Technology-Based Assessment: From Assignment to Program

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Abstract: In responding to Middle States Association (MSA), National Council for Accreditation of Teacher Education (NCATE), and State University of New York (SUNY) mandates, the faculty members of the Early Childhood, Childhood, and General Professional Education Department at SUNY Potsdam are developing learning outcomes for all programs. Described is a pilot program in which a PDA is used to gather in-class performance data related to learning outcomes which have been mapped to the Interstate New Teacher Assessment and Support Consortium (INTASC) principles. These data are then synchronized with a FileMaker® database allowing flexible program analysis on the web.

In the spring of 2002 the SUNY College at Potsdam had its on-site visits from the Middle States Association (MSA) and the National Council for the Accreditation of Teacher Education (NCATE). Both organizations emphasize institutional assessment as crucial to program accountability and improvement (Middle States Commission on Higher Education, 2002, National Council for Accreditation of Teacher Education, 2002). In response to MSA and NCATE recommendations resulting from the on-site visits and assessment mandates from the State University of New York (SUNY), the Center for Technology-Based Assessment (CTBA) at SUNY Potsdam has guided the development of technology-based tools to gather and analyze program learning outcomes (Schwob & Schwob, 2003).

Such program assessment has: (1) been built utilizing existing assessment tools; (2) focused upon the pre-service field experience component of the Childhood Education (Grades 1-6) program; (3) minimized the use of special software or technology; (4) allowed for data entry and revision; and, (5) had a user interface designed for ease of interaction. To meet all these criteria it was decided to utilize FileMaker™ Pro 6.0 for data storage and analysis and a web browser (Netscape™ or Internet Explorer™) as the interface. FileMaker™ was chosen because of the readily available CDML tags to simply the form creation process in HTML and because of the FileMaker® Mobile version which can be used on a PDA.

Once learning outcomes based upon the INTASC principles for the Childhood Program were developed, the next step was to identify where, in each in-class student assignment, the appropriate principles were being addressed. Then, rubrics and checklists were developed which could be converted into a database form usable on a PDA.

As each assignment is submitted, the PDA-based rubric is used to grade the assignment. Once the grading is completed, the PDA is synchronized with the desktop machine containing the full student grading database. At the end of the semester the INTASC-related information is imported into the program database mounted on a web server. This design allows web-based analysis of two types: student, which tracks student progress in meeting the learning outcomes and INTASC principles; and, program, which explores aggregate student data to identify program success and areas for improvement.
The advantage of using a PDA is particularly evident during student delivery of field experience or in-class model lessons. The assignment rubric is installed on the PDA, referenced during the lesson, then synchronized to a PC as mentioned above. If a portable keyboard is also available, notes can also be taken during the lesson and attached as part of the information returned to the student. Even though the initial creation of the rubrics and databases is time-intensive, the simplicity of use and the data that is automatically available allows a degree and level of analysis which was clerically impossible previously. A working example of the web-based interface and PDA device will be modeled during the presentation.

References


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