



Blackboard®

Learning Analytics: Real-Time Indicators of Student Success

John Fritz

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Bios



John Fritz

Assistant Vice President
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Management, Blackboard, Inc.

Agenda

1

Learning Analytics at Blackboard

2

Research + Perspective from UMBC

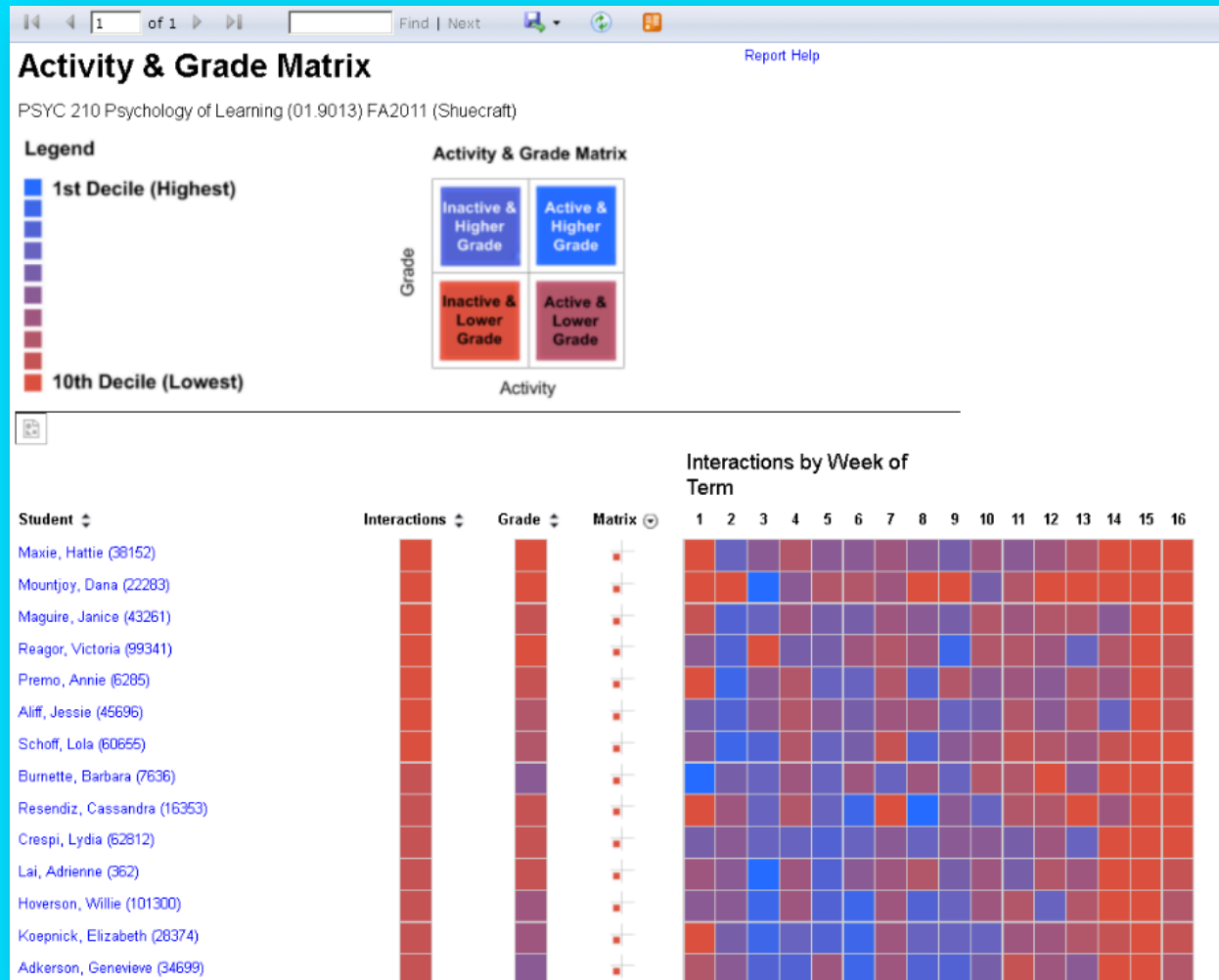
3

Discussion

GOAL:

