Assessing the Impact of a Faculty Online Teaching Certification Course

Molly Mead, PhD
University of Missouri-Kansas City (UMKC) Quick Facts

• Public urban research university

• Students:
  – Enrollment: 16,944
  – Entirely online students: 1,136
  – Students taking at least one online course: 3,327

• Faculty:
  – 1,172 faculty members
  – 95% hold doctorates or the highest degree possible in their field
What is UMKC Online?

Established in 2012, we are a Department in the Provost’s office responsible for the development, delivery and accreditation of our online programs.

Currently, we have:
• A Vice Provost,
• One state authorization coordinator,
• Four instructional designers, and
• Two instructional technologists.
What was our Initial Purpose for Bb Analytics?

- Assessing the impact of course design changes on student learning and student success
- Evaluating the “course drift” of online courses over time
Those two initial purposes are still relevant to our long range plan, but that is not what we have been doing with analytics.
The Reason behind our Current Use of A4L Begins with Accreditation

“Faculty responsible for delivering the online learning curricula and evaluating the students’ success in achieving the online learning goals are appropriately qualified and effectively supported.”

C-RAC
Council of Regional Accrediting Commissions

A collective of seven regional organizations responsible for the accreditation of roughly 3,000 of the nation’s colleges and universities
UMKC is characterized by:

- Decentralization
- Online courses and programs developed with no oversight
- Instructional design last to arrive

1994: First distance education program started

1994 – 2010: Continued organic growth of online programs and schools with no institutional oversight

2010: Implemented certification course for faculty teaching online

2015: Passed a policy that all faculty teaching online must be certified via the course by fall 2018
Lack of Knowledge Regarding Best Practices in Online Courses Led to:

- No Shared Definitions of Online Course Types
- Unregulated Use of Non-Supported Software
- Many Courses that Could be Classified as Self-Paced
- Broad Range of Teaching Styles and Behaviors
- Little Campus-wide Consensus on Best Practice in Online Courses
What Content is Covered in our Certification Training Program?

- Regular Interactions
- LMS Basics
- Quality Matters
- Student Assessment
- Student Retention
- Copyright
- Active Learning
- Advanced Grade Center
- Analytics
- Accessibility
How is the Faculty Certification in Online Teaching Offered?

- **Boot Camp**
- **Instructor-Led OA**
- **Online Self-Paced**
Faculty Certified by Instructional Mode (as of 1/30/2018) N = 470

Number of Faculty

- Boot Camp: 100
- Instructor Led Asynchronous: 280
- Self Paced: 90
### Snapshot of the eLearning Tracker

<table>
<thead>
<tr>
<th>Name</th>
<th>Unit</th>
<th>Certificate Type</th>
<th>Date Certified</th>
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<tbody>
<tr>
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<tr>
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<td>School of Nursing &amp; Health St</td>
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<tr>
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<td>College of Arts &amp; Sciences</td>
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<td></td>
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The Research Question

Can LMS data (from Blackboard Analytics for Learn) be used to evaluate the impact of the certification program on faculty online teaching practices, course design, and student behaviors?

- What is the best way to assess the faculty development training programs?
- Faculty satisfaction ratings
- Survey of faculty needs/wishes for continuing education
- Student surveys
- LMS data of teaching behaviors?
Integrations with Blackboard Analytics for Learn

- Faculty Activity Data
- SIS
- Faculty LMS Reports in A4L
- eLearning Tracker
What Data Were We Looking at from Analytics for Learn?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Course Design</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Course Activity</td>
<td>• Course Items</td>
<td>• Gradebook</td>
</tr>
<tr>
<td>• Submissions</td>
<td>• Course Summary</td>
<td>• Student Course Summary</td>
</tr>
<tr>
<td>• Forum Submissions</td>
<td></td>
<td></td>
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<tr>
<td>• Course Item Activity</td>
<td></td>
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<tr>
<td>• Session Activity</td>
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</tbody>
</table>
Course Activity

- Course Activity provides metrics on course level activity by users - both high and low accesses, interactions and minutes
  - Average Minutes per session/day/week/semester
  - Time spent in course every week
  - Number of interactions with students
## Faculty Course Summary by C...

Filter Selection: [Primary Instructor, Enabled, {2016 Fall Semester, 2016 Spring Semester, 2015 Fall Semester}, All SIS Course Colleges, {Online Asynchronous Instr, Online Synchronous Instr}]

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Semester</th>
<th>Content Accesses - Us</th>
<th>Course Access Minutes - Us</th>
<th>Course Accesses - Us</th>
<th>Course Item Accesses - Us</th>
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Pyramid Reports

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Course Name</th>
<th>Date Certified</th>
<th>Semester</th>
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For Each Course, Faculty Certified or Not Certified

- Content Accesses
- Course Access Minutes
- Course Accesses
- Course Item Access
- Course Interactions
Data Export and Clean-up

A Many Step Process

- Export data for each semester individually
- Adjust the faculty certification status dependent upon the date certified
- Aggregate each semester’s data into one file
- Code data for import into SPSS
- Import into SPSS. Run all appropriate tests for data homogeneity and variances.
Preliminary Results (includes 4 semesters)

Of the five measures we investigated,

Interactions $F(1, 623) = 8.46, p = .004$

Content Accesses $F(1, 623) = 15.40, p = .000$

Course Access $F(1, 623) = 12.29, p = .000$

Course Items Access $F(1, 623) = 13.40, p = .000$

Course Minutes $F(1, 623) = 3.94, p = .048$
Updated Results (includes 7 semesters)

Of the five measures we investigated,

Interactions $F (1,1437) = 24.57, p = .000$

Content Accesses $F (1,1432) = 24.06, p = .000$

Course Access $F (1,1437) = 20.04, p = .000$

Course Items Access $F (1,1431) = 24.09, p = .000$

Course Minutes $F (1,1436) = 6.48, p = .011$
Certification Course Type Differences

- **Boot Camp**
- **Instructor-Led Online Asynchronous**
- **Online Self-Paced**

When the certification course types are compared, faculty who completed the face-to-face Boot Camp have the highest number of:
- course accesses,
- content accesses,
- interactions,
- course item accesses, and
- minutes spent in course.
known study limitations

- Massive standard deviations in measures. There is huge variability in instructor teaching behaviors.
- Mismatched course type designations may be confounding the data.
Future Exploration with A4L Data

- Are there differences in faculty teaching behaviors over time?
- What impact does instructor course interaction have on student interaction and student achievement in online asynchronous courses?
- Tracking changes in course design
- Developing a reference range for average course interactions
Questions?

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