EVALUATION ECONCORDIA:

A HOLISTIC MODEL

Wynnpaul Varela[1], Jihan Rabah[1], & Anik de St-Hilaire[1]
[1]*eConcordia KnowledgeOne Inc, Concordia University*
Montréal, Québec, Canada

wynnpaul.varela@knowledgeone.ca; jihan.rabah@econcordia.com;
anik.dest-hilaire@econcordia.com

ABSTRACT

Elearning does not automatically make for better learning. Nor does it necessarily guarantee superior achievement outcomes. Indeed, many scholars have observed that a considerable amount of online learning in higher education has had but a mediocre impact on learner achievement. Part of the problem may be the focus on technological tools and the tendency to append these to existing classroom routines. Another factor may be the lack of depth and breadth of evaluation procedures and the value attached to such efforts. The following paper presents a holistic, iterative approach to evaluation that leverages the experience and insights of a broad range of stakeholders. Our recommended holistic evaluation model not only boosts learning efficiency and effectiveness. It also serves to align the learning experiences of both students and teachers and bolsters the administration and technical capabilities of our elearning tools.

INTRODUCTION

As glib as it may sound, technology has impacted almost every facet of our lives. Within the context of higher education, institutions are increasingly investing in elearning in the hope that it will prime individuals for the realities of globalization, give rise to more efficient and effective pedagogies, and throw open the frontiers of learning typically associated with traditionalist brick-and-mortar classrooms. However, the attainment of such objectives is, of course, far from being a foregone conclusion. Elearning does not automatically make for better learning. Nor does it necessarily guarantee superior achievement outcomes. Indeed, many scholars have observed that a considerable amount of online learning in higher education has had but a mediocre impact on learner achievement.

Part of the problem may be the focus on technological tools and the tendency to append these to existing classroom routines. Another factor may be the depth and breadth of evaluation procedures, and the value attached to such efforts. As the 2018 NMC Horizons report so neatly puts it, “What good is a new approach or technology deployment if the results are not carefully measured and analyzed, with the program adjusted based on the results?” (Becker et al., 2018, p. 6). Thus, just as effective learning relies on a host of interrelated factors, evaluation needs to extend beyond single metrics of teaching and learning examination (Cashin & Downey, 1992; Marsh & Roche, 2000; Theall & Franklin, 2000) and acknowledge the diverse perspectives of those involved in the development and implementation of an elearning course—data which often remains silo-ized and largely untapped (Parnell, Jones, Wesaw, & Brooks, 2018).

Evaluation represents a cornerstone of any elearning initiative. Since collecting insightful data is challenging (Theall & Franklin, 2001), we recommend a holistic, iterative approach to evaluation that leverages the experience and insights of a broad range of stakeholders. In this way, our approach not only continually boosts learning efficiency and effectiveness but also serves to align the learning experiences of students and teachers, as well as bolster the administration and technical capabilities of our elearning tools. The following paper presents the ensemble of evaluation procedures adopted, the underlying rationale for each procedure, the handling of confidentiality issues, and the respective contribution of each stakeholder group to the overall evaluation process.

DESCRIPTION OF ECONCORDIA'S HOLISTIC EVALUATION MODEL

Rationale and general overview

The eConcordia evaluation model is motivated by a desire to recognize the needs and concerns of multiple stakeholders and to thereby maximize learning effectiveness and efficiency. The holistic model hence generates information from students, professors, and teaching assistants, as well as eConcordia's Analysis, Production, and Implementation Supports Services (ISS) teams. Since the evaluation process is both formative and summative, stakeholder data is obtained at the following points: 1) after conducting a course needs analysis, 2) after producing this course, 3) while implementing it (i.e., once it 'goes live'), and 4) after implementing it, as illustrated in Figure 1. What follows is a description of what is evaluated, the methodologies involved, and data access procedures that ensure the protection of stakeholders' confidentiality at every phase of the evaluation process. It is important to remember, however, that the process is iterative with potential for aggregation of data. In other words, the feedback collected can be analyzed at granular levels as well as longitudinally.