**Understand the Correlation
Between LMS Usage, Overall
Performance, and Retention**

Learner Engagement Analytics for Learn



Learner Engagement Real-Time Indicators

**Combing LMS Engagement
and Risk Profiles from A4L...**

All Learn Risk Profiles

1 - High Grades & Engaged

2 - High Grades & Not Engaged

3 - Low Grades & Engaged

4 - Low Grades & Not Engaged

5 - Borderline

Not Applicable

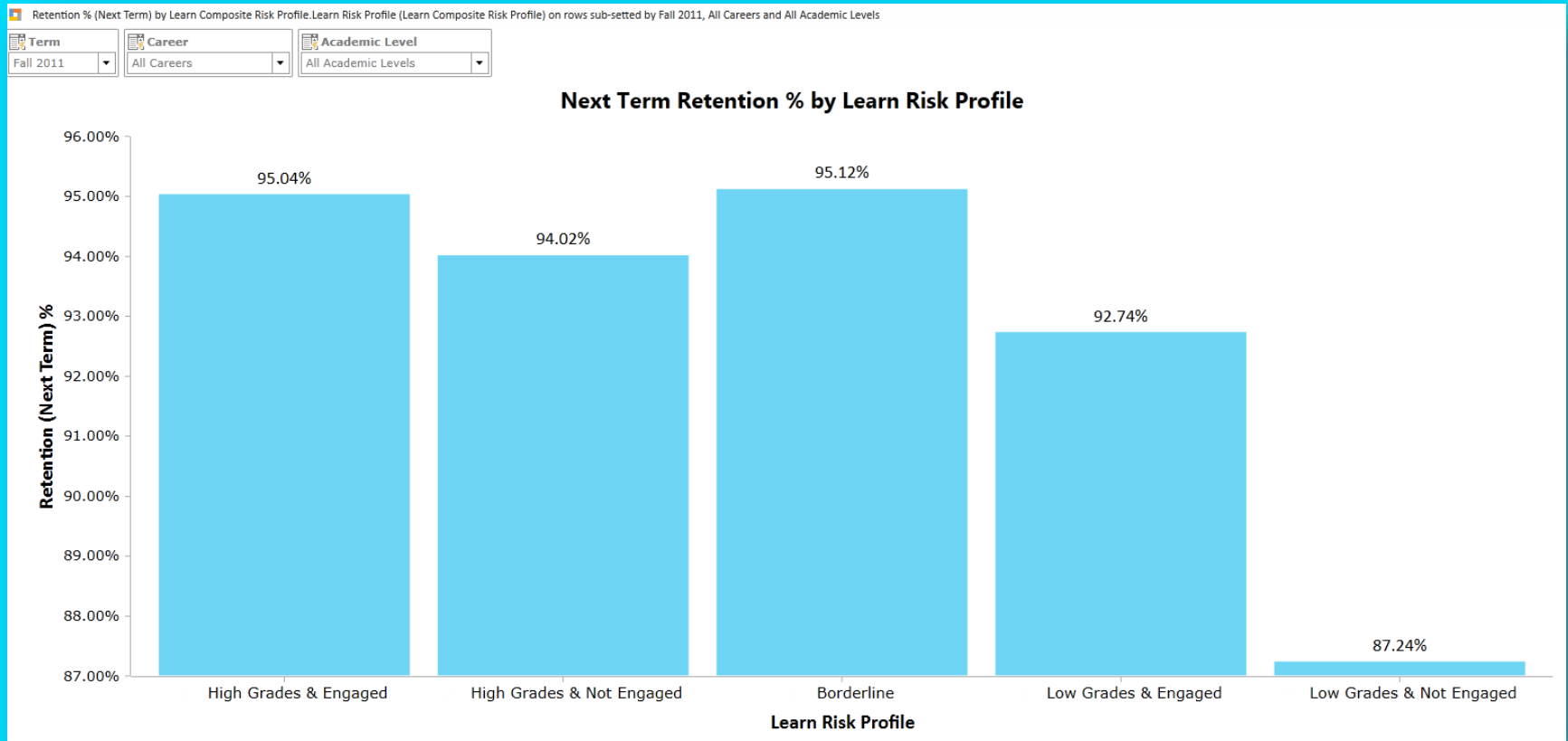


**...with Enrollment and Retention
Data from Student Management**

Retention % (Next Term)	Did Not Return %
92.22%	7.78%
95.91%	4.09%
95.32%	4.68%
92.95%	7.05%
86.71%	13.29%
95.57%	4.43%
82.07%	17.93%

Student LMS Usage

Correlation to Retention



Student LMS Usage

Low Grades + Engaged

Retention % (Next Term) and Distinct Students by Learn Composite Risk Profile. Learn Risk Profile (Learn Composite Risk Profile) on columns; and Plan (Plan) on rows sub-setted by Fall 2011, Undergraduate, All Academic Levels, Full Time and Major

Term: Fall 2011
 Career: Undergraduate
 Academic Level: All Academic Levels

	Low Grades & Engaged	
	Retention % (Next Term)	Distinct Students
History - BA (HIST BA)	84.62%	14
Information Systems - BS (IFSM BS)	95.12%	46
Interdisciplinary Studies - BA (INDS BA)	100.00%	7
Interdisciplinary Studies - BS (INDS BS)	100.00%	2
Mathematics - BA (MATH BA)	100.00%	10
Mathematics - BS (MATH BS)	100.00%	12
Mechanical Engineering - BS (MENG BS)	85.19%	27
Media & Communication Studies (MCS BA)	100.00%	14
Mngmnt of Aging Services - BA (MAGS BA)	133.33%	4
Modern Lang & Linguistics - BA (MLL BA)	85.71%	9
Modern Languages & Ling BA (MLL2 BA)	100.00%	1
Music - BA (MUSC BA)	83.33%	6
Philosophy - BA (PHIL BA)	80.00%	5
Philosophy (2MPHIL)	100.00%	1
Physics - BS (PHYS BS)	83.33%	6
Political Science - BA (POLI BA)	100.00%	28
Psychology - BA (PSYC BA)	95.38%	71
Psychology - BS (PSYC BS)	100.00%	17
Social Work - BA (SOWK BA)	92.00%	26

