

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



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## Executive Summary

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 *course evaluation technology is an integral part of a university's overall evaluation process*. Hence, **to recommend appropriate course evaluation technology we need to evaluate all other components of an established evaluation process, including (1) the purpose of course evaluation at UAF, (2) the indicators that we want to use to determine success, (3) and the benchmarks we want to use to evaluate performance.**

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 (paper plus online), (3) University-focused vs. generic survey-focused, and (4) flexible question set vs. fixed survey format. Also the amount of applied data analysis varies widely (see Section 4.3).
8. Three systems were identified that are excellent in their flexibility and functionality and are also well matched with UAF's needs (Section 4.3).
9. We recommend starting a discussion on the development of a culture of course evaluation on campus to improve course evaluation quality independent of evaluation technology.

To further analyze the capabilities of a down-selected group of three electronic course evaluation systems, UAF will continue to examine their suitability in fall 2013. We will coordinate our activities with UAF faculty and administration. Details of the evaluation activities in the fall will be announced.

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# 1 Background and Motivation of This Study

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:

1. **Is it advisable for UAF to move to an electronic course evaluation model?**
2. **If so, what would be the necessary steps towards adopting an electronic course evaluation system?**

In addition to these main goals, the activities performed were also aimed at reviving the discussion about electronic course evaluations (ECEs) by surveying their current state of the art and by gauging the sentiment towards ECEs on campus.

This report summarizes the research that was conducted towards addressing this topic and provides our main initial findings. **The report is grouped into three main sections that reflect our view of the chronology of discussions that need to be led when applying changes to UAF's established course evaluation process.**

**It is important to note that the goal of this report is not to make decisions for Steps 1 – 3, but to provide suggestions and parameters that will support a future decision making process.**

We suggest to approach course evaluation discussions by following these three main steps:

1. **Define the intended purpose of course evaluation:** Relevant parameters that inform this discussion are addressed in Section 2 of this report, which summarizes potential uses of course evaluation and assesses current practices at UAF. *Defining the intended purpose(s) of course evaluation is essential to be able to select appropriate course evaluation technology.*
2. **Select evaluation technology in light of the identified purpose and considering UAF's needs:** This topic is addressed in Section 3, which analyzes the pros and cons of paper and electronic course evaluation approaches. We also provide information that help in weighing these pros and cons against each other in support of finding an optimal technology for UAF.
3. **If electronic course evaluation is favored, select the most appropriate electronic course evaluation system:** This topic is addressed in Section 4, where we summarize the results of an extensive study of existing electronic course evaluation systems. Evaluation criteria are listed together with the main findings of the conducted survey. A detailed description is provided for a subset of systems that fit best with UAF's requirements.

A summary of our main recommendations and findings concludes this report.

## 2 Defining the Intended Purpose of Course Evaluation at UAF

Nowadays, a wide range of course evaluation systems (both paper and electronic) are available from a number of vendors throughout North America. While these systems have common traits, their evaluation philosophies and the applied evaluation technologies vary widely. Evaluation technologies range from pure paper-based systems to hybrid systems that combine paper with web-based services, to online-only technologies. Evaluation philosophies differ depending, for instance, on whether the system is focused on supporting faculty development or on assessing faculty performance.

In addition to the diversity of course evaluation solutions, it also has to be recognized that UAF is an institution with very specialized and highly diverse needs requiring a course evaluation concept that is able to address this diversity.

Hence, selecting or designing an optimal course evaluation concept for UAF is a non-trivial task that requires the careful consideration of a large number of parameters. In the following, we list and discuss some of these parameters in an attempt to facilitate a discussion on potential modifications to UAF's current course evaluation concept.

From our research we have reached the conclusion that **it is a necessary requirement to develop consensus on the intended purpose of course evaluation at UAF before modifications of evaluation technology should be attempted**. To facilitate a discussion on the main goal of course evaluation, we provide (1) a list of the most relevant course evaluation goals (Section 2.1) as well as (2) a summary of analysis methods that can be applied to generated course evaluation data (Section 2.2). Findings from Sections 2.1 and 2.2 are compared to the current practices at UAF (Section 2.3).