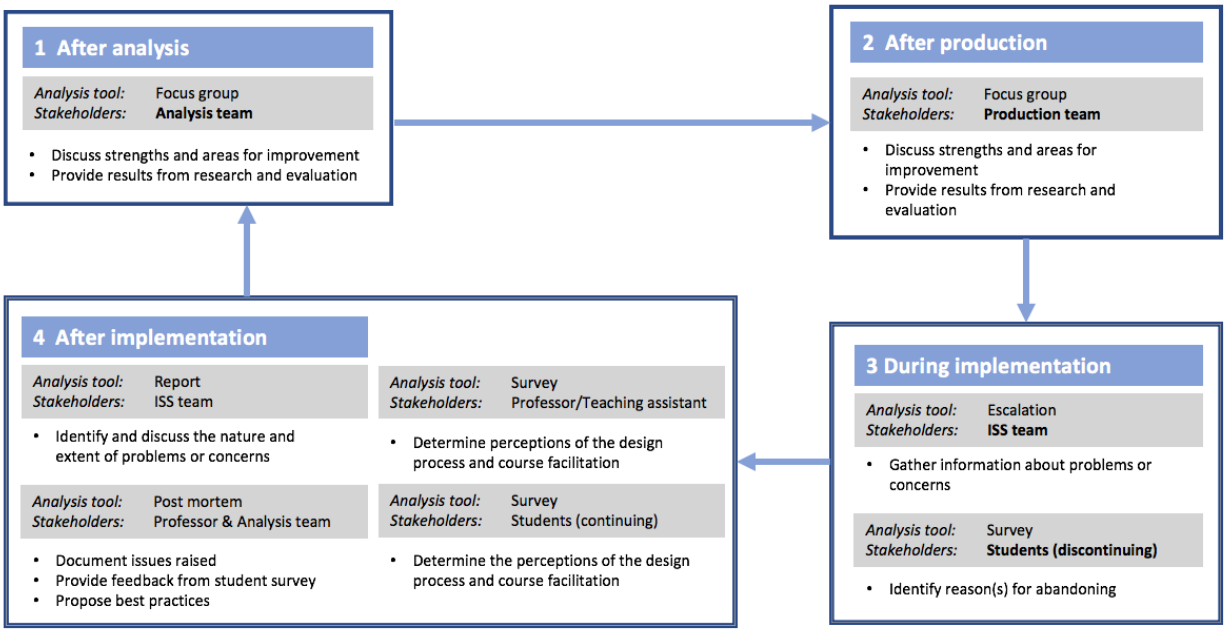

Figure 1. eConcordia's holistic evaluation model.

After course needs analysis

Following the needs analysis phase, which consists of a thorough investigation of students' and professors' needs, course objectives, and proposed instructional design methodologies, the Analysis team participates in a one-hour focus group session to share experiences and provide insights into what worked well, what could be improved, why, and how. Internal feedback at this point not only deepens shared understandings of the analysis process but can influence future recommendations. During the session, the researcher facilitates discussions while keeping a record of participants' observations. This approach offers a number of benefits. Firstly, analysis of qualitative data from informal groups yields understandings in the team's collective experience that may not be captured via standard surveys. Secondly, it may lead to internally developed rubrics of professional success that reflect the goals of the Analysis team. It may also influence the choice of topics for discussion in future focus groups. In order to protect the Analysis team members' confidentiality, data is password-protected, restricted to the Research team, stored within the eConcordia system, and used solely for internal purposes.

After online course production

The course production phase corresponds to the ADDIE model's design and development stages. During design, the Production team and professor plan the strategy, delivery methods, structure, duration, assessment, and feedback for the online course, a collaborative effort which leads to the creation of a detailed course storyboard and/or prototype. During

development, the Production team creates the course. Following the storyboard/prototype, the team ensures that each course element remains faithful to the agreed-upon design, adding graphics and deciding upon colours and fonts. With the production phase completed, the Research team invites the Production team to participate in one-hour focus group sessions. As with the Analysis team, these sessions allow individuals to share experiences and provide insights. However, due to the larger size of the Production team, participants are not obliged to attend more than one focus group session in any given course roll-out phase. During these sessions, the Research team once again plays a facilitative role but also takes the opportunity to summarize key findings from the professor and student surveys. As with the Analysis team focus group sessions, data is password-protected, restricted to the Research team, stored within the eConcordia system, and used solely for internal purposes.