University of Maryland Baltimore County

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UMBC

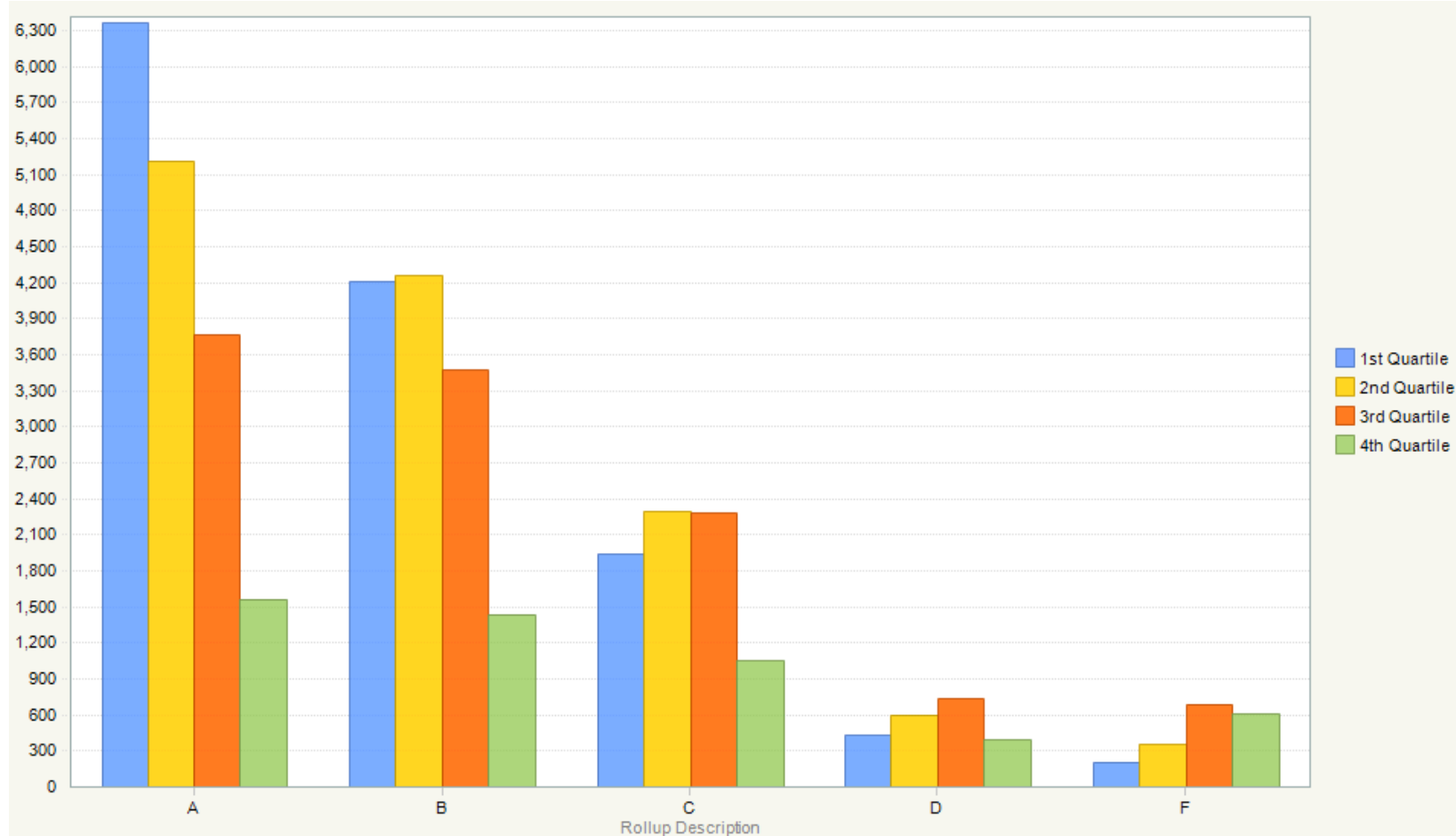
Kevin Joseph

Director, Business Intelligence
UMBC

SP2014 Course Accesses Grades

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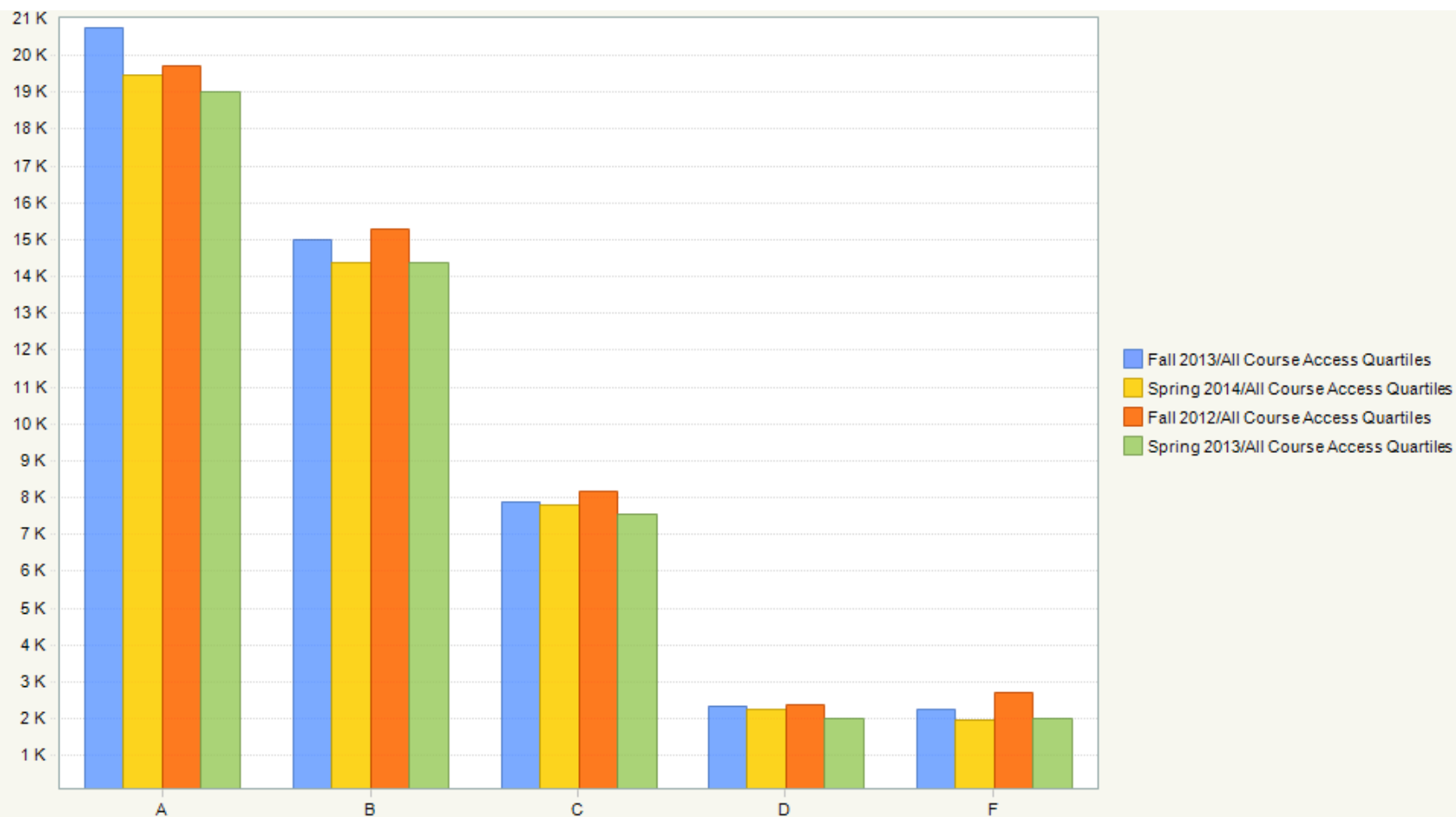
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Last Two Years

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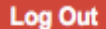
Check My Activity (CMA)

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John Fritz 

[Start](#) [Topics](#) [Community](#) [Groups](#)

Switch Role: Faculty

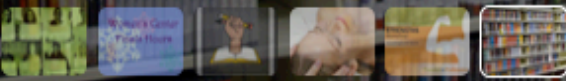
Spotlights for Wednesday, 11/22



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Your courses and activity inside of Blackboard.

