

EVALUATION OF ON-LINE COURSES DEVELOPED AT THE FACULTY OF BUSINESS STUDIES AND LAW AND FACULTY OF INFORMATION TECHNOLOGY

BOJANA BURIĆ MUTAVČI¹, JELENA DUMANJIĆ¹ &
MARIJA BAJIĆ²

¹ Faculty of Business Studies and Law, University "Union – Nikola Tesla", Belgrade, Serbia, e-mail: bojana.buric@fbsp.edu.rs, jelena.dumanjic@fbsp.edu.rs

² Faculty of Information Tehnology, University "Union – Nikola Tesla", Belgrade, Serbia, e-mail: marija.bajic@fbsp.edu.rs

Abstract Systematic evaluation of computer-based education (CBE) in all its various forms, including integrated learning systems, interactive multimedia, interactive learning environments and microworlds, often lags behind current development. Therefore, an evaluation of on-line courses developed at the Faculty of Business Studies and Law and at the Faculty of Information Tehnology has been conducted. The courses which were intended as a supplement to lectures and seminars were developed as a project using Citrix platform. The evaluation criteria used were based on the experience of the staff at the Instructional Media and Design department at Grant MacEwan College, Edmonton, Alberta, Canada and their eleven referential points. Considering the fact that the courses evaluated are still in their trial period it was not surprising when the outcome showed substantial space for improvements.

Keywords:

Evaluation,
on-line
course,
Citrix
platform.



University of Maribor Press

DOI <https://doi.org/10.18690/978-961-286-442-2.9>
ISBN 978-961-286-442-2

1 Introduction

Only by evaluating the effectiveness of on-line courses can we justify their use and continue to develop their quality.

There are nearly 2,000 references on student rating scales used in face-to-face (F2F) courses (Benton & Cashin, 2012), with the first journal article published 90 years ago (Freyd, 1923). In higher education there is more research on and experience with student ratings than with all of the other 14 measures of teaching effectiveness combined, including peer, self, administrator, learning outcomes, and teaching portfolio (Berk, 2006, 2013). With all that has been written about student ratings (Arreola, 2007; Berk, 2006; Seldin, 2006), there are three up-to-date reviews (Benton & Cashin, 2012; Gravestock & Gregor-Greenleaf, 2008; Kite, 2012) that furnish a research perspective from the world of F2F faculty evaluation.

Unfortunately, there has not been nearly the same level of attention given to the rating scales and other measures used for summative decisions about faculty who teach blended/hybrid and online courses and the evaluation of those courses. Given the sizable commitment by colleges and universities to the F2F scales already being used, can they be applied to online courses? Are online courses structured and delivered that differently from F2F courses? Is the use of technology a big factor that should be measured? Do faculty and administrators now need to develop all new measures for the online courses? What are directors of distance education supposed to use?

The purpose of this paper is to clarify the measurement options available to evaluate teaching effectiveness in online courses primarily for faculty employment decisions of contract renewal, merit pay, teaching awards, promotion, and tenure. That information can also be used for course and program evaluation. The first two sections briefly review the status of online courses and the major characteristics of F2F and online courses to determine whether they are really different enough to justify separate measures and evaluation systems. Finally, based on a review of the research and current practices, seven concrete measurement options are described. They are proffered and critiqued as a state-of-the-art "consumer's guide" to the evaluation of online and blended courses. Selecting the correct options can

potentially move formative, summative, and program decisions to a higher level of evaluation practice.

Status of Online Courses

The Pew Research Center's survey of U.S. colleges and universities found that more than 75% offer online courses (Taylor, Parker, Lenhart, & Moore, 2011). More than 30% of all college enrollments in Fall 2010 were in online courses (Allen & Seaman, 2011) and nearly 9% of all graduate degrees in 2008 were earned online (Wei et al., 2009).

The conversion of traditional F2F courses into either blended/hybrid combinations of F2F and online or into fully online courses is increasing at a rapid pace along with enrollments in those courses. Further, there is no sign that these trends are abating nationally (McCarthy & Samors, 2009) or internationally (Higher Education Strategy Group, 2011). Distance education in all of its forms is the "course tsunami" of the future. Everyone needs to be prepared.