### 2.1 A List of Potential Goals of Course Evaluation

Course evaluation can serve a wide range of purposes. To extract the most relevant of all potential uses, more than 1,500 faculty (90% of all study participants) and members of academic administration (10% of all study participants) were asked to rank purposes of student course evaluation by importance and popularity (Rathke and Harmon, 2011). The following list shows the main results of this study by highlighting the six most popular purposes of course evaluation in descending order:

**Table 1:** List of potential goals of course evaluation in order of importance and popularity and as perceived by both faculty and academic administration (modified from (Rathke and Harmon, 2011)).

Relevance Ranking by Faculty	Relevance Ranking by Academic Administration
1. Instructor feedback for teaching improvement	1. Instructor feedback for teaching improvement
2. Evaluation of class quality as a means for course improvement	2. Evaluation of class quality as a means for course improvement
3. Collection of information in support of program/institutional accreditation	3. Collection of information in support of program/institutional accreditation
4. Evaluation of faculty performance in the context of promotion and tenure procedures	4. Assessing student learning outcomes
5. Assessing student learning outcomes	5. Evaluation of faculty performance in the context of promotion and tenure procedures
6. Collection of information for program review	6. Collection of information for program review

Remarkably, both faculty and administration ranked “teaching improvement” and “course improvement” as the most relevant and popular goals of course evaluation. In comparison, “evaluation of faculty performance” appears low on the priority list. Table 1 can serve as a basis for a discussion on the main goals of course evaluation at UAF.

## 2.2 Potential Analysis Methods of Course Evaluation Results

In addition to the main goal of a course evaluation system, it is equally relevant to discuss how the produced course evaluation data should be analyzed, as not all evaluation systems support all potential evaluation methods equally well. Ways of analyzing course evaluations may include:

- Comparison of performance measures over time
- Benchmark comparison against peer groups
- Comparisons among units
- Comparisons among faculty
- Benchmark comparisons against national norms
- Benchmark comparisons against institutions using the same evaluation system

## 2.3 Current Course Evaluation Practices at UAF

Currently, UAF is using a paper-based evaluation process for large parts of the student population and adds an online evaluation option for students that participate in online and distance classes. Both the paper and online system are administered by IASystems, an instructional assessment system that has been developed over many years at the University of Washington. Two types of forms are provided to students to gather feedback: (1) a questionnaire that asks to rank properties of the class and the instructor on a six point scale (“Excellent” to “Very poor”), and (2) a comment sheet that allows students to provide open-ended feedback. The questions on both forms are largely focused on “assessing faculty performance” and comparably little feedback is provided for “teaching and class improvement”.

This focus on “assessing faculty performance” is further evidenced by references to course evaluation in various UAF guidelines, regulations, and policy documents. Information on course evaluation can be found in (1) The Board of Regents Policy (P.04.04.050. Evaluation of Faculty), (2) the UAF Blue Book (Regulations for the Appointment and Evaluation of Faculty, Chapter III – Periodic Evaluation of Faculty), (3) as well as the Collective Bargaining Agreements with UA faculty unions (UNAC Collective Bargaining Agreement, Chapter 15.5.1 Merit Bonus Factors; UAFT Collective Bargaining Agreement, Chapter 7.1 Merit Pay). The verbiage used in these documents is listed in the following:

- Board of Regents Policy, Part IV Human Resources, Chapter 04.04 Faculty Section P.04.04.050 Evaluation of Faculty, states in Subsection D (only relevant sections are shown) (University of Alaska Fairbanks Board of Regents, 2006):

