborative approach that connect students, teachers and the researcher community in a growing network of educa1tion environments.

Unlike several typical methods and environments, available e-Learning including distance learning, online learning and web-based learning; the proposed web-based learning entails content in a web-based browser, and actual learning materials delivered in web-based format in intelligent manner based on the level of the learner.