Unfortunately, evaluation of these online courses and the faculty who teach them lags far behind in terms of available measures, quality of measures, and delivery systems (Hathorn & Hathorn, 2010; Rothman, Romeo, Brennan, & Mitchell, 2011). Although formative decisions based on student data for course improvement can be conducted by the professor during the course using learning analytics, especially for massive open online courses (MOOCs) (Bienkowski, Feng, & Means, 2012; Ferguson, 2012; van Barneveld, Arnold, & Campbell, 2012), the overall commitment to online evaluation is lacking. A recent survey of distance learning programs in higher education (Primary Research Group, 2012) in the U.S., Canada, and U.K. found that fewer than 20% of the colleges (15% U.S. and 37.5% Canada and U.K.) have at least one full-time staff person devoted to evaluating the online distance-learning program.

In order to acquire invaluable information about the quality of computer-based education (in our case – the development of on-line courses) we often use some evaluating technique. Evaluation may be defined in many ways. For instance, according to Dudley-Evans and St John – fundamentally, evaluation is asking questions and acting on the responses. It is a whole process which begins with

determining what information to gather and ends with bringing about change in current activities or influencing future ones. It is definitely more than just collecting and analyzing data. To have value, the evaluation process must include action (1998, p. 128).

Usually, we talk about formative and post project evaluation. Formative evaluation takes place during the lifetime of an ongoing process, immediately applying changes, which can improve some aspects of a particular activity. Post project evaluation, on the other hand, takes place after the end of an activity. Information obtained in that way is used for improving activities to come. With that in mind, we have conducted an evaluation of three on-line courses in a 5-week project at the Faculty of Business Studies and Law and at the Faculty of Information Tehnology in Belgrade.

2 The Challenge of Evaluating On-line courses

Distance education systems consist of a complex array of infrastructures and personnel. A few of the factors to consider are instructional, technological, implementation, and organizational issues. Additionally, while these factors can be isolated and itemized, by no means are they independent of each other. As in any system, the separate components must work together effectively so that the whole on-line system can operate holistically.

When on-line delivery technologies break down, distance learners cannot engage in the planned instructional event. Without institutional policies that provide for online support services, distance learners can find it difficult or impossible to get assistance with matters necessary for their basic participation in a higher education program. Thus, a comprehensive review of on-line education efforts must not only scrutinize the individual system components, but also attempt to get a clear picture of how the parts work together as a whole to create positive outcomes (learning, satisfaction, matriculation, and so on).

Perhaps the most feasible manner in which to appraise the effectiveness of typically complex on-line education efforts is to do so incrementally. Fortunately, the tradition of educational evaluation has established stages and data collection approaches that lend themselves to the cause.

Evaluation generally breaks down into two broad categories: formative and summative. Formative evaluation serves to improve products, programs, and learning activities by providing information during planning and development. Data collected during the design and development process provides information to the designers and developers about what works and what does not, early enough to improve the system while it remains malleable.

Summative evaluation determines if the products, programs, and learning activities, usually in the aggregate, worked in terms of the need addressed or system goal. Simply, formative and summative evaluations differ in terms of the audience for the information collected, the time in the development cycle, when the information is collected, and the intention behind the data collection. Summative evaluation is information provided to audiences external to the design and development team about how the entire package works in a real setting. Although this information might be used to suggest changes, additions, segmentations, and such, it is more likely that the information will be used to make fiscal and policy decision to use, or continue funding, a learning system.

3 Methodology

Sample

The sample consisted of 88 students enrolled in three different on-line courses. All of the students were full-time students at the Faculty of Business Studies and Law and at the Faculty of Information Technology. For the purpose of clarity the three groups were marked as following: Group "A" are first year students, group "B" are second-year students, and group "C" are fourth year students. At the end of the 5-week pilot project, the students participating in the three courses completed course-evaluation form. The distribution of students in the courses was as following: NA = 39 (1st year students) NB = 25 (4th year students) NC = 24 (2nd year students) N(total) = 88.