\* \* \*

*D. In conducting evaluations pursuant to this chapter, faculty and administrative evaluators may consider, but shall not be limited to, the criteria set out in 1.-7. of this subsection as appropriate to the faculty member's professional obligation. In addition, units may elaborate in writing on these or other criteria that take into account the distinctive nature of the discipline or special university assignment. Criteria may include:*

\* \* \*

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), Chapter III – Periodic Evaluation of Faculty (University of Alaska Fairbanks, 2006):  
B. *Criteria for Instruction*

\* \* \*

2. *Components of Evaluation:*

*Effectiveness in teaching will be evaluated through information on formal and informal teaching, course and curriculum material, recruiting and advising, training/guiding graduate students, etc., provided by:*

a. *systematic student ratings, i.e. student opinion of instruction summary forms,*

\* \* \*

- United Academics (UNAC) Collective Bargaining Agreement, Section 15.5.1 Merit Bonus Factors (United Academics, 2013):

*Recommendations and determinations of merit pay adjustments by the dean/director and provost for exemplary performance shall consider pertinent factors regarding faculty effort, such as the following:*

\* \* \*

- *quality of student evaluations*

- University of Alaska Federation of Teachers (UAFT) Collective Bargaining Agreement, Section 7.1 Merit Pay (University of Alaska Federation of Teachers (UAFT), 2013):

\* \* \*

*Merit Pay Factors: Recommendations and determinations of merit pay adjustments by the dean/director and provost for exemplary performance shall consider pertinent factors regarding faculty effort, such as the following:*

\* \* \*

- *quality of student evaluations*

All of the above information highlights “faculty evaluation in the context of promotion and tenure” as the main application of course evaluation at UAF. Interestingly, this stands in contrast to the survey results referenced in Section 2.1.1, where “instructor feedback for teaching improvement” was cited as the most important and popular use of course evaluation.

**Recommendation: Before discussing changes in course evaluation technology, we recommend to lead a discussion on the desired purpose of course evaluation at UAF and on whether or not a change of course evaluation focus is required.**

### 3 Discussion of Course Evaluation Technology

After a good understanding of the intended goals of course evaluation is developed, an appropriate evaluation technology can be selected. To support this step, this section provides some background on the main benefits and drawbacks of various course evaluation technologies.

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.

### 3.1 Pros and Cons of Electronic Course Evaluation (ECE) Concepts

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).

**Table 2:** List of the main benefits and drawbacks of electronic course evaluation systems relative to traditional paper-and-pencil options.

Pros of Electronic Course Evaluation Concepts	Cons of Electronic Course Evaluation Systems
<ul style="list-style-type: none"> <li>• Flexibility of evaluation design</li> <li>• Easy creation of course-specific questions</li> <li>• Flexibility of access</li> <li>• Flexibility of evaluation period (both length of period and timing)</li> <li>• Improved anonymity (especially for written comments)</li> <li>• Cost reduction likely</li> <li>• Equal course evaluation of classroom-type and online classes</li> <li>• Faster production of evaluation results</li> <li>• Wide range of statistical analyses possible if data is digital</li> <li>• Potentially easier production of teaching portfolios</li> </ul>	<ul style="list-style-type: none"> <li>• Potentially lower response rates</li> <li>• The student population that is evaluating the class may change</li> <li>• The course evaluation process becomes less visible as the visual cues (paper forms, envelopes, pencils, ...) go away</li> <li>• Not all students may have access to the internet on a regular basis</li> <li>• Students have to be proactive to visit the web location and complete the form</li> <li>• Electronic systems may increase the number of irrelevant and inappropriate comments</li> </ul>

While the benefits of electronic course evaluations outnumber their drawbacks in Table 2, some of the risks associated with electronic course evaluations can have severe consequences. One of the most discussed drawbacks of electronic means of evaluating courses is a potential drop in response rates that was observed by various universities (Adams and Umbach, 2012). To provide additional background on the relative importance of the benefits and drawbacks listed in Table 2, Section 3.2 provides an assessment of the main parameters that determine the success of a course evaluation system.

