Consistency Matters: Comparing Term-based and Semester-based Online MLIS Education

Edward Benoit, III,[a] Jennifer Thiele,[a] and Ana Roeschley[b]

[a]School of Information Studies, Louisiana State University, USA

[b]Department of Information Studies, University of North Texas, USA

ebenoit@lsu.edu, jenniferthiele@lsu.edu, Ana.Roeschley@unt.edu

ABSTRACT

This study compares the student learning outcome assessments of an online Master of Library and Information Science (MLIS) program offered in traditional 14-week semesters and an accelerated 7-week term program. Louisiana State University's School of Information Studies (SIS) offers the MLIS program through two delivery platforms: SIS Online (14-week semester program) and LSU Online (7-week term program). The study explores the differences in student performance between SIS Online and LSU Online and investigates the impact of term length on students' ability to achieve the program's SLOs. The findings provide insights into the effectiveness of different online program delivery formats and suggest ways to improve student learning outcomes in online MLIS education.

ALISE RESEARCH TAXONOMY TOPICS

online learning; curriculum; pedagogy; students.

AUTHOR KEYWORDS

Assessment; Backward design; Accelerated learning.

DOI: https://doi.org/10.21900/j.alise.2023.1319

INTRODUCTION & BACKGROUND

The School of Information Studies (SIS) at Louisiana State University (LSU) transitioned from offering its Master of Library & Information Science (MLIS) in both in-person and online formats to an exclusively asynchronous online delivery at the start of the 2015-2016 academic year. Despite their entirely online nature, LSU continued to categorize the SIS programs as traditional, on-campus programs for tuition and fees, which therefore required out-of-state students to pay a non-resident fee. At the same time, LSU offered an independent platform for online program delivery called LSU Online which charged students a flat rate tuition for all students, regardless of residency. In 2020, SIS decided to move towards offering the MLIS program in both LSU Online and the "on-campus" online version, hereafter referred to as SIS Online.

LSU programs through LSU Online are offered in accelerated 7-week terms in the Fall and Spring semesters and 5-week terms in the Summer. The majority of students take one 3-credit course per term and complete their degree in 2 years. While covering the same content and learning objectives as their SIS Online counterparts, faculty develop all LSU Online courses following a backward design model and adhering to identical Moodle templates.

As noted previously, courses in the SIS Online MLIS are offered in traditional 14-week semesters during the Fall and Spring and accelerated terms in the Summer. Most students enroll in 6 credit hours per semester and complete their degree in 2-2.5 years. Unlike LSU Online, course construction and Moodle design are at the complete discretion of the instructors.

Students in the SIS MLIS program meet the following student learning outcomes (SLO):

- SLO-1: Describe and identify political, social, legal, and ethical issues related to the role of information in society.
- SLO-2: Demonstrate an understanding of information technologies.
- SLO-3: Critically evaluate and synthesize research literature in LIS and other disciplines.
- SLO-4: Describe and evaluate information services that reflect and respond to the needs of diverse constituencies.

Programmatic assessment adheres to an embedded assessment model within the MLIS-required core courses, with each course including one or more assessment artifacts. The assessed assignments are identical in SIS Online and LSU Online, and faculty utilize the same assessment rubrics for each platform. Likewise, the SIS faculty teach in both programs.

Faculty raised concerns regarding students' ability to meet the SLOs for traditional and accelerated programs. This study addresses these issues by answering the following research question:

RQ: How do SIS Online and LSU Online assess student learning outcome assessments compare?

LITERATURE REVIEW

Prior research on models of online pedagogy tend to focus on comparisons of the efficacy of online versus face-to-face courses in terms of pedagogical best practices rather than term length. McFarlane (2011) begins this discussion by highlighting the importance of instructors in both formats adhering to common objectives in the discipline they are teaching, as well as continuing to learn the common concepts of these such disciplines. This can sometimes be an inherent challenge given the class format, and this must be kept in mind when developing the curriculum. He discusses organizational and process structure detailing a shared vision, mission,

and curriculum in the school itself and the critical nature of communication on a larger scale (McFarlane, 2011).