In order to evaluate our on-line courses we used the evaluation criteria based on the experience of the staff at the Instructional Media and Design department at Grant MacEwan College, Edmonton, Alberta, Canada and their eleven referential points. These eleven points deal with the following:

- General information providing information to students that will assist them in understanding objectives and procedures.
- Accessibility concerning the infrastructure as another point.
- Organization of the course (introduction, objectives, etc.)
- Language (grammar, language, content verification)
- Layout with respect to usability and content presentation
- Goals and objectives (were they (and how) clearly stated at the beginning of courses)
- Course Content (content quality)
- Instructional or Learning Strategies and Opportunities for Practice and Transfer (learning effectiveness with respect to strategies used)
- Learning Resources
- Evaluation (do the evaluation activities match the content)
- Overall (does the course(s) meet quality standards taking into account content, design, etc...)

Each one of the points contains criteria statements which should be met if a course is to be considered well developed. Thus, an evaluation form consisting of 83 statements was applied using a scale from “1” to “5”, where 1 corresponds to “I completely disagree” and “5” corresponds to “I completely agree”. A “0” was used for statements which were “not applicable”. After the completion of the 5-week on line pilot project, the students and teachers involved, were asked to complete the evaluation form.

Results and discussion

Considering that there were three different courses developed by three different teachers, the results were analyzed separately depending on a course that was taken. There were a few statements which were course independent, such as computer literacy, technical support availability, user interface with respect to the “Citrix” platform, etc. The results obtained from these statements show that the majority (43.2% partly and 29.5% completely – 72.7% in total) agree with the statement “Participants are computer literate enough to work independently.” This is not surprising since the courses were not obligatory and all of the participants were aware of the necessity of having IT skills in order to successfully complete the course.

Table 1: Statement: “Participants are computer literate enough to work independently.”

Participants are computer literate enough to work independently	%
I completely agree	29,5
Not applicable	1,1
E completely disagree	5,7
A partly disagree	5,7
I don,t know	13,6
I partlz agree	43.2
Missing	11

The availability of technical support was not clearly defined according to 45.5% of the participants as opposed to 8% of them who completely agree and 22.7% of them who partly agree (30.7% total). There are a significant 20.5% of them who stated not to have known about the availability of technical support. Although the students managed to complete their tasks having explicitly defined technical support would obviously assist them in the process.

Pages containing answers to FAQs (frequently asked questions) are of great help in solving common problems; however, it is somewhat surprising that 8% completely agreed there was a page with such content when there actually wasn't one. More acceptable is 28.4% claiming the statement is not applicable and another 34.1% disagreed with it. Another 15.9% did not know anything about it. The fact that 78.4% noticed that there was no FAQ page, leads us to consider that such a page should be included in the future courses.

Using the “Citrix” platform as learning management system was well accepted by the participants, and statements on course layout were generally regarded as positive. In that respect, 13.6% participants in total, completely and partly disagreed that the layout is appropriate for the content. Only 4.5% completely disagreed that the style and graphics are used consistently. Site navigation seemed to be intuitive for almost half of the participants 21.6% who completely, and 26.1% who partly agreed that the function of each icon or button is self-explanatory.

It is well known that generally, people find it difficult to read from a computer screen for a longer period. Thus, it is noteworthy that almost 80% percent of the participants agreed (54.5% completely agreed, 23.9% partly agreed) that the text is legible considering font type, kerning, contrast and color. Taking all that into account, we can conclude that layout does not need changing or some significant improvements.

For further analysis and discussion, the eleven statements from the “Instructional or Learning Strategies and Opportunities for Practice and Transfer” will be taken. Those statements are:

- Instructions or directions are clear and concise.
- Learners are informed about their own responsibilities in on-line learning.
- Deadlines are specified, and the consequences of missing deadlines are clearly stated.
- A variety of instructional or learning activities are used to promote interactivity. This may include on-line discussions, on-line conferencing, collaborative assignments and listserv participation.
- Learners can proceed at a pace that is appropriate for them and can repeat sections as often as they need to.
- Activities engage and motivate the learners. Learners must frequently respond to questions, select options, provide information, or contact others.
- Activities and materials are presented sequentially in order of difficulty.
- Learners are encouraged to interact with others and benefit from their experience and professional expertise.
- The number of activities is sufficient to support learning.
- Constructive, relevant, and frequent feedback is provided to promote clarification, elaboration, and transfer.
- The instructor primarily facilitates learning, rather than just providing content.

