

CONSTRUCTION STUDENT TECHNOLOGY SKILL ASSESSMENT: A SURVEY INSTRUMENT

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Abstract: The purpose of this paper is to describe the design and initial results of a data collection instrument developed to assess student technology skills. These baseline data are believed to be important for the educators in the construction industry to incorporate technology knowledge into the academic curricula. The instrument is a questionnaire that assesses the subject's level of technology skills in five dimensions: Attitude, Operational Skills, Interactions, Active Learning, and Cooperative Learning. Each of these dimensions has five developmental stages or maturity levels: Functional and Perceptual Knowledge, Pluralist Awareness, Synthetic Awareness, Competence, and Proficiency. The instrument is designed and will be validated using the Structural Equation Modeling method. The paper will present the process of initial design and data collection, the method for validation of the original instrument, and its refinement process. The original survey was distributed to 117 students in 4 Civil Engineering departments in America and initial results were used to explore the validity method of the instrument. These preliminary results and exploratory analyses suggest that with a sufficiently large sample size, it is likely that the model can be validated to satisfactorily meet the validity requirements of a well-designed measurement instrument. The data collection and validation process is still ongoing and will be feeding the design cycle of this presumably valuable instrument.