Prototype of a Configurable Web-based Assessment System

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The Educational Assessment System enables subjects and courses at MIT to perform online assessment. The system is web-based, allowing users, at their leisure, to submit and review assessments with web browsers.

Since it is online, the Educational Assessment System can be used to provide an anonymous forum for discussion. Students are more likely to submit honest assessments if they are not afraid of what their instructors and fellow students will think of what they say. Also, in [2] Sara Kiesler and Lee Sproull found indications that people are more forthcoming in electronic surveys than in either paper surveys or face-to-face.

The assessments are stored in a relational database, which is integrated with the world wide web server by a set of database connection software that we developed.

Configurable Policy

The Educational Assessment System is configurable, allowing it to meet the varied needs of subjects at MIT. In all cases the system must enforce three policies:

- Prohibit harassment
- Discourage electronic "flaming"
- Protect Privacy

Within the framework of these constraints, courses and their subjects can set policy about several issues, including the following.

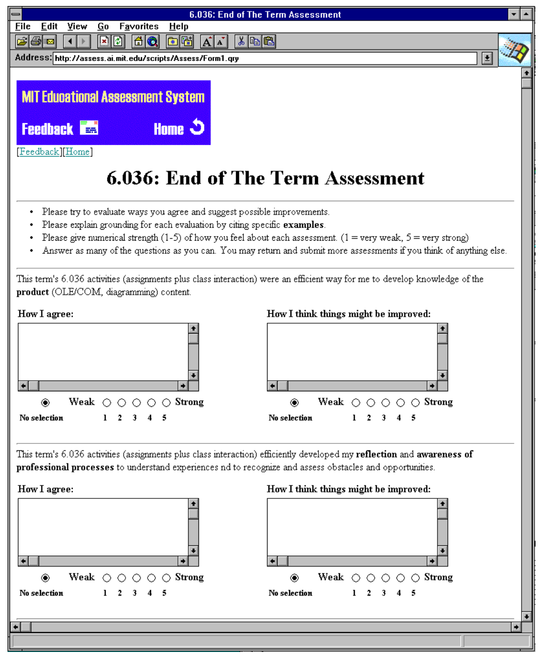

Figure 1: The first page of a sample questionnaire.

Timing of Assessments

When should participants be allowed to submit assessments? Some subjects may desire to accept assessments continually throughout the semester, allowing the users to submit assessments whenever they have something to say. Others may define specific times for assessments to take place, such as drop date, add date, and the end of the semester.

Response to Assessments

Subjects may wish to provide an easy way for students to reply to others' assessments. The comments could be accessed as annotations to

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the original assessment. A danger with enabling students to submit replies is that it can lead to "flaming".

Staff Participation

Allowing subject staff to take part in the assessment process can promote discussion with students while they are still taking a subject. If the subject staff responds to issues raised by students, the students may feel that their opinions are being taken seriously, and be more inclined to submit constructive assessments. On the other hand, the presence of staff members might inhibit some students, so some subjects may decide to limit staff participation.

Privacy

The Educational Assessment System requires that users obtain accounts before they use the system. The assessment system uses the account information to authenticate users internally, even though subjects may choose to allow postings to be anonymous. The information linking people to accounts is encrypted and accessible only to parties authorized to obtain them. These encrypted records could be automatically destroyed at the end of the semester.

Moderated Assessment

Some subjects may wish to review assessments prior to releasing them, in an attempt to prevent off-topic postings. While reviewing assessments can help keep discussion focused, it requires moderators, and it slows down the discussion. Therefore, some subjects may choose not to have submissions be reviewed before they are posted.

Section-level Assessment

Subjects with large enrollments may find assessments problematical. One possibility is for these subjects to perform assessment separately for each section. By keeping the number of participants small, the subjects could help keep discussion focused, promote a sense of community, and discourage "flaming".

However, if separated into sections, the students would not be able to interact with each other, possibly missing out on interesting issues raised by other sections. One possibility is to provide a subject-wide, moderated discussion forum. Moderators (perhaps the section instructors) could post interesting topics from the individual sections. These topics could "seed" the section discussions, and ensure that each section is exposed to the ideas brought up by other sections.

Access to Assessments

During the semester, many subjects will want to allow only those students and staff associated with the subject to read the assessments, since some of the students or staff might not want the remarks made by or about them to be available to everyone. Subject assessments can be valuable to other students, teachers, and administrators. One possibility is to have summaries of the assessments prepared at the end of the semester. These summaries could be made available to all of MIT, providing students and faculty with useful information.

Origin of Questionnaires

It would be difficult to create a single set of blank questionnaires that would satisfy the requirements of all of the subjects at MIT. Therefore, the Educational Assessment System will allow customized questionnaires to be created. Students, subject staff, departments, schools, or the Institute might want to develop new blank questionnaires. Figure 1 shows part of a sample questionnaire.

Acknowledgments

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References

[1] Miguel G. Hall. The Design And Implementation of a Continuously Updated Class Evaluation Guide. Master's thesis, MIT, June 1996.

[2] Sara Kiesler and Lee Sproull, "Response Effects in the Electronic Survey." *Public Opinion Quarterly, vol. 50*, 1986.