System Announcement

[Blackboard Down for Maintenance 10 pm 11/22 to 1 am 11/23](#)

Courses*	Rank	Activity (?)	 Below	 Average	 Above	Grade Report
Fall 2013						
ENCH 664	24					Yes
PHYS 121	317					Yes

* Note: This list only includes active Blackboard courses.



the List!

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Blackboard Reports

 Honors Forum, Lecture Hall 1
by Stefanie Mavronis
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Activity for ENCH 664:

▾ How active you (the black bar) are compared to the average activity of other students in the course (the gray bar).

Below Average Above



▲ How active this course (the black bar) is compared to others in the same discipline.

Activity Rank ([What's this?](#))

- Your activity ranks **24th** out of **25** students in this course.
- This course's activity ranks **5th** out of **13** ENCH courses in Blackboard.

Your Usage

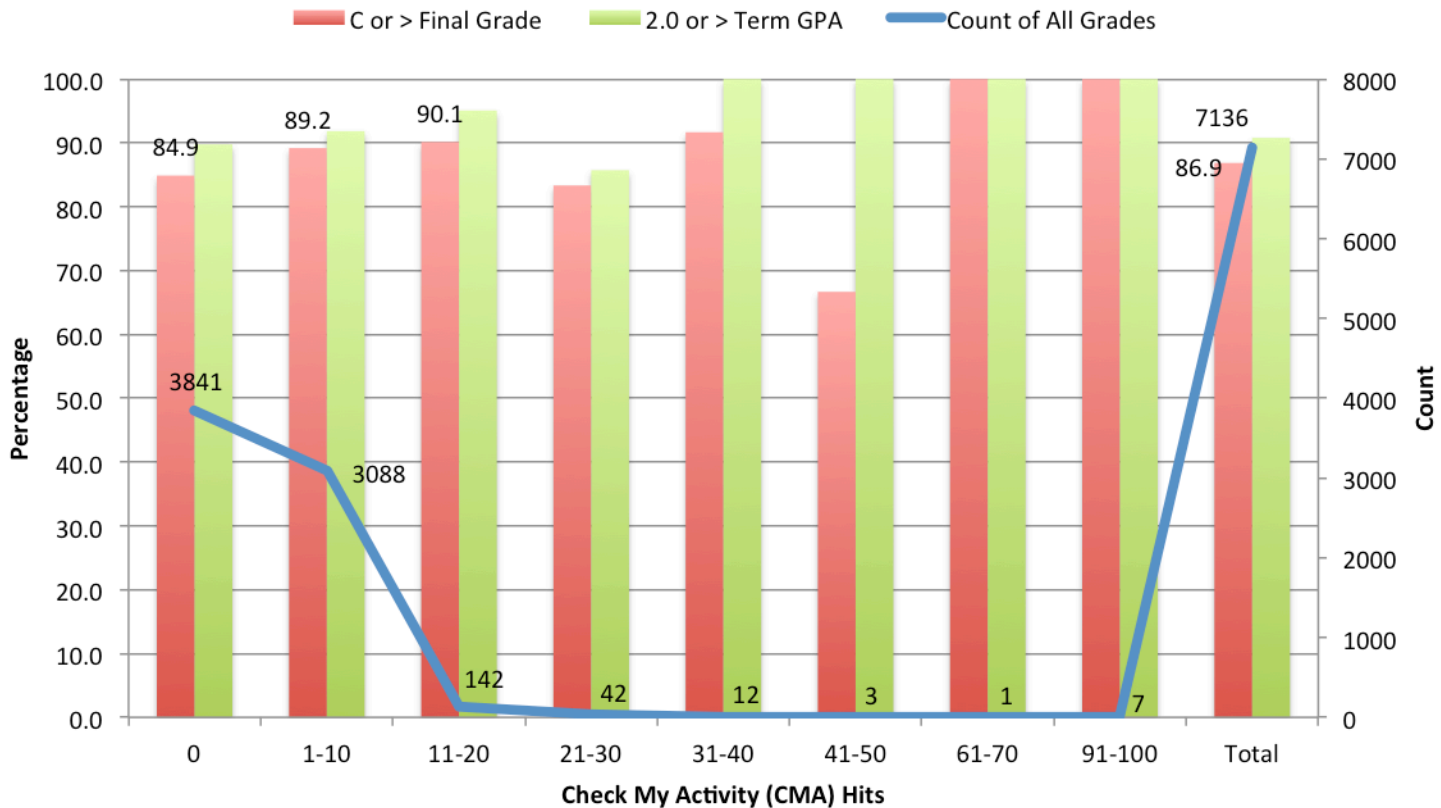
Tool	Hits	
Announcements	4	<div></div>
Content Folder/Content Area	4	<div></div>
Other	3	<div></div>
Total	11	

Course Usage (Average Hits per User)

Tool	Hits	
Announcements	84.36	<div></div>
Assignment	23.30	<div></div>

Impact of Feedback as Intervention?