### 3.2 Parameters for Assessing the Success of a Course Evaluation Technique

Depending on the identified purpose of course evaluation at UAF, a number of parameters can be identified that indicate whether or not a course evaluation system successfully met the intended purpose. A list of suggested parameters includes:

- 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 *ultimate goal of course evaluation is to derive an unbiased assessment of instructor and/or class performance by polling class participants*. 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 *student response quality* and *student response rate*. It is therefore recommended to analyze these parameters together.

*Student response rate* 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.

### 3.3 A Discussion on Response Rates in Electronic Evaluation Systems

#### 3.3.1 Background on Student Response Rates

As mentioned before, low student response rates do not directly cause biases in course evaluation but rather increase the likelihood for biases to occur. Unfortunately, some studies have suggested that survey nonresponse both inside and outside of the university environment is not random (Avery et al., 2006; Dillman et al., 2002; Porter, 2004), meaning that low response rates do often result in non-representative survey results. As results from class evaluations can have significant impact on decision-making processes at universities (promotion process, accreditation, program review, ...), it is therefore important to (1) acknowledge that student response rates are an important parameter in course evaluation and (2) to provide suggestions on how student response rates can be improved.

In this context, it is worth mentioning that *low response rates* are not a problem that is specific to electronic evaluation methods but a systemic and *increasing issue of all evaluation methods* (Dillman et al., 2002). Therefore, reflecting on methods to improve student response rates is a worthwhile exercise independent on whether or not UAF is changing its current course evaluation strategy.

#### 3.3.2 Student Response Rates in Electronic Course Evaluation

Many universities report a decrease of response rates after a move from paper-and-pencil-type systems to electronic evaluation systems was performed. Decreases of response rates were also experienced by

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--students must answer ALL questions for their responses to be accepted by the system.
- Aside from reminder emails, no other student incentives are currently in place.
- The release time of surveys is not standardized across campus, resulting in confusion among both faculty and students.
- No discussion on the goal of course evaluation at UAA was had before an evaluation system was selected.
- Both evaluation technology and survey questions were changed at the same time.

While many universities do report lower response rates for electronic course evaluation, many institutions have managed to maintain or even improve student response rates when moving from a paper-based to an electronic system (Crews and Curtis, 2010; Dommeyer et al., 2003; Murphy, 2004). In the following section, methods and activities are summarized that led to success at many institutions and are reported to improve student response rates for electronic course evaluation systems.

### **3.3.3 Methods for Improving Response Rates in Electronic Evaluation**

Murphy (2004) discussed the importance of developing a university culture that actively promotes course evaluation.

*We have learned that if faculty do not provide incentives, or encourage student participation, they do not get high participation. However, faculty who do a good job of informing and reminding students about evaluations and encourage participation get good response rates. (Murphy 2004, para. 21)*

The same paper also stresses the importance of incentives to ensure high participation rates. Similar results were found in other studies (Anderson et al., 2005; Crews and Curtis, 2010; Dommeyer et al., 2003). The following list summarizes and explains methods that are deemed useful to improve student response rates. This list is compiled from available literature on this topic and from information that was gathered by the authors of this report during an extensive survey of electronic course evaluation systems that was conducted between December 2012 and March 2013:

