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Technical Evaluation Report

12. Online Polling Services

Jon Baggaley, **Tom Kane,** and **Bill Wade**
Masters in Distance Education Programme
Athabasca University – Canada's Open University

Abstract

Real-time collection of student opinions and their instant feedback can be useful in guiding the design and implementation of online educational sessions. Students can gain insights into each others' attitudes and opinions, often anonymously and confidentially; and teachers can adapt to the feedback in directing the progress of a session based on, in effect, a series of "if then" contingency measures. Online tabular and diagrammatic features can provide useful visual summaries of polling results, indicating whether or not the session's learning outcomes are being achieved. Online polling services available differ greatly in the extent to which they provide these useful educational features. To guide distance educators in their selection and implementation of online polling and quizzing procedures, an evaluation study was conducted featuring a selection of the poll creation systems that were available at the time of study.

All questionnaire, quizzing, survey, and assessment products/ services are referred to generically in the report as "polling systems."

Evaluation Criteria

In the interests of open distance education access, the study was restricted to those websites and services that are free of charge, or have no payment versions. Inevitably, the use of cost-free services is accompanied by certain non-financial costs (e.g., exposure to advertising, and access to the stored data), each of which represents an important criterion in an educational product evaluation. Most services examined in this study do not allow the user to download the data at all, or only make such data available for a short period of time. These are important factors for online educators to consider in the selection of a polling methodology, since ready and continual access to polling data is essential to the right of teachers and students to own the data they generate.

With these issues in mind, the evaluation team developed a 20-point set of product rating criteria for the evaluation of polling systems and services. They include:

- *Cost:* including tolerance of advertising, and need to supply user data for registration

- *Ease of use:* complexity of installation, help, and usage functions, etc.

- *Designer control:* Does the poll creator have wording and formatting control?

- *Question range:* e.g., multiple-choice, open-ended, and repeated questioning options

- *Delivery of Results:* e.g., instantaneity of feedback, and amount of statistical detail

- *Data storage:* where are questions and responses stored, and who owns them?

The full list of criteria is presented at the evaluation Web site accompanying these reports.

Trials of Free Online Services

1) *AdvancedSurvey* fulfils most of the educational user's online polling needs. It generates multiple-choice, multiple-response, and textual responses to questions. The poll designer can decide whether to permit or forbid multiple attempts to answer the survey, and whether or not the respondent will receive feedback of results. The service's step-by-step procedures are well described, although the definition of question type might be more conveniently presented as a primary design function rather than as a follow-up to the definition of response types. The service site allows the poll designer to download results, albeit without a great deal of analysis. The user has no control over the formats of polling results. Occasional problems in accessing the *AdvancedSurvey* online server were noted.

2) *CGISpy*. This site is a storehouse of server-side polling scripts and HTML form-creation kits. To those with the necessary technical and programming skills, these are useful poll creation tools. A significant drawback of *CGISpy* is that the one polling format available at the time of our study involves a single multiple-choice question only.

3) *Dream Tools* provides sleek presentation formats, though has the same drawback as *CGISpy* – i.e., the ability to generate only one multiple choice question per study, which is a major drawback for educational users of polling techniques.

4) *Freedback* is also a polling form-creation procedure for use by those with Web programming skills. The *Freedback* Web site takes the poll creator through a series of clearly defined steps using the form builder tool. This generates HTML code that users can paste into their own Web page source code. *Freedback* supports the use of radio buttons, response check boxes, dropdown menus, text formats, and open-ended comments. As a result, the user is able to design a wide range of polls, with the responses sent immediately to the creator by email. Pedagogically, *Freedback* increases opportunities for asynchronous, one-way interaction (student to instructor), although the individual email feedback procedure prevents participants in an educational session from reacting instantly to collated poll results.

5) *Misterpoll* is an easy to use and reliable online application that allows a poll's creator to decide whether it should be public (i.e., listed in the service's main polls directory) or private (i.e., the designer provides participants with an exclusive link to the poll). *Misterpoll* provides the option of immediate or delayed feedback, permits multiple questions of several different types, and allows voters to comment on the poll itself. An instructor can create a series of individual or multi-question polls for integration into an online synchronous or asynchronous conference. Questions must be created in advance, and cannot be re-worded or re-sequenced thereafter. This makes it difficult for users to present questions spontaneously.

6) *QuizCenter* originated at the University of Hawaii's Community College at Maui, and is now operated by Discovery.com. *QuizCenter's* primary goal is to help teachers with student assessments, to which end it sends the data collected to the teacher, while retaining the questions on the *QuizCenter* server. The service permits a wide variety of question types (e.g., multiple-choice, multiple-answer, text/ essay, short-answer). *QuizCenter* is easy to use, though provides limited feedback regarding performance percentages rather than more precise feedback of polling results.

7) *Quiz Master* is a well designed question design tool intended to generate print based exams from a database of questions using the Question Bank Editor. Its useful features include multiple question types, random question selection, answer shuffling, and an Export as HTML feature facilitating distribution of the exam online. An additional Export as Text feature would be useful, permitting the instructor to receive a copy of the exam by email. Use of the software involves a moderate learning curve, though novice users can master the question development and exam generation processes by using the help menu. The software provides support for graphic, video, and audio files (including wav and midi formats), though does not permit the printing of embedded graphics, a function often useful in poll development.

8) *Zoomerang* is a student assessment tool for use by teachers. It has free and limited versions, as well as a commercial one priced at the time of study at $599 US. *Zoomerang* is easy to use and provides a wide range of question types. It provides polling feedback involving basic calculations (number of respondents, total of answers, percentages, etc.). The poll designer can place a link to *Zoomerang* poll results on a course website, or can use the *Zpro* emailer tool. A limitation to the service's educational use is the availability of question and response data in online formats only. The *Zoomerang* Web site states that the poll designer (member) owns the polling questions and answers. However, these data are stored exclusively on the service site for ten days only, and cannot be downloaded. The service also offers access to user mailing lists, which may cause some concern to users wishing to protect their privacy.

Conclusions

Efficient use of online polling methods can help distance educators and their students to monitor and improve their online interactions. Polling methods engage participants actively during an online discussion, increasing their active learning and improving student-teacher interaction. Most online poll creation services provide clear, step-by-step guidance during poll creation. However, the selection of an appropriate service for educational use must be made with care. A major consideration is the privacy and ownership of the question and response data. With the exception of *CGISpy*, which provides polling scripts rather than generating actual polling data, all of the Web sites examined in this study store the data at an external service site, and some prevent them from being downloaded. It is recommended that prospective users of an online polling service should read its User Agreement with care, and should only select it if the data ownership conditions are clearly described. There is a clear need for the development of educational polling services that address the specific design needs and rights of educational users.

The next report in this series will compare online video-conferencing products.

N.B. Owing to the speed with which Web addresses are changed, the online references cited in this report may be outdated. They can be checked at the Athabasca University software evaluation site: http://cde.athabascau.ca/softeval/. Italicised product names in this report are assumed to be registered trademarks.

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