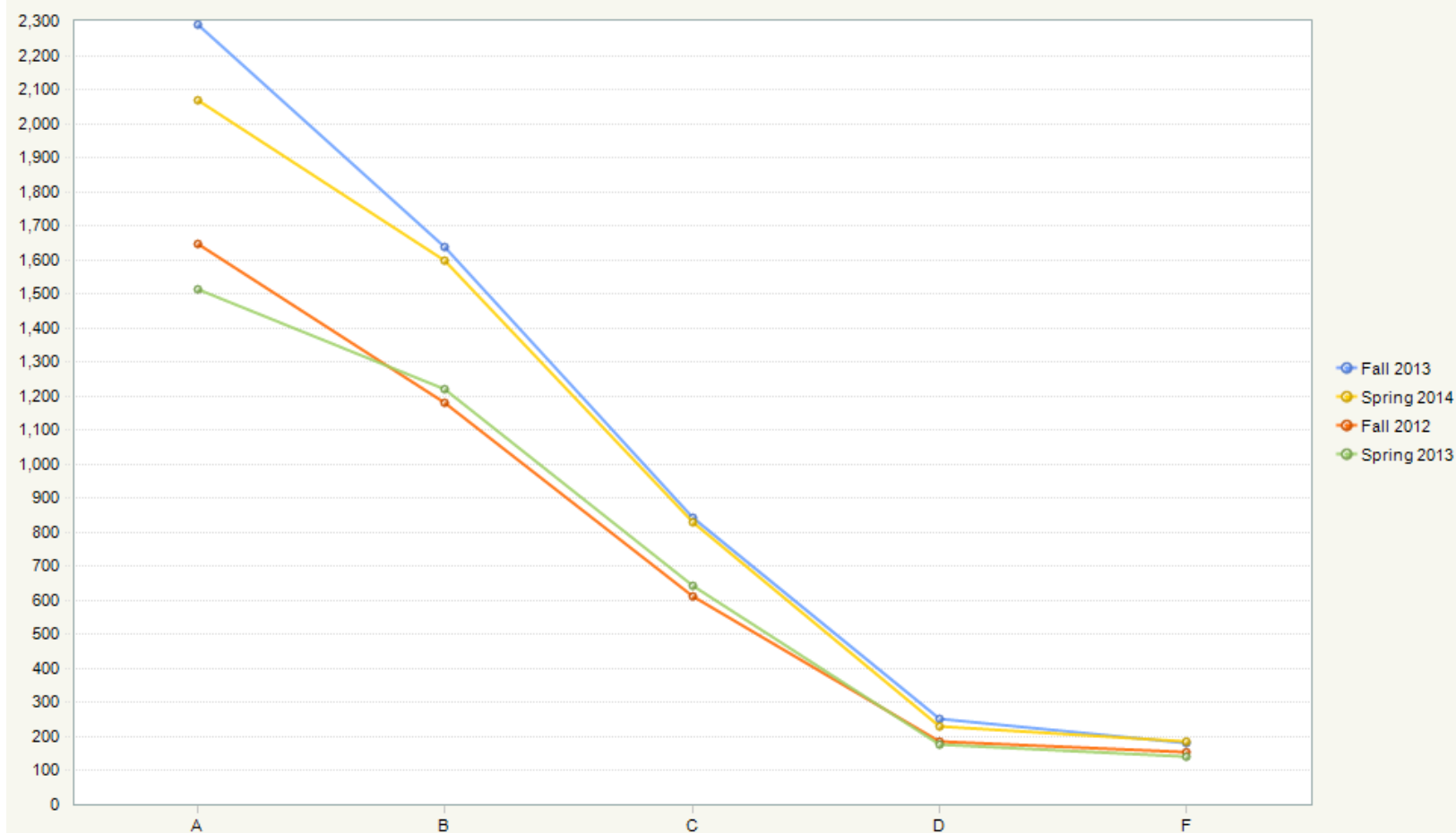
FA2013: 1,653 FT Freshmen CMA Usage by Outcomes



CMA Usage – Last 2 Years

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How Faculty Use LMS



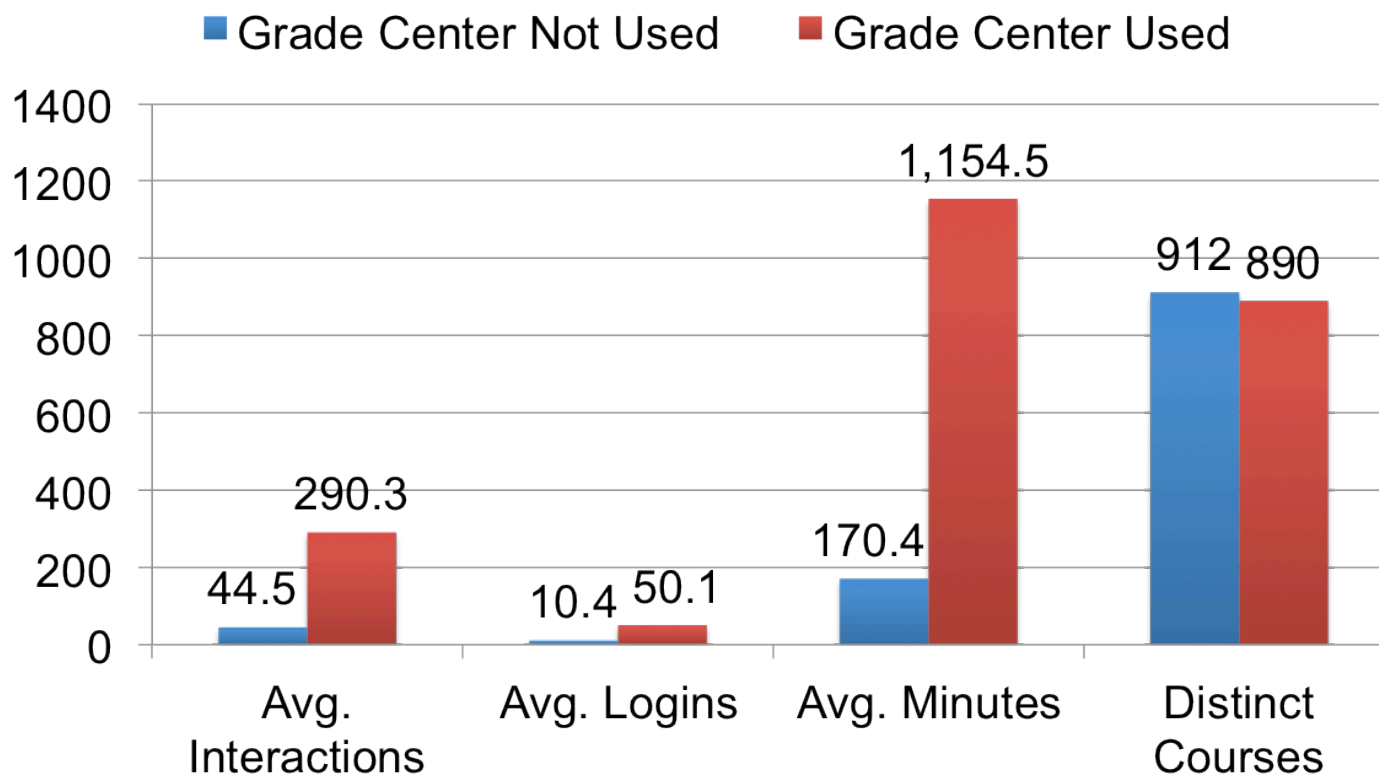
1. User & Document Management (most used approach)
 - Auto course creation and enrollment
 - Password-protected class & group space
 - Attach or Copy/Paste Documents, perhaps with expiration dates.
2. Communications (moderately used)
 - Announcements
 - Email, Messages
 - Discussion & Chat
3. Assessments (least used)
 - Electronic assignment delivery & collection
 - Quizzing, surveys, online grade center.
 - Adaptive release of content

