Usability Study of Mobile Learning Technology: A Holistic Evaluation of a Field Observation Experience

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Abstract: The purpose of this study is to evaluate a field observation experience for students learning about the nature of science and practicing scientific inquiry. A holistic approach will be used to examine the efficiency, effectiveness, satisfaction, and learnability of the scientific inquiry process that takes place inside a classroom as well as in the “field” at a wildlife center. The classroom experience includes instruction, reading, and research using a content-driven website that contains a student journal, discussion board, and database of field observation data from the wildlife center. The website is coupled with an iPad application. Students are provided with an iPad at the wildlife center; the iPad application helps students familiarize themselves with the location of various animal habitats, fast facts of the animals, and the application has three observation “worksheets” for students to fill out that will populate an online database. A systematic approach will be taken to examine the usability of the website, iPad, and overall field experience. Usability and evaluation data will be collected through observations, short questionnaires, informal interviews, and focus groups. A protocol will be developed and evaluators will be trained for consistent and accurate data collection. Once formative evaluation data is collected and reviewed, designers and developers will make iterative changes to improve the quality of the field experience and accompanying technology.