

Assessment of Electronic Course Evaluation Technology and its Applicability to the University of Alaska Fairbanks



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In October 2012, the Faculty Development, Assessment, and Improvement (FDAI) committee together with Dr. Eric Madsen, School of Education, were entrusted by the UAF Faculty Senate to study the current state-of-the-art of electronic course evaluation technology and its applicability to UAF. Early in the study it was recognized that

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With this report, we analyze course evaluation technology as a part of UAF's overall evaluation process and provide guidelines for a step-by-step approach to optimizing UAF's course evaluation philosophy. The main findings and recommendations are summarized in the following:

1. We recommend to formulate a clear understanding of the main purpose(s) of course evaluation at UAF before deciding upon changes in course evaluation technology (see Section 2).
2. If a change in the course evaluation procedure is planned, we recommend to not change technology and question sets at the same time, but instead follow a step-by-step approach.
3. Electronic course evaluation systems have a number of benefits and drawbacks relative to traditional paper-and-pencil technology that need to be carefully analyzed and compared before selecting the most appropriate evaluation technology for UAF (see Section 3.1).
4. While student response rates are an important factor in evaluating the success of a course evaluation system, it is only one of many performance parameters (see Section 3.2).
5. Electronic course evaluation can produce satisfactory student response rates if students are incentivized, if the course evaluation system is easy to use, if faculty and administration actively promote the importance of course evaluation, and if regular reminders of active or upcoming survey periods are provided to faculty and students (see Section 3.3).
6. Nowadays, a large number of highly capable electronic course evaluation systems are available whose capabilities are ever improving (Section 4.3).
7. From our system survey, we conclude that available technology varies widely in aspects including (1) hosted vs. host-yourself solutions, (2) online-only vs. hybrid (paplchn widu498.-5(n06(in)5()-306(s8

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In October 2012, the Faculty Senate was approached by Provost Susan Henrichs to evaluate a potential implementation of an electronic course evaluation system at UAF. A discussion on electronic means for evaluating courses offered by UAF is both timely and relevant for several reasons. These reasons include, among others, (1) the need to provide an accessible and equivalent course evaluation method for students in traditional and online class environments, (2) the potential for faster processing times of evaluation results, (3) potential improvements of anonymity and safety of evaluation results, (4) the high costs associated with the current paper-based evaluation system, and (5) an increase of flexibility of course evaluation format, questions, and timing. As a consequence, the Faculty Development, Assessment, and Improvement (FDAI) committee together with Dr. Eric Madsen, School of Education, were entrusted with studying the following two main questions associated with electronic course evaluations:

2. ***effectiveness in teaching, demonstrated by such things as: evaluation by peers; reaction of students as determined by surveys and classroom and laboratory observations; development of improved teaching materials and processes; development of new courses; advising of students; assessments of student achievement; and participation in necessary and routine duties that support classroom performance;***

University of Alaska Fairbanks Regulations for Faculty Appointment and Evaluation (Blue Book),
Ch07.Bpter III

For the purpose of this report, course evaluation technology is divided into two groups: (1) traditional paper-based evaluations and (2) electronic evaluation systems. Due to recent technological advances, more and more institutions are moving to administer course evaluations online, forgoing the traditional paper-and-pencil methods (Adams and Umbach, 2012). In the following, the pros and cons of electronic course evaluation technology are analyzed.

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A growing body of literature has studied the benefits and drawbacks of changing from paper-based to electronic course evaluation systems (Adams and Umbach, 2012; Anderson et al., 2005; Lieberman et al., 2001; McCracken and Kelly, 2011). Table 2 provides a list of the main benefits and drawbacks of ECE systems that was created based on a review of pertinent literature and based on our own experience from conducting an extensive survey of existing ECE technology (See Section 4).

List of

Response quality
Response Rates
Improvements in course quality (as indicated by comparing performance measures over time)
Costs associated with the evaluation system
Flexibility of the implementation
and more

It is important to note, that the

. Polling results are biased if the students that are responding to a survey are a non-representative subset of the class population. Hence, the representativeness of survey results is influenced by both and . It is therefore recommended to analyze these parameters together.

is certainly one of the most talked-about parameters in the context of electronic course evaluations, as response rates are often reported to decrease when teaching evaluations are shifted from a face-to-face process to an online system (Adams and Umbach, 2012; Avery et al., 2006; Kucsera and Zimmaro, 2008). While low student response rates do not necessarily lead to biases in course evaluation, they do increase the potential for biases to occur and are therefore a threat to the validity of the evaluation process (Avery et al., 2006). Because of the importance of this topic, a separate section (Section 3.3) is dedicated to the topic of student response rates. This section includes a discussion of experiences with response rates within the UA system as well as a summary of ways to improve student response rates in an electronic course evaluation environment.



the University of Alaska Southeast (UAS) and the University of Alaska Anchorage (UAA), both of which moved toward electronic course evaluation in recent years.