Grade Center as Proxy for Design

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UMBC Bb & Student Activity – SP2014



Adaptive Release SP2014

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↑	Adaptive Release Rules		No Adaptive Release Rules	
	Distinct Courses	% Items Accessed	Distinct Courses	% Items Accessed
↓ Coll Arts Humanities & Soc Sci	52	57.2%	1,163	33.0%
↓ Engineering & Info Tech	12	100.0%	174	43.5%
↓ Erickson School of Aging St			15	42.1%
↓ Natural & Math Sciences	6	92.5%	176	44.0%
↓ Social Work	4	100.0%	37	34.9%
↓ UMBC	2	100.0%	48	39.8%
Grand Total	76	65.1%	1,613	36.3%

Reports I'd Change to Improve Feedback to Students and Faculty

1. Learn Course Use by College
2. Learn Course At A Glance
3. Student At A Glance

Who should change these: Clients or Bb?

SP2014 LMS Usage by College

College	Total Learn Courses	Learn Courses w/ Students	Active Learn Courses	Learn Courses Using Grade Center	Learn Courses Currently Available	Avg. Course Accesses Per Student	Avg. Interactions per Student	Avg. Minutes per Student	Avg. Submissions per Student
Natural & Math Sciences	266	203 (76%)	137 (52%)	109 (41%)	133 (50%)	63.6	330.6	1523.0	5.0
Engineering & Info Tech	291	265 (91%)	210 (72%)	166 (57%)	170 (58%)	51.6	281.8	1245.3	6.4
UMBC	87	85 (98%)	51 (59%)	34 (39%)	47 (54%)	38.1	223.6	849.3	6.6
Social Work	37	37 (100%)	31 (84%)	31 (84%)	31 (84%)	35.9	174.3	591.5	3.0
Coll Arts Humanities & Soc Sci	1388	1118 (81%)	779 (56%)	491 (35%)	733 (53%)	32.5	199.1	676.8	6.9
Erickson School of Aging St	18	17 (94%)	15 (83%)	4 (22%)	15 (83%)	25.8	138.5	467.4	3.0
Professional Education	69	69 (100%)	53 (77%)	52 (75%)	46 (67%)	25.1	105.5	269.4	2.1
No SIS College Mapped	15	9 (60%)	8 (53%)	3 (20%)	8 (53%)	6.8	29.8	103.9	2.5
Grand Total	2171	1803 (83%)	1284 (59%)	890 (41%)	1183 (54%)	42.0	236.7	939.3	6.2



A4L Course at a Glance

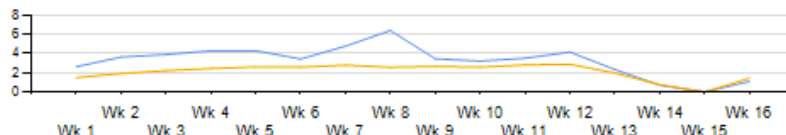
Learn Course At-a-Glance

[Report Here](#)

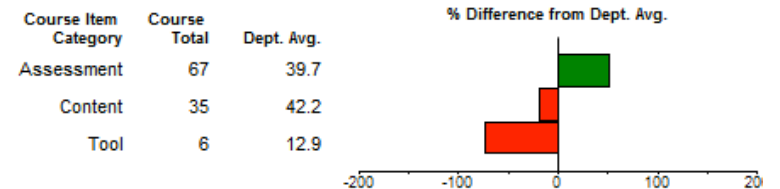
PSYC 210 Psychology of Learning (01.9013) FA2011 (01)

Learn Course Information

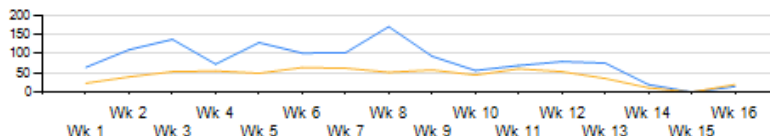
Instructor: Barbara Shuecraft **Term:** Fall 2011 **Delivery Method:** In Person **College:** Arts, Humanities, Soc Sci
Course ID: PSYC210_9013_FA2011 **Status:** Active **Students Enrolled:** 102 **Department:** Psychology
Course Accesses Avg. vs. Department Avg. (same Instruction Method) **Section:**  **Dept Avg:** 