Table 2: The results from each of these statements are presented in the remainder of the text

Instructions or directions are clear and concise							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
1	A	2,6	17,9	28,2	33,3	12,8	5,1
	B	0	0	8,7	21,7	47,8	21,7
	C	0	8	28	28	28	8

Participants in the C course equally split among those who understood and those who didn't understand the instructions and directions. Only 17.9% of the A course participants agreed with the statement as opposed to 46.1% of them disagreeing on that, which is certainly not satisfying. Almost 1/3 stated not to know about it. The majority of the participants in the B course (69.5%) agreed, and only 8.7% partly disagreed that the instructions given were clear and concise (table 2).

Table 3: Students role in the learning process

Learners are informed about their own responsibilities in on-line learning							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
2	A	10,3	15,4	20,5	23,1	17,9	12,9
	B	4,3	8,7	0	39,1	17,4	30,4
	C	0	20	12	16	32	20
Deadlines are specified, and the consequences of missing deadlines are clearly stated							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
3	A	5,1	10,3	20,5	23,1	25,6	15,4
	B	13,6	0	0	27,3	36,4	22,7
	C	0	4	8	8	44	36

It is of great importance for students to understand their role in the learning process, that is, know their responsibilities, plan their time and act in accordance with the course demands. In other words, to acquire organizational skills that will help them manage their learning and course load. This can be achieved by having clearly stated rules to be obeyed, criteria to be met and explicit consequences for not doing so! Evidently, almost half of the participants in all three courses think that this was not the case, and that they haven't been informed about these aspects (table 3). On the other hand, according to the results of the 3rd statement, it is evident that the students were not equally informed about the deadline (table 3).

Table 4: Results: A variety of instructional or learning activities are used to promote interactivity. This may include on-line discussions, on-line conferencing, collaborative assignments and listserv participation

A variety of instructional or learning activities are used to promote interactivity. This may include on-line discussions, on-line conferencing, collaborative assignments and listserv participation							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
4	A	5,1	7,7	15,4	23,1	28,2	20,5
	B	4,3	4,3	13	8,7	34,8	34,8
	C	0	8	0	32	24	36

It seems that all course developers integrated a variety of instructional or learning activities to promote interactivity. According to the results from the three courses, more than half of the participants agreed to that (table 4).

Table 5: Results: Learners can proceed at a pace that is appropriate for them and can repeat sections as often as they need to

Learners can proceed at a pace that is appropriate for them and can repeat sections as often as they need to							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
5	A	2,6	5,1	28,2	17,9	28,2	17,9
	B	0	0	13	8,7	21,7	56,5
	C	0	4	12	20	28	36

Considering that the A course was in close connection with the tasks, which were dealt with in the traditional classroom, it explains why there are over 30% of students who claim that the pace was controlled by the course developer. In other two courses (C and B they obviously had a pace of their own (table 5).

Table 6: Results: Activities engage and motivate the learners. Learners must frequently respond to questions, select options, provide information, or contact others

Activities engage and motivate the learners. Learners must frequently respond to questions, select options, provide information, or contact others							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
6	A	0	7,7	25,6	28,2	23,1	15,4
	B	0	0	22,7	27,3	31,8	18,20
	C	0	12	24	44	12	8

Activities were least engaging and motivating in the C course and somewhat better stated in the A and B courses, yet another aspect to be improved (table 6). Similarly the activities and material should be better presented in order of difficulty as can be seen from the results of statement number 7 (table 7).

Table 7: On-line courses v.s traditional class

Activities and materials are presented sequentially in order of difficulty							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
7	A	5,1	7,7	17,9	43,6	17,9	7,7
	B	4,3	8,7	17,4	21,7	30,4	17,4
	C	0	12	40	28	20	0
Learners are encouraged to interact with others and benefit from their experience and professional expertise							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
8	A	5,1	7,7	23,1	33,3	15,4	15,4
	B	4,3	0	26,1	21,7	30,4	17,4
	C	0	0	0	40	36	24

Keeping in mind that these on-line courses were a supplement to the traditional class a great deal of interactivity among the participants actually took part offline, that is, in the traditional classroom. That explains the results in A and B course. C course, however, had a lot of group work which demanded a collaborative approach (table 7).