- **Providing student incentives:** Many studies have indicated that providing incentives to students can significantly improve student response rates. The following list provides some of the incentives that have proven to be particularly useful:
  - Providing a very modest grade increase (e.g., 0.25%) for completing the evaluation.
  - Providing early access to course grades for students that completed the survey.
  - In-class education and reminders of course evaluations combined with explanations on the purpose of course evaluation.
  - Blocking access to grades until survey was completed.
  - Sending regular reminder emails to students during the surveying period.
  - Sharing of evaluation results with students.
  - Random drawings of prizes for students that completed the survey.
- **Creating a university culture that promotes the importance of student evaluation:** Conveying the importance of course evaluations to students is regularly reported to be a key to success for course evaluation in general, and electronic course evaluation in particular. This can be achieved both in class (e.g., through reminding students of the importance of course evaluation and through explaining what these evaluations are used for) and by promoting course evaluations campus wide (campus-wide marketing of course evaluation was reported to improve response rates by about 10% (Ravenscroft and Enyearts, 2009)).
- **Ensure faculty buy-in for electronic course evaluation:** To ensure the success of electronic course evaluation, the support from large parts of the faculty is needed. Faculty buy-in requires actively involving the faculty in every step of the decision-making process.
- **Simplicity is key:** To maximize student participation, access to and completion of the class survey has to be as convenient and simple as possible. If students experience technical problems when accessing the online course evaluations, they are less likely to complete the evaluations now or in the future (Crews and Curtis, 2010).
- **Staff involvement to remind faculty of an upcoming evaluation process:** As the online evaluation process lacks visual cues, faculty may forget about upcoming evaluation periods. It was shown to be helpful to involve staff in reminding faculty of upcoming surveys.

Many studies show that any of these actions lead to significant improvements in student participation.

**Recommendation:** 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.

## 4 A Survey of Electronic Course Evaluation (ECE) Systems

To survey the capabilities of currently available ECE solutions and to develop an understanding of whether or not ECE systems are a good match with UAF's needs, an extensive ECE system survey was conducted. The following sections describe the evaluation procedure that was applied (Section 4.1),

provide details on the criteria that were used to evaluate ECE systems (Section 4.2), and summarize the main findings of the surveying effort (Section 4.3).

## 4.1 System Evaluation Procedure

To conduct a representative survey of existing electronic course evaluation technology, a work program was developed by Dr. Eric Madsen and members of UAF's FDAI committee that was carried out from November 2012 until March 2013. The main steps of this work program were:

- Develop a comprehensive set of evaluation criteria to be used in the evaluation of existing electronic course evaluation systems and for assessing their fit to UAF's needs.
- Compile a list of electronic course evaluation systems through an extensive internet research.
- Downselect this list to a set of vendors that showed sufficient focus on higher education.
- Schedule weekly one-hour demos with the selected vendors to assess the main capabilities and limitations of their systems.
- Write a report summarizing the main findings from this exercise and formulating the next steps in the evaluation process.

Announcements for the weekly demos were distributed over every campus listserv and all faculty, staff, and students were invited to participate in the evaluation process. Widely spread announcements were important to provide a representative evaluation of analyzed electronic course evaluation systems. During the evaluation period, a core evaluation team emerged that includes faculty from both Fairbanks and rural campuses, as well as representation from the Provost's office and representation from the Office of Information Technology. This core evaluation group included the following members:

- Chris Beks, OIT
- Andrea Ferrante, CNSM
- Kelly Houlton, CRCD / Dev Ed
- Brenda Konar, SFOS
- Michael Koskey, DANRD
- Eric Madsen, SoEd
- Franz Meyer, CNSM
- Sally Skrip, Provost's Office
- Nathan Zierfuss, OIT

Demos were conducted largely remotely using teleconferencing technology. After completion of all demos, the main findings of the team were summarized in a separate two-hour meeting.

## 4.2 Main Evaluation Criteria

A set of technical evaluation criteria were developed that were used in assessing electronic course evaluation systems. These technical evaluation criteria are listed in Table 3, structured by their relationship to the two core questions of this study:

- Is it advisable for UAF to move to an electronic course evaluation model?
- If so, what would be the necessary steps towards adopting an electronic course evaluation system?

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.