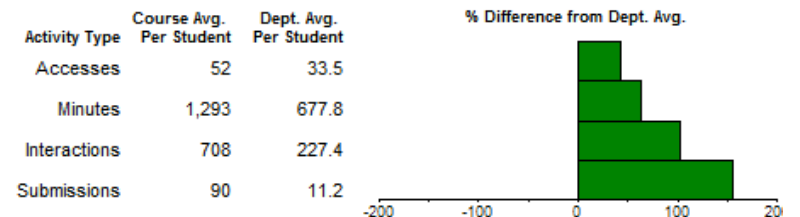
Course Item Count vs. Department Avg. (same Instruction Method)



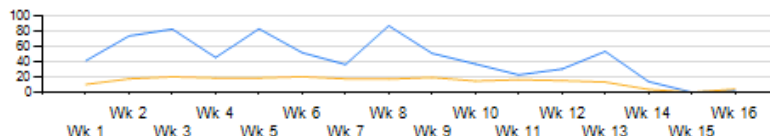
Minutes Avg. vs. Department Avg. (same Instruction Method)



Avg. Activity Per Student vs. Department Avg. (same Instruction Method)



Interaction Avg. vs. Department Avg. (same Instruction Method)



A4L Student At A Glance

Student At-a-Glance Report

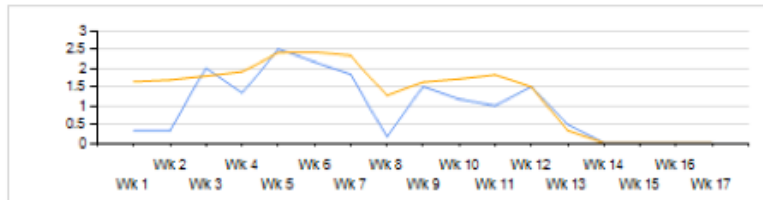
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Gossage, Audrey (7430)

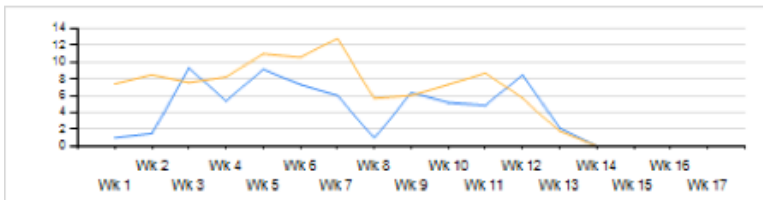
General Information

Student ID: 7430 **Email:** User 382656@blackboard.edu
Standing: Good Standing **Phone:**
Primary Major: Computer Science - BS **Class Level:** Senior
College: Engineering & Info Tech **Level:** Undergraduate

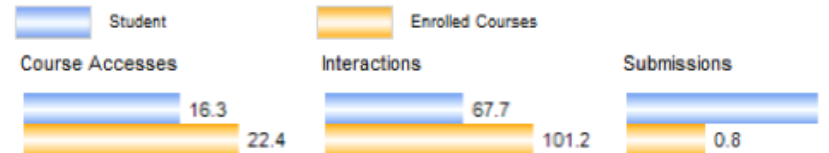
Course Accesses vs. Avg.



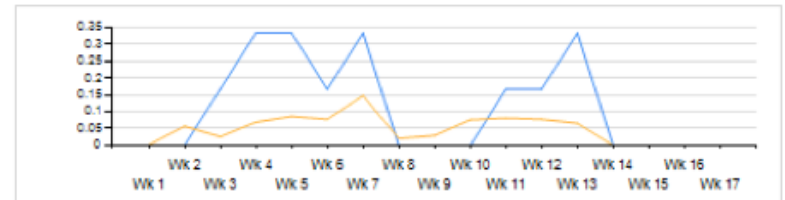
Interactions vs. Avg.



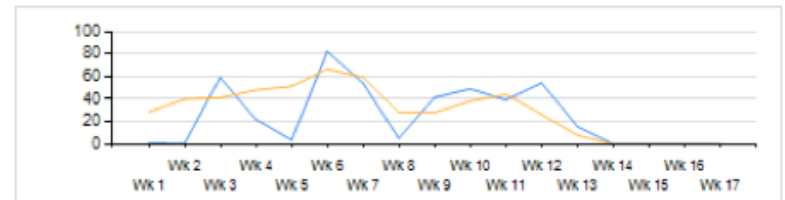
Student Avg. Per Course vs. Enrolled Courses Averages (366 Students)



Submissions vs. Avg.

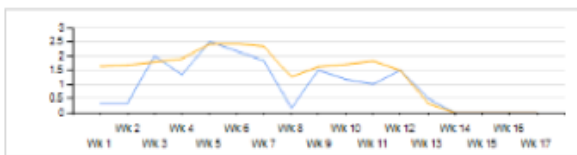


Minutes vs. Avg.



A4L Student Courses At A Glance

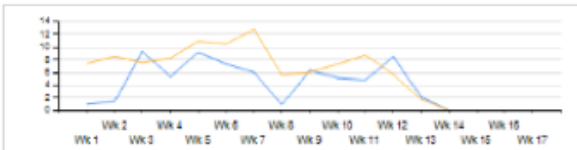
Course Accesses vs. Avg.



Submissions vs. Avg.



Interactions vs. Avg.



Minutes vs. Avg.