Table 8: Results: The number of activities is sufficient to support learning

The number of activities is sufficient to support learning							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
9	A	0	10,3	12,8	98,5	30,8	7,7
	B	8,7	0	13	21,7	21,7	34,8
	C	0	8	36	28	24	4

The students felt that number of learning supported activities was the most sufficient in the B course, and there should be more of those activities in the C and A courses (table 8).

Table 9: Results: Constructive, relevant, and frequent feedback is provided to promote clarification, elaboration, and transfer

Constructive, relevant, and frequent feedback is provided to promote clarification, elaboration, and transfer							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
10	A	5,1	7,7	23,1	12,8	33,3	17,9
	B	0	13	4,3	30,4	39,1	13
	C	4	16	28	36	8	8

One of the most important elements in on-line learning is constructive and prompt feedback. It is evident from results that some of the students lacked this type of feedback in the C course. In the other two courses, more than 50% of the students claimed that the feedback was satisfying (table 9).

Table 10: Results: The instructor primarily facilitates learning, rather than just providing content

The instructor primarily facilitates learning, rather than just providing content							
	Course	Not applicable %	I completely disagree %	U partly disagree %	I don't know %	I partly agree %	I completely agree %
11	A	2,6	12,8	28,2	17,9	15,4	23,1
	B	0	8,7	4,3	4,3	43,5	39,1
	C	0	8	24	20	32	16

According to the results the B course developer managed to make on-line learning appealing (over 80% agreed with that). The C and A developers did not achieve the same results, but still have a respectably high percentage in the affirmative direction (table 10).

4 Conclusion

All the statements which refer to the technical aspects of on-line courses were generally positive. Also, statements concerning course content, layout, site navigation and usability yielded positive results.

On the other hand, there were aspects of the evaluation, such as, technical support, constructive and prompt feedback, instructional strategies, etc. that did not meet expectations. It must be noted, however, that these aspects are course specific, and depend on the course developers' teaching methods, technical skills and the (in)experience in on-line course design itself.

Also, we must bear in mind that the courses were optional, not exclusively on-line, but were intended as a supplement to the traditional classroom teaching. Furthermore, this was the first time that the students and teachers were engaged in a type of on-line learning, which can account for some deviations from what was expected. However, evaluating those on-line courses provided us with invaluable information that should be applied in the projects to come. Therefore, using evaluation criteria in a course developing process plays a key part in the planning, implementation and assessment of a course.

References

- Allen, I. E., & Seaman, J. (2011). *Going the distance: Online education in the United States*, 2011. American Educational Research Association, American Psychological Association, and National Council on Measurement in Education Joint Committee on Standards. (1999). *Standards for educational and psychological testing*. Washington, DC: AERA.
- Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. *The International Review of Research in Open and Distance Learning*, 12(3), 80-97. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/890/1663>
- Babson Park, MA: Babson Survey Research Group. Retrieved from <http://www.onlinelearningsurvey.com/reports/goingthedistance.pdf>
- Bangert, A. W. (2006). Identifying factors underlying the quality of online teaching effectiveness: An exploratory study. *Journal of Computing in Higher Education*, 17(2), 79-99. doi:10.1007/BF03032699