Steele, Holbeck, and Mandernach (2019) highlight the increasing number of students enrolled in online education and the critical need to examine elements that increase the success rate of enrolled students. They echo the need for cohesion in online pedagogy, discussing the lack of a pedagogical theory that can be applied to online education (Steele, Holbeck, and Mandermach, 2019). Serdyukov (2015) does propose a model of e-pedagogy that the authors support. This includes portions that address course design, teaching style, socialization, structures, and formatting, among many other elements (Serdyukov, 2015).

On a smaller scale, several scholars examined technological best practices for online classes, some focusing on the structure of the classes within the learning management system (LMS) itself. Christie and Jurado (2009) discuss student familiarity with online platforms and the importance of having faculty support by experts in the function of the LMS and the utilization of its separate functions. They emphasize the consideration of the platform design and the use of its capacity, being more cognizant of combining technology and pedagogy. While this will create a time commitment on the front end, it is an investment in efficiency, innovation, and improvement. Having the support to develop instructor skills is therefore critical to success in an LMS environment. They highlight the importance of university stakeholders who must commit time and money to the training and implementation of these structures, providing LMS support for the faculty teaching the courses. Even if every function of an LMS is not used, training levels should support functionality and innovation for all classes in their programs (Christie and Jurado, 2009).

Wuench, Aziz, Ozan, et al. (2008) ask faculty and graduate students about their feelings regarding online education. While students found online classes more convenient, they also reported inferior communication. This communication is linked directly to greater learning levels when it occurs. It was also found that there was a connection between the prompt delivery of course materials by the instructor and the grade point average of the student (Wuench, Aziz, Ozan, et al.,2008).

Overall, research supports the idea of a separate pedagogical theory for online classes. This theory should guide instructors on best practices for their courses. With university-level training and support, aligned with good communication, some best practices for online learning will emerge. The current study addresses a significant gap in the literature through a comparison of course length and LMS structure.

METHODOLOGY

During AY 2019-2020, the SIS faculty developed new SLOs and assessment assignments for the MLIS program to align with the American Library Association Committee on Accreditation standards for curriculum. The faculty integrated the new SLO assessment assignments into the MLIS core courses and began using embedded assessment procedures in the Fall 2020 semester. Table 1 identifies assignments used for each SLO criterion. Prior to the start of the semester, the faculty completed a normalization training to ensure the assessment rubrics were applied uniformly.

The Associate Director collects faculty's assessment data at the end of each semester and normalizes it to the following 4-point scale: Exceeding Expectations (4), Meeting Expectations (3), Approaching Expectations (2), and Not Meeting Expectations (1). The normalization process

also removes students who did not submit an assessment assignment and non-SIS students enrolled in the associated courses. While the data is anonymized, it retains key descriptive information, including student type (SIS Online/LSU Online), course instructor, and program.

For this study, the authors aggregated the faculty assessment data from the Fall 2020 through the Fall 2022 semesters. The means and median for each of the 15 criteria were calculated, and a Mann-Whitney U test compared the medians for statistically significant differences.

During their final semester or term, SIS students complete an exit survey, including a self-assessment of the MLIS SLOs using a slider from 0 to 100. This study calculated the self-assessed means for the 4 SLOs and compared them using independent samples t-tests.

Table 1

SLO Assessment Assignments

	Criteria	Course	Assignment
SLO 1	Political Considerations	LIS 7000	Critical Book Review/Analysis
	Social Considerations	LIS 7000	Critical Book Review/Analysis
	Legal Considerations	LIS 7000	Critical Book Review/Analysis
	Ethical Considerations	LIS 7004	Ethics Case Study
SLO 2	Identification of Technology	LIS 7008	Information Technologies for Services and Management of Libraries Assignment
	Identification of Schema or Standards	LIS 7010	Comparative Metadata System Report
	Information Searching Skills	LIS 7008	Searching Assignment
	Evaluate Search Systems	LIS 7008	Cross-System Comparison and Evaluation for Information Search Systems Assignment
SLO 3	Problem Statement	LIS 7011	Information Needs and Information Seeking Term Paper
	Existing Knowledge, Research, and/or Views	LIS 7011	Information Needs and Information Seeking Term Paper
	Evaluation of Methodologies	LIS 7009	Evaluation of Research Assignment
	Analysis/Identification of the Research Findings	LIS 7011	Information Needs and Information Seeking Term Paper
	Conclusions	LIS 7011	Information Needs and Information Seeking Term Paper
SLO 4	Differing Information Needs of Diverse Constituencies	LIS 7011	Information Needs and Information Seeking Term Paper
		LIS 7004	Case Study #1
	Information Services Meeting the Needs of Diverse Constituencies	LIS 7011	Information Needs and Information Seeking Term Paper
		LIS 7004	Case Study #1