Legend




Blackboard Course History

Term	Learn Course	GradeCenter Not Used	No Items Added	Interactions Trend	Enrolled Count	Course Accesses		Minutes		Interactions		Submissions	
						Student	Avg.	Student	Avg.	Student	Avg.	Student	Avg.
Spring 2012	CMSC 202 Computer Science II for Majors (16.7337/17.7338/18.7339) SP20... (16)	X	X		37	0	0.0	0	0.0	0	0.0	0	0.0
Spring 2012	CMSC 202 Computer Science II for Majors (04.1060/05.1061/06.1062/07.10... (04)	X			201	16	13.9	113	230.2	44	65.8	2	0.6
Spring 2012	MATH 152 Calculus and Analytic Geometry II (11.6996/12.6997/13.7605/14... (11)				131	33	56.4	851	1434.1	156	264.3	0	0.0
Spring 2012	MATH 221 Introduction to Linear Algebra (02.4750) SP2012 (02)	X			48	15	16.9	344	212.7	45	41.8	0	0.0
Spring 2012	MATH 152 Calculus and Analytic Geometry II	X	X		121	0	0.0	0	0.0	0	0.0	0	0.0








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20+

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Spotlights for Wednesday, 11/22



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Your courses and activity inside of Blackboard.

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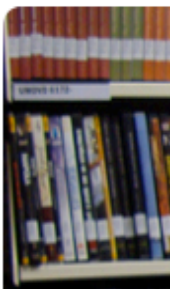
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Spotlight



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My Courses

Courses where you are: Instructor

Collaborate Training Course

crab220

ENCH 664 Quality Control and Quality Assurance of Biotechnology Products (01.7308) FA2013 *(unavailable – was last available Tuesday, December 31, 2013)*

HCST 100 The Human Context of Science and Technology SP2009 *(unavailable – was last available Monday, June 15, 2009)*

LLC 644 METHODS OF LLC RESEARCH (1.10200) FA2011 *(unavailable – was last available Sunday, January 15, 2012)*

Quiz Zero Example

SCI 100 Water; An Interdisciplinary Study (MS) (100/300/100Y) FA2014

Courses where you are: Student

CMPE 321 Communication Laboratory (1.11723) FA2010

ry Maps

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Report

Yes

Yes

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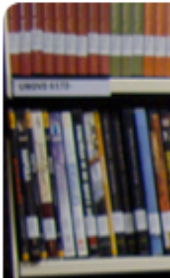
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Spotlight







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My Courses

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Spring 2012	CMSC 202 Computer Science II for Majors (04.1060/05.1061/06.1062/07.10... (04)	X		
Spring 2012	MATH 152 Calculus and Analytic Geometry II (11.6996/12.6997/13.7605/14... (11)			
Spring 2012	MATH 221 Introduction to Linear Algebra (02.4750) SP2012 (02)	X		
Spring 2012	MATH 152 Calculus and Analytic Geometry II	X	X	

LLC 644 METHODS OF LLC RESEARCH (1.10200) FA2011 (unavailable – was last available Sunday, January 15, 2012)

Quiz Zero Example

SCI 100 Water; An Interdisciplinary Study (MS) (100/300/100Y) FA2014

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My Maps

Log Out

Report

Yes

Yes

A4L Student At A Glance

Student At-a-Glance Report

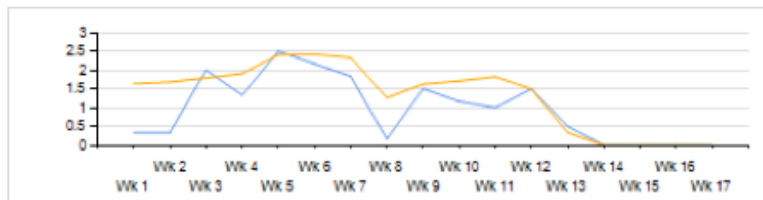
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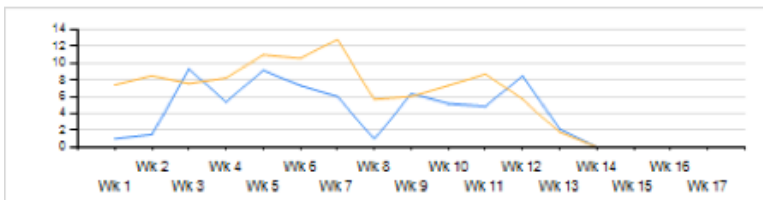
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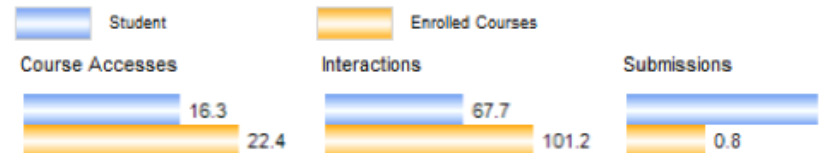
Course Accesses vs. Avg.



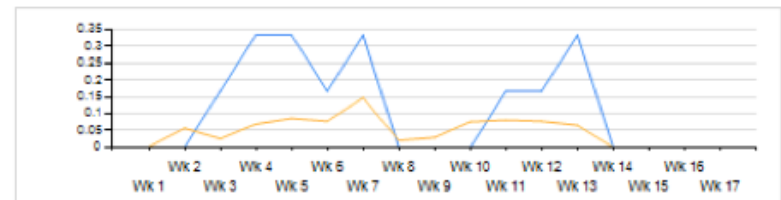
Interactions vs. Avg.



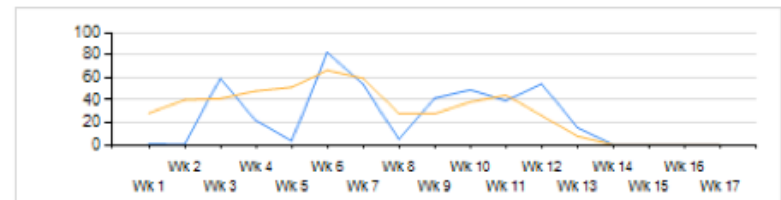
Student Avg. Per Course vs. Enrolled Courses Averages (366 Students)



Submissions vs. Avg.



Minutes vs. Avg.



Discussion

A scenic landscape with rolling hills, a lake, and mountains under a hazy sky. The foreground shows a grassy hillside with scattered trees. In the middle ground, a calm lake reflects the surrounding landscape. The background features a range of mountains under a soft, hazy sky. The overall tone is peaceful and contemplative.

How are we using analytics to conceptualize, implement and evaluate effective, scalable interventions?

Discussion

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