Background

Research indicates that perceived support and access to teaching resources increases self-efficacy, or confidence in one’s own ability to teach [TmH02, S04], which has been shown to improve student achievement and motivation in the classroom [AW86, R92]. We investigate how and to what extent a wiki for TAs can provide this support.

Description

In large introductory courses, laboratory sections are taught by two types of TAs: graduate student instructors (GSIs) and undergraduate instructional aides (IAs), many of whom are inexperienced teachers. To ensure high quality of lab instruction (without high costs involved) we focus on a wiki website for GSIs and IAs, which was created for two large, introductory-level electrical engineering (EE) courses for EE and non-EE majors. The wiki allows for the accumulation of experience, technical knowledge, and advice, and provides asynchronous communication among instructors for the exchange of information and ideas. Example wiki pages are shown in the figures to the right.

Research questions:

- How do GSIs and IAs use the wiki?
- How does their use of the wiki impact their teaching experiences?

Methods

1. Surveys
   Pre- and post-surveys of GSIs & IAs
   Fall 2008: pilot survey
   Winter 2009: 5 grad, 3 undergrad
   Fall 2009: 7 grad, 3 undergrad

2. Focus Groups
   Focus group with GSIs & IAs (Winter 2009, planned for Fall 2009)

3. Wiki Usage Statistics

Key Findings

- The wiki was particularly helpful to first-semester TAs, while TAs that were repeating the course already knew many of the tips about the labs.
- TAs believe that they collectively possess important information and experiences, but few have posted comments, noting reasons that include lack of awareness of the wiki and lack of motivation to visit the wiki as a returning instructor. The figure above shows wiki contributions from Winter 2009.
- TAs suggested that it would be helpful if the wiki had a teaching reflection component (which is in place for Fall 2009), in addition to practical tips and advice.
- New TAs find the information on the wiki useful, but returning TAs need incentive to contribute their knowledge.