**Table 3:** List of evaluation criteria that were used to assess the suitability of ECE systems to UAF's needs.

<b>Evaluation Criteria Related to Goal 1: Advisability of ECEs for UAF</b>	
<b>General Requirements</b>	<b>Related Technical Evaluation Criteria</b>
Can ECEs provide sufficient student response rates?	<ul style="list-style-type: none"> <li>• What are actual response rates at other universities using a specific ECE system?</li> <li>• Does the system include strategies for improving / sustaining response rates?</li> </ul>
Will faculty accept and promote the move to ECE?	<ul style="list-style-type: none"> <li>• Ease of use (user friendliness) of the system for faculty and students</li> <li>• Can faculty add questions?</li> <li>• How early after the semester ends can reports be released?</li> <li>• Usefulness of output to students, faculty, UAF</li> </ul>
Will students accept the move to ECE?	<ul style="list-style-type: none"> <li>• Is student anonymity guaranteed?</li> <li>• Can results be easily shared with students?</li> <li>• Does ECE interface with Banner/Blackboard?</li> <li>• Is the usage of smart devices supported?</li> <li>• Does the system support student incentives?</li> </ul>
Is moving to ECE financially efficient?	<ul style="list-style-type: none"> <li>• What is the ECE system's cost structure?</li> <li>• What are the immediate and short term costs related with adoption, conversion, implementation?</li> <li>• What are potential ongoing costs associated with hardware, software, system operation, and system management?</li> </ul>
Can continuity with legacy system be achieved (in case we want this to be an option)?	<ul style="list-style-type: none"> <li>• What latitude does UAF have to determine or modify "standard" (cross-campus) questions?</li> <li>• Can legacy data be easily imported into the ECE?</li> <li>• Can review reports be fully customized?</li> </ul>
Is data security guaranteed? Who owns the data and who has access to original survey information?	<ul style="list-style-type: none"> <li>• Where do the data reside (inside/outside UAF)?</li> <li>• Is privacy for instructors guaranteed?</li> <li>• How is anonymity of students provided?</li> <li>• What is the privacy policy of the service provider?</li> <li>• How will UAF be able to retrieve/retain data if we decided to change the provider?</li> </ul>
Do ECEs meet the unique needs of the UAF system (dispersed campuses; field classes; rural campuses)	<ul style="list-style-type: none"> <li>• Is the system flexible to merge online and paper-and-pencil reviews if necessary?</li> </ul>

with limited internet access; ...)?	<ul style="list-style-type: none"> <li>• Can different schools / faculty add customized questions?</li> </ul>
What are the training and maintenance efforts?	<ul style="list-style-type: none"> <li>• Availability of support and training</li> <li>• Are support hours user-friendly for Alaska?</li> </ul>

<b>Evaluation Criteria Related to Goal 2: Necessary Steps Towards Adopting an ECE</b>	
<b>Abstract Evaluation Criteria</b>	<b>Related Technical Evaluation Criteria</b>
Is there an ECE that addresses UAF's needs and concerns?	<ul style="list-style-type: none"> <li>• Is the ECE providing a service (data hosted and processed by vendor) or a product (hosted and executed at UAF)?</li> <li>• Experience of vendor and popularity of system</li> <li>• Does the ECE provide online and offline access?</li> <li>• Does the ECE interface with other management software at UAF and is it flexible enough to respond to changes in software preference?</li> <li>• Does ECE offer free or low cost pilot studies?</li> </ul>
How will survey formats, data access permissions, and report content be defined?	<ul style="list-style-type: none"> <li>• Who manages assessment deployment, data collection/analysis, distribution of results to faculty?</li> <li>• Can detailed and layered access structures be implemented?</li> </ul>
How can questionnaires and review results be made more useful to both faculty and students?	<ul style="list-style-type: none"> <li>• Are data analysis tools provided within the system? If so, what are they like?</li> <li>• If not, what is the export process (to what packages, who handles...)?</li> <li>• Can questions be customized to better fit UAFs specific needs?</li> <li>• Is an archive of typical (unbiased) questions available for direct use or as a guideline?</li> </ul>
How can student responses be improved both in quantity and quality?	<ul style="list-style-type: none"> <li>• What recommendations do the ECEs have for improving the student evaluation process on campus?</li> <li>• Are the ECE providers actively assisting their customers in improving quality and quantity of student feedback?</li> </ul>