In an extended phone call with Dr. Mark Fitch, Faculty Senate President Elect at UAA and chair of several ad-hoc committees on electronic course evaluation, we discussed UAA's experience with electronic course evaluations. We learned that student response rates could initially be maintained when UAA moved from paper-based to electronic course evaluation. Yet, after these first successes, response rates started to suddenly drop in subsequent years and have continuously decreased since. While the reasons for this drop are not known, the following general observations were shared with us: (1) The period during which high response rates could be maintained coincided with a time period where a lot of effort was put into training faculty in the use of the new evaluation system; (2) response rates are higher for colleges where staff members are actively reminding faculty of upcoming evaluation periods; and (3) response rates seem to depend on whether or not the instructor actively promotes course evaluations in the class environment. The following other reasons for low response rates at UAA were mentioned:

The currently used survey includes a very large number of questions and--in this particular system--

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The left column of Table 3 contains general requirements that an ECE system must fulfill to be relevant to UAF. These general requirements are translated into corresponding technical evaluation criteria that are listed on the right side of the table.

with limited internet access; ...)?	Can different schools / faculty add customized questions?
What are the training and maintenance efforts?	Availability of support and training Are support hours user-friendly for Alaska?

Is the ECE providing a service (data hosted and processed by vendor) or a product (hosted and executed at UAF)?

Is there an ECE that addresses UAF's needs and concerns?

As IASystem is holding all of UAF's course evaluation data for the last years, a seamless combination of historic and newly acquired evaluation data would be guaranteed.

The existing customer relationship with IASystems could simply be extended, reducing some of the uncertainties that are inherent to the process.

We will coordinate our activities with UAF faculty and administration. Details of the evaluation activities in the fall will be announced.

In summary, the evaluation team wants to convey the following recommendations and findings to the faculty senate and to the administration of UAF:

1. We recommend to formulate a clear understanding of the main purpose(s) of course evaluation at UAF before deciding upon changes in course evaluation technology (see Section 2).
2. If a change in the course evaluation procedure is planned, we recommend to not change technology and question sets at the same time, but instead follow a step-by-step approach.
3. Electronic course evaluation systems have a number of benefits and drawbacks relative to traditional paper-and-pencil technology that need to be carefully analyzed and compared before selecting the most appropriate evaluation technology for UAF (see Section 3.1).
4. While student response rates are an important factor in evaluating the success of a course evaluation system, it is only one of many performance parameters (see Section 3.2).
5. Electronic course evaluation can produce satisfactory student response rates if students are incentivized, if the course evaluation system is easy to use, if faculty and administration actively promote the importance of course evaluation, and if regular reminders of active or upcoming survey periods are provided to faculty and students (see Section 3.3).
6. Nowadays, a large number of highly capable electronic course evaluation systems are available whose capabilities are ever improving (Section 4.3).
7. From our system survey, we conclude that available technology varies widely in aspects including (1) hosted vs. host-yourself solutions, (2) online-only vs. hybrid (paper plus online)

- Adams, M.D. and Umbach, P., 2012. Nonresponse and Online Student Evaluations of Teaching: Understanding the Influence of Saliency, Fatigue, and Academic Environments. *Res High Educ*, 53(5): 576-591.
- Anderson, H.M., Cain, J. and Bird, E., 2005. Online student course evaluations: Review of literature and a pilot study. *American Journal of Pharmaceutical Education*, 69(1): 34-43.
- Avery, R.J., Bryant, W.K., Mathios, A., Kang, H. and Bell, D., 2006. Electronic Course Evaluations: Does an Online Delivery System Influence Student Evaluations? *Journal of Economic Education*, 37(1): 21-37.
- Crews, T.B. and Curtis, D.F., 2010. Online Course Evaluations: Faculty Perspective and Strategies for Improved Response Rates. *Assessment & Evaluation in Higher Education*, 36(7): 865-878.
- Dillman, D.A., Eltinge, J.L., Groves, R.M. and Little, R.J., 2002. Survey nonresponse in design, data collection, and analysis. *Survey Nonresponse*. New York: John Wiley & Sons: 3-36.
- Dommeyer, C.J., Baum, P., Chapman, K. and Hanna, R., 2003. An experimental investigation of student response rates to faculty evaluation: The effect of the online method and online treatments, Annual meeting of the Decision Sciences Institute Washington, D.C.
- Kucsera, J.V. and Zimmaro, D.M., 2008. Electronic course instructor survey (eCIS) report, Division of Instructional Innovation and Assessment, University of Texas at Austin, Austin, TX.
- Lieberman, D., Bowers, N. and Moore, D.R., 2001. Use of Electronic Tools to Enhance Student Evaluation Feedback. *New Directions for Teaching and Learning*, 2001(87): 45-54.
- McCracken, B. and Kelly, K., 2011. Online Course Evaluations - Feasibility Study Project Plan and Draft Report, San Francisco State University.
- Murphy, P., 2004. Incentives: The key ingredient for successful web-based course evaluations, TLC Teaching Learning & Technology Center, University of California.
- Porter, S.R., 2004. Pros and cons of paper and electronic surveys. *New Directions for Institutional Research*, 2004(121): 91-97.

University of Alaska Fairbanks Board of Regents, 2006. Regents' Policy and University Regulations. In: U.o.A. Fairbanks (Editor), Office of the President, University of Alaska Fairbanks.

University of Alaska Federation of Teachers (UAFT), 2013. Collective Bargaining Agreement Between the University of Alaska and the University of Alaska Federation of Teachers, <http://www.alaska.edu/files/labor/Final-UAFT-CBA-on-website.pdf>.