During online course implementation

Having finalized the course and tested it for QA, it 'goes live.' This involves uploading the course to the LMS and configuring delivery options regarding enrolment, allotted time, pass marks for assessments, and feedback collection, among others. Thus, besides carefully documenting delivery, tracking, and reporting the LMS functioning, the ISS team looks out for warning signs of potentially disruptive issues. As part of the escalation process, the ISS team flags any problems or concerns, generating information that improves future iterations of the course in question. Processes and perceptions of discontinuing students are also followed up, with discontinuing students completing an online exit survey about their reason(s) for abandoning the course. This permits the identification of composite factors (e.g., personal, pedagogical, technological) which predict the type of students most likely to discontinue online courses: information of potential benefit to all internal and external stakeholders. The online survey is administered relatively quickly and easily. Since it allows students to express their views anonymously, potential response bias is reduced. Student feedback is anonymized, password-protected, and only accessible to the Quality Assurance and Research teams. Moreover, it is stored within the eConcordia system for a maximum of 10 years and analyzed for internal purposes only.

After course implementation

The busiest period of the evaluation process occurs after the implementation of an online course, with data provided by the ISS team, professors, and continuing students. The ISS team's final report contains important information, such as the number of phone calls received and the types of complaints mentioned during the implementation phase and how they were solved. By analyzing this data, the Research team can identify trends of potential interest to all internal and external stakeholders. Furthermore, by leveraging quantifiable data that is readily available, ISS services are minimally disrupted.

Following the implementation phase, professors provide useful data in two ways: via an individual post-mortem meeting and an online survey. The first of these is already a key feature of the Analysis team's lessons learned process as it offers professors an opportunity to discuss their experiences as co-designers. However, the additional presence of the researcher permits the Research team to document issues raised and to summarize feedback from the student surveys. It also allows the Research team to generate richer data, to address issues not covered in the professor survey, and to propose best practices that are explicitly tailored to each professor's needs. Professors, on the other hand, can take advantage of these meetings to reflect upon student survey feedback, as well as to brainstorm best practice recommendations with members of both the Analysis and Research teams. Importantly, many of these recommendations may later find their way to eConcordia's existing repository of best practices. Overall, therefore, the post-mortem grants researchers access to a potentially broader range of key performance indicators which in turn adds both context and depth to standard post-implementation professor surveys. At the same time, professors benefit from the individual attention received. Given its sensitive nature, however, only the Research and Analysis teams are given access to post-mortem data, with Analysis team members reserving the right to expand upon or query the researcher's interpretations of the post-mortem meeting before the dissemination of any relevant internal reports. To protect individuals' privacy, anonymization procedures are employed when writing up the internal reports. These procedures can include the use of pseudonyms or the replacement of identifying features with generic descriptions.

Professors can also provide information about the implementation of an online course by completing an online survey. While this data-gathering method is primarily intended for professors who cannot attend the post-mortem meeting, all professors teaching an online course are invited to participate. The principal aim of the survey is to determine perceptions of the design process. Thus, closed-ended items ask professors about their experiences of collaborating with the eConcordia development team at different phases of the development of the course. Meanwhile, open-ended items ask professors to describe their most impactful design decisions, as well as to suggest possible improvements to the design of future online courses. The second aim of the survey is to understand perceptions of how well their course was facilitated. To this end, closed-ended items relate to professors' communication with eConcordia staff, training and support, and the facilitation experience in general. Open-ended items, meanwhile, shed light on perceived challenges and main lessons learned when facilitating the online course.

Although the survey is restricted to self-reported data, it offers a number of advantages. First of all, it is relatively quick and easy to administer. Second, it provides targeted feedback on a range of key performance measurements. For example, these include ratings of communication with the Analysis and ISS teams, satisfaction levels with training, timelines, and overall involvement in online course development. Third, it permits the identification and measurement of significant relationships such as the association between pre-existing comfort levels with technology and satisfaction with course accessibility and support. Fourth, it allows professors to express views asynchronously and limits the potential response bias

inherent in face-to-face meetings. Besides improving future analysis and production experiences for professors—and thereby highlighting strengths and areas of development for all stakeholders—the eventual analysis of longitudinal data also provides objective evidence of important trends. The latter can prove instrumental in attracting and maintaining professors' satisfaction with the online course development process, as well as when applying for funding. As with the post-mortem data, professors' feedback is password-protected, accessible only to the QA and Research teams, and kept private from university departments and faculty associations. The views and opinions of professors are stored within the system for a maximum of 10 years and serve purely internal use purposes.