- Bangert, A. W. (2008). The development and validation of the Student Evaluation of Online Teaching Effectiveness. *Computers in the Schools*, 25(1-2), 25-47. doi:10.1080/07380560802157717
- Beattie, J., Spooner, F., Jordan, L., Algozzine, B., & Spooner, M. (2002). Evaluating instruction in distance learning classes. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 25(2), 124-132. doi:10.1177/088840640202500204
- Benton, S. L., & Cashin, W. E. (2012). Student ratings of teaching: A summary of research and literature. Manhattan, KS: The IDEA Center. Retrieved from http://www.theideacenter.org/sites/default/files/idea-paper_50.pdf
- Benton, S. L., Webster, R., Gross, A. B., & Pallett, W. H. (2010). An analysis of IDEA student ratings of instruction in traditional versus online courses. Manhattan, KS: The IDEA Center. Retrieved from <http://www.theideacenter.org/sites/default/files/Technical%20Report15pdf.pdf>
- Berk, R. A. (2005). Survey of 12 strategies to measure teaching effectiveness. *International Journal of Teaching and Learning in Higher Education*, 17(1), 48-62. Retrieved from <http://www.isetl.org/ijtlhe/pdf/IJTLHE8.pdf>
- Berk, R. A. (2006). Thirteen strategies to measure college teaching: A consumer's guide to rating scale construction, assessment, and decision making for faculty, administrators, and clinicians. Sterling, VA: Stylus.
- Berk, R. A. (2010). The secret to the "best" ratings from any evaluation scale. *The Journal of Faculty Development*, 24(1), 37-39.
- Berk, R. A. (2013). Top 10 flashpoints in student ratings and the evaluation of teaching: What faculty and administrators must know to protect themselves in employment decisions. Sterling, VA: Stylus.
- Bienkowski, M., Feng, M., & Means, B. (2012). Enhancing teaching and learning through educational data mining and learning analytics: An issue brief. Washington, DC: Office of Educational Technology, U.S. Department of Education. Retrieved from http://www.evidenceframework.org/wp-content/uploads/2012/04/EDM-LA-Brief-Draft_4_10_12c.pdf
- Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin*, 39(7), 3-7.
- Compura, D. (2003). Current trends in distance education: An administrative model. *Online Journal of Distance Learning Administration*, 6(2). Retrieved from <http://www.westga.edu/~distance/ojdla/summer62/compura62.html>
- Creasman, P. A. (2012). Considerations in online course design. Manhattan, KS: The IDEA Center. Retrieved from http://www.theideacenter.org/sites/default/files/idea_paper_52.pdf

- Drouin, M. (2012). What's the story on evaluations of online teaching? In M. E. Kite (Ed.), *Effective evaluation of teaching: A guide for faculty and administrators* (pp. 60-70). Washington, DC: Society for the Teaching of Psychology. Retrieved from <http://www.teachpsych.org/Resources/Documents/ebooks/evals2012.pdf>
- Dudley-Evans, T. & St John, M. J. (1998). *Developments in English for Specific Purposes*. Cambridge: CUP.
- Ferguson, R. (2012). *The state of learning analytics in 2012: A review and future challenges*. Milton Keynes, UK: Knowledge Media Institute, The Open University. Retrieved from <http://www.kmi.open.ac.uk/publications/pdf/kmi-12-01.pdf>
- Freyd, M. (1923). A graphic rating scale for teachers. *The Journal of Educational Research*, 8(5), 433-439. Available from JSTOR database. (27524960)
- Gravestock, P., & Gregor-Greenleaf, E. (2008). *Student course evaluations: Research, models and trends*. Toronto, Canada: Higher Education Quality Council of Ontario.
- Harrington, C. F., & Reasons, S. G. (2005). Online student evaluation of teaching for distance education: A perfect match? *The Journal of Educators Online*, 2(1), 1-12. Retrieved from <http://www.thejeo.com/ReasonsFinal.pdf>
- Hathorn, L., & Hathorn, J. (2010). Evaluation of online course websites: Is teaching online a tug-of-war?
- Higher Education Strategy Group. (2011). *National strategy for higher education to 2030: Report of the Strategy Group*. Dublin, Ireland: Department of Education and Skills.
- Hosie, R., Schibeci, R., & Backhaus, A. (2005). A framework and checklists for evaluating online learning in higher education. *Assessment & Evaluation in Higher Education*, 35(5), 539-553. doi:10.1080/02602930500187097
- Instructional Media and Design department at Grant MacEwan College, Edmonton, Alberta, Canada Retrieved December 2005, from <http://www.imd.macewan.ca/imd/content.php?contentid=36>
- ip, P. C. H. (2008). Evaluating teaching and learning from students' perspectives in their classroom through easy-to-use online surveys. *International Journal of Cyber Society and Education*, 1(1), 33-48 Retrieved from <http://www.academicjournals.org/ojs2/index.php/IJCSE/article/download/451/4>
- Joint Committee on Standards for Educational Evaluation. (2009). *The personnel evaluation standards: How to assess systems for evaluating educators* (2nd ed.). Thousand Oaks, CA: Corwin.
- Journal of Educational Computing Research*, 42(2), 197-217. doi:10.2190/EC.42.2.d
- Kite, M. E. (Ed.). (2012). *Effective evaluation of teaching: A guide for faculty and administrators*.
- Loveland, K. A. (2007). Student evaluation of teaching (SET) in web-based classes: Preliminary findings and a call for further research. *The Journal of Educators Online*, 4(2), 1-18. Retrieved from