FINDINGS

In examining the aggregated faculty assessment data from the Fall 2020 through the Fall 2022 semesters, the authors found statistically different results in 14 of the 15 criteria (see Tables 2 & 3). According to Mann-Whitney U tests, these criteria all had a p-value of less than 0.05—indicating a statistically significant difference. In all 14 of the statistically different results from the assessment data, students enrolled in LSU Online performed better than students enrolled in SIS Online.

The criterion in which students did not perform significantly differently based on program enrollment is the methods criteria for SLO-3. While students enrolled in LSU Online did perform higher than students enrolled in SIS Online in the criterion, the difference was not found to be statistically significant according to the Mann-Whitney U test comparison as the p value for the methods criterion at 0.754.

Table 2

SLO Criteria Means by Program Type

Criterion	Type	N	Median	Mean	Std. Deviation
SLO 1: Political	SIS Online	109	4.0	3.50	0.647
	LSU Online	113	4.0	3.88	0.357
SLO 1: Social	SIS Online	109	4.0	3.59	0.531
	LSU Online	113	4.0	3.85	0.359
SLO 1: Legal	SIS Online	109	3.0	3.33	0.746
	LSU Online	113	4.0	3.69	0.552
SLO 1: Ethical	SIS Online	172	3.0	3.15	0.800
	LSU Online	188	3.0	3.40	0.667
SLO 2: ID Tech	SIS Online	166	3.0	3.13	0.541
	LSU Online	211	3.0	3.43	0.533
SLO 2: Search	SIS Online	164	3.0	3.24	0.645
	LSU Online	211	4.0	3.61	0.527
SLO 2: Eval	SIS Online	164	3.0	3.26	0.652
	LSU Online	210	4.0	3.43	0.676
SLO 2: Schema	SIS Online	156	3.0	3.42	0.691
	LSU Online	154	4.0	3.64	0.614
SLO 3: Problem	SIS Online	156	4.0	3.74	0.531
	LSU Online	91	4.0	3.90	0.300
SLO 3: Literature	SIS Online	156	4.0	3.58	0.567
	LSU Online	91	4.0	3.85	0.515
SLO 3: Method	SIS Online	156	3.0	3.27	0.560
	LSU Online	91	3.0	3.36	0.863
SLO 3: Analysis	SIS Online	122	4.0	3.57	0.513
	LSU Online	91	4.0	3.88	0.443
SLO 3: Conclusion	SIS Online	168	4.0	3.23	0.638
	LSU Online	218	4.0	3.24	0.488
SLO 4: Info Need	SIS Online	204	3.0	2.84	0.642
	LSU Online	92	3.0	3.63	0.641
SLO 4: Info Service	SIS Online	204	3.0	2.85	0.672
	LSU Online	92	4.0	3.62	0.626

Table 3
Comparing SLO Criteria Medians by Program Type (Mann-Whitney U Tests)

Criterion	Total N	Mann-Whitney U	Standard Error	Standardized Test Statistic	Asymptotic Sig. (2-sided test)
SLO 1: Political	222	8028.5	366.443	5.103	<.001
SLO 1: Social	222	7678.5	368.603	4.124	<.001
SLO 1: Legal	222	7817.0	413.536	4.011	<.001
SLO 1: Ethical	360	18927.5	900.939	3.063	.002
SLO 2: ID Tech	377	22199.5	898.594	5.215	<.001
SLO 2: Search	375	22569.5	923.541	5.704	<.001
SLO 2: Eval	374	19902.0	927.354	2.892	.004
SLO 2: Schema	310	14126.5	677.833	3.119	.002
SLO 3: Problem	247	7929.0	353.293	2.352	.019
SLO 3: Literature	247	9005.5	420.203	4.539	<.001
SLO 3: Analysis	247	8160.0	489.968	2.167	.030
SLO 3: Methods	386	18027.0	908.740	-.314	.754
SLO 3: Conclusion	213	7346.0	344.444	5.211	<.001
SLO 4: Info Need	296	14957.0	630.860	8.834	.000
SLO 4: Info Service	296	14731.5	631.268	8.471	.000

