INSTRUCTIONAL DESIGN OF A REMOTE LAB SESSION

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Practical work plays a fundamental role in training in electronic engineering. But often the labs class are designed just to check the validity of a theory, the stages of discovery, exploration and creation are absents. Teachers do not set formal learning objectives and care little about the impact of the practical session labs on the acquisition of skills by students.

This paper recalls the theories of learning and presents a methodology for designing a practical session that inculcates in students ability to acquire scientific inquiry skills, promoted by the organisation Accreditation Board for Engineering and Education (ABET).

The Dick and Carey model is used to design a session of practical work which includes the phases: Engagement, Exploration, Explanation, Development and Evaluation. This phases are contained in the Biological Sciences Curriculum Study (BSCS) 5E Instructional Model.
A design example demonstrates the implementation of the different phases and shows how to individualize instructions and tests and adapt them to remote labs.
keywords: instructional design, inquiry-based learning, remote lab.