- <http://www.thejeo.com/Volume4Number2/Loveland%20Final.pdf>
- Madden, T. J., Dillon, W. R., & Leak, R. L. (2010). Students' evaluation of teaching: Concerns of item diagnosticity. *Journal of Marketing Education*, 32(3), 264-274. doi:10.1177/0273475310377759
- MarylandOnline. (2013). Higher ed program > Rubric | Quality Matters program. Retrieved from <http://www.qualitymatters.org/rubric/>
- McCarthy, S. A., & Samors, R. J. (2009). *Online learning as a strategic asset. Volume I: A resource for campus leaders*. Washington, DC: Association of Public and Land-grant Universities. Retrieved from <http://www.aplu.org/NetCommunity/Document.Doc?id=1877>
- McGhee, D. E., & Lowell, N. (2003). Psychometric properties of student ratings of instruction in online and on-campus courses. *New Directions for Teaching and Learning*, 96, 39-48. doi:10.1002/tl.121
- Oliver, R. L., & Sautter, E. P. (2005). Using course management systems to enhance the value of student evaluations of teaching. *Journal of Education for Business*, 80(4), 231-234. doi:10.3200/JOEB.80.4.231-234
- Peltier, J. W., Schibrowsky, J. A., & Drago, W. (2007). The interdependence of the factors influencing the perceived quality of the online learning experience: A causal model. *Journal of Marketing Education*, 29(2), 140-153. doi:10.1177/0273475307302016
- Postsecondary Student Aid Study (NPSAS: 08): Student financial aid estimates for 2007-08, First look. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://www.nces.ed.gov/pubs2009/2009166.pdf> LI3026.pdf
- Primary Research Group. (2012). *The survey of distance learning programs in higher education, 2012-*
- Reeves, T. Dr., University of Georgia; Retrieved December 2005. from <http://www.educationau.edu.au/archives/cp/reeves.htm>
- Rothman, T., Romeo, L., Brennan, M., & Mitchell, D. (2011). Criteria for assessing student satisfaction with online courses. *International Journal for e-Learning Security*, 1(1-2), 27-32.
- Seldin, P. (Ed.). (2006). *Evaluating faculty performance: A practical guide to assessing teaching, research, and service*. Bolton, MA: Anker.
- Stewart, I., Hong, E., & Strudler, N. (2004). Development and validation of an instrument for student evaluation of the quality of web-based instruction. *American Journal of Distance Education*, 18(3), 131-150. doi:10.1207/s15389286ajde1803_2
- Tallent-Runnels, M. K., Thomas, J. A., Lan, W. Y., Cooper, S., Ahern, T. C., Shaw, S. M., & Liu, X.
- Taylor, P., Parker, K., Lenhart, A., & Moore, K. (2011). *The digital revolution and higher education*.

- van Barneveld, A., Arnold, K. E., & Campbell, J. P. (2012). Analytics in higher education: Establishing a common language. Boulder, CO: EDUCAUSE. Retrieved from <http://net.educause.edu/ir/library/pdf/>
- E Wang, A. Y., & Newlin, M. H. (2000). Characteristics of students who enroll and succeed in psychology web-based classes. *Journal of Educational Psychology*, 92(1), 137-143. doi:10.1037/0022-0663.92.1.137
- Washington, DC: Pew Internet & American Life Project. Retrieved from <http://www.pewinternet.org/~media/Files/Reports/2011/PIP-Online-Learning.pdf>
- Washington, DC: Society for the Teaching of Psychology.
<http://www.teachpsych.org/Resources/Documents/ebooks/evals2012.pdf>
- Wei, C. C., Berkner, L., He, S., Lew, S., Cominole, M., Siegel, P., & Griffith, J. (2009). 2007-08 National
- Wright, K. B. (2005). Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication*, 10(3). doi:10.1111/j.1083-6101.2005.tb00259.x
- Yarbrough, D. B., Shulha, L. M., Hopson, R. K., & Caruthers, F. A. (2011). *The program evaluation standards: A guide for evaluators and evaluation users* (3rd ed.). Thousand Oaks, CA: Sage.