Interestingly, the data from the student exit surveys did not indicate a statistically significant difference between students enrolled in LSU Online and students enrolled in SIS Online (see Tables 4 & 5). In the survey data related to each SLO, the p-value was greater than 0.05 in every case. However, as the survey was taken by only 31 LSU Online students and 24 SIS Online students, there may not be enough data present to gauge significant results.

Overall, the findings from the faculty assessment data do point towards statistically significant differences between the academic success of LSU Online and SIS Online students with students enrolled in LSU Online performing better than students enrolled in SIS Online. However, student self-assessment data does not indicate significant differences between the two programs regarding how students view their mastery of the student learning outcomes.

Table 4
Self-Assessed SLO Proficiency Means by Program Type

	Type	N	Mean	Std. Deviation
SLO 1	SIS Online	24	78.13	26.086
	LSU Online	31	88.35	14.539
SLO 2	SIS Online	24	75.50	25.155
	LSU Online	31	85.29	15.203
	SIS Online	24	84.42	21.340

SLO 3	LSU Online	31	90.52	15.062
	SIS Online	24	79.63	27.332
SLO 4	LSU Online	31	87.29	15.419

Table 5

Comparing Self-Assessed SLO Proficiency Means by Program Type (Independent Samples t-Test)

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Equal Variances
SLO 1	1.847	53	0.070	10.230	5.538	Assumed
SLO 2	1.683	35.662	0.101	9.790	5.816	Not assumed
SLO 3	1.242	53	0.220	6.099	4.909	Assumed
SLO 4	1.231	34.141	0.227	7.665	6.229	Not assumed

DISCUSSION & CONCLUSION

The study's comparison of both formal assessments of the MLIS SLOs indicates that students in the accelerated LSU Online program outperform their SIS Online counterparts. While the informal assessment does not include statistically significant findings, the increased self-assessed proficiency by LSU Online graduating students is also noteworthy. Since the LSU Online and SIS Online MLIS programs share identical curriculum content, one must look towards different variables, particularly course length and structure. The utilization of backward design and a consistent "look and feel" within the LSU Online courses supports the findings of Steele, Holbeck, and Mandermach, 2019. While utilizing the LSU Online design processes may require significant time commitments from faculty, its pedagogical advantages reflect the findings of Christie and Jurado (2009).

The current study is limited to only two years of assessment data and does not consider the open-ended responses from student exit surveys. Additional analysis of these data and focus groups will be conducted in the near future to illuminate the findings further. Likewise, the impact of variables such as student courseload and overall differences between the composition of the SIS Online and LSU Online student groups (i.e., demographic, undergraduate GPA, etc.) need further analysis.

REFERENCES

Christie, M., & Jurado, R. G. (2009). Barriers to innovation in online pedagogy. *European Journal of Engineering Education,* 34(3), 273-279.

Edwards, M. M., & Thornton, E. (2013). Library outreach: Introducing campus childcare providers to the academic library. *Education Libraries*, 36(2), 4-16.

McFarlane, D. A. (2011). A comparison of organizational structure and pedagogical approach: Online versus face-to-face. *Journal of Educators Online,* 8(1), n1.

Serdyukov, P. (2015). Does online education need a special pedagogy? *Journal of Computing and Information Technology,* 23(1), 61-74.

Steele, J., Holbeck, R., & Mandernach, J. (2019). Defining effective online pedagogy. *Journal of Instructional Research,* 8(2), 5-8.

Wuensch, K. L., Aziz, S., Ozan, E., Kishore, M., & Tabrizi, M. (2006, October). Pedagogical characteristics of online and face-to-face classes. In *E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 2422-2429). Association for the Advancement of Computing in Education (AACE).