### 4.3 Main Findings of the ECE System Survey

Between December 5, 2012 and March 29, 2013 a total of 12 vendor demos were held. Every vendor had one hour to demonstrate the main concepts, capabilities, and features of their respective system. It is worth mentioning that, despite sharing the same ultimate goal, the **individual ECE systems differed widely** in several aspects. These aspects included, for instance, (1) hosted vs. host-yourself solutions, (2) online-only vs. hybrid (paper plus online) solutions, (3) University-focused vs. generic survey-focused,

and (4) flexible question set vs. fixed survey format. Also the amount of data analysis that was conducted on the produced data was vastly different for different vendors.

After all acquired information was consolidated and analyzed, eight of the twelve vendors were eliminated from further considerations. Reasons for their elimination included, for example:

- Question sets were inflexible or restricted in various ways (e.g., customers are required to adhere to the company's question set; no option for instructor or university-generated questions; very long lists of must-answer questions).
- Various technical concerns (e.g. difficulties in integration with UAF's data systems and learning management systems).
- Generic survey systems that are not well adapted to higher education needs.
- Heavy burden on UAF for implementation and/or management of system.

**Three ECE systems were identified that seem to be well matched with UAF's needs.** These systems are:

- **EvaluationKit** Online Course Evaluation and Survey Software (<http://www.evaluationkit.com>)
- **eXplorance: Blue** course evaluation management system (<http://www.explorance.com/>)
- **Gap Technologies: SmartEvals** online course evaluations (<http://info.smartevals.com>)

Following are examples of some of the strengths of these systems that separated them from the other competitor systems:

- Most of these systems offer free pilot studies.
- Large variety and user-friendliness of student access modes.
- Compliance with special needs requirements.
- Ease of integration with UAF data and learning management systems.
- System tools and company strategies for achieving desirable response rates.
- Ease of implementation and management.
- Usefulness of reports to faculty and UAF.
- Accommodates instructor and UAF-generated questions.
- Data analysis tools adapt to UAF's specific needs and interests.
- Individualized reports for co-taught, cross-listed, short courses.
- High level of UAF control (question sets, reporting periods, reminder systems, data analysis and report features...).

In addition to the three systems mentioned above, **the following fourth system will remain in consideration:**

- **IASystems**, University of Washington ([http://www.washington.edu/oea/services/course\\_eval/](http://www.washington.edu/oea/services/course_eval/))

IASystems is the current provider of course evaluation services to UAF and has recently started to expand their presence in the online course evaluation market. While IASystems is currently not mature enough to be selectable, we will continue to monitor its development due to the following reasons:

- As IASystems is currently administering UAF's course evaluation efforts, the transition to their online system (if matured) could be easy and quick.

- 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.

**Conclusion:** To further analyze the capabilities of the systems EvaluationKit, Blue, and SmartEvals, we will examine these three systems in greater depth next fall. We will coordinate our activities with UAF faculty and administration. Details of the evaluation activities in the fall will be announced.

## 5 Recommendations and Future Steps

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), (3) university-focused vs. generic survey-focused, and (4) flexible question set vs. fixed survey format. Also the amount of applied data analysis varies widely (Section 4.3).
8. Three systems were identified that are excellent in their flexibility and functionality and are also well matched with UAF's needs (Section 4.3).
9. We recommend starting a discussion on the development of a culture of course evaluation on campus to improve course evaluation quality independent of evaluation technology.

To further analyze the capabilities of the down-selected electronic course evaluation systems EvaluationKit, Blue, and SmartEvals, we will continue to examine the suitability of these three systems in fall 2013. We will coordinate our activities with UAF faculty, staff and students, as well as UAF administration. Details of the evaluation activities in the fall will be announced.

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