In the final step of the evaluation process, all continuing students complete an online survey. This provides critical feedback on key performance measurements (e.g., online course organization, course accessibility, and perceived course effectiveness) and permits the identification of significant relationships (e.g., the association between tool support and the achievement of course objectives). As with the professor data, student feedback is password-protected and accessible to the QA and Research teams only. Again, it is anonymized, stored within the system for a maximum of 10 years, and analyzed for internal purposes only.

CONCLUSION

When it comes to the implementation of elearning initiatives, higher education institutions may not always collect enough or appropriate data to make sense of the phenomena at hand, nor adequately leverage the data at their disposal (Smart Sparrow, 2017). Given the amount and complexity of data that can be aggregated, in addition to the extra costs involved, this is to some extent understandable. However, failure to capitalize on this trove of information will ultimately result in limited understandings of what works in elearning and why. Furthermore, while measurement of learning is well recognized as a driver of technology adoption within higher education (Becker et al., 2018), a focus on learning gains at the expense of holistic, longitudinal research may ironically stymie innovation and experimentation. The eConcordia evaluation model has been explicitly designed around the parameters of focus, method, content, dissemination, analysis, feedback, and knowledge-sharing as they relate to online learning development (cf. Figure 2). We are thus cautiously optimistic that our approach will be a useful contribution to the field, and more importantly, further the cause of technology in higher education. For elearning to truly fulfil its promise, however, what is required is an empirically proven and theoretically driven pedagogy that underpins the instructional design and development of elearning itself. Indeed, only when educational technology tools are developed, integrated, employed, and evaluated with specific pedagogical needs and outcomes in mind, will we truly be able to transform teaching and learning practices and thereby deliver the next-generation classrooms to which we all aspire.

Figure 2. eConcordia's evaluation parameters.

REFERENCES

Artino, A. R. (2007). Motivational beliefs and perceptions of instructional quality: predicting satisfaction with online training. *Journal of Computer Assisted Learning*, *24*(3), 260–270.

Becker, S. A., Brown, M., Dahlstrom, E., Davis, A., DePaul, K., Diaz, V., & Pomerantz, J. (2018). *The NMC horizon report: 2018 Higher education edition* (pp. 1–54). The New Media Consortium.

Parnell, A., Jones, D., Wesaw, A., & Brooks, D. C. (2018). *Institutions' use of data and analytics for student success: Results from a National Landscape Analysis.* EDUCAUSE Center for Analysis and Research (ECAR), 11. (pp. 1–31).

Smart Sparrow (2017). *Digital learning innovation 2017 report: The Current state of innovation in Australian Higher Ed.* Smart Sparrow. Retrieved from https://www.smartsparrow.com/2018/01/05/the-state-of-digital-learning-innovation-download-the-free-report/

Cashin, W. E., & Downey, R. G. (1992). Using global student rating items for summative evaluation. *Journal of Educational Psychology*, *84*(4), 563–572.

Marsh, H. W., & Roche, L. (2000). Effects of grading leniency and low workload on students' evaluations of teaching: Popular myths, bias, validity, or innocent bystanders? *Journal of Educational Psychology*, *92*(1), 202–228.

Theall, M., & Franklin, J. (2000). Creating. In K. E. Ryan (Eds.), Evaluating teaching in higher education: A vision for the future (Special issue). *New Directions for Teaching and Learning*, *83*, 95–107.

Theall, M., & Franklin, J. (2001). Looking for bias in all the wrong places: A search for truth or a witch hunt in students of instruction? In M. Theall, P. C. Abrami, & L. A. Mets (Eds.), The student ratings debate: Are they valid? How can we best use them? (Special issue). *New Directions for Institutional Research*, *109*, 45–56.