

Blackboard

# Characterizing Engagement in an Online Setting

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## Recent EDUCAUSE Quick Poll:

- **Apx 2/3** of respondents reported a moderate-large increase in Student Analytics
- Of those:
  - **78%** sought campus data for academic interventions
  - **66%** sought data on LMS engagement

How do we characterize  
LMS engagement?

When do we intervene?

# Face to Face Experience

Instructors can pick up on non-verbal cues

- **7% Communication is verbal**
- Confused looks/Excited Looks
- ‘Being there is the essence of teaching and learning’ (Druger, 2003, p. 351)
  - Learning occurs within the unforeseen experiences that provide novel insight to a given topic.

**How do deliver that personalized learning environment?**

**How do you bridge the non-verbal 93%?**





# Our Approach

Matt Abrahams – Speaking Up Without Freaking Out

- WHAT
- SO WHAT
- NOW WHAT

#BBANALYTICS



# Accesses

- Frequency of opening a course
- Max of 1 per session
  - Imagine walking into a f2f course
  - Leaving for a drink of water, then returning

## Calculating Last Date of Attendance

Academically related activities do not include activities where a student may be present but not academically engaged, such as:

- ♦ living in institutional housing,
- ♦ participating in the school's meal plan,
- ♦ logging into an online class without active participation,
- ♦ participating in academic counseling or advisement.



# Minutes

- Click in, then log out
- Late policies in F2F courses
- Video Lectures, Reading content, taking exams, etc.





# Interactions

- What about students who click in, then walk away
- 'Clicks' / Engaging with content
  - Not just random clicks
  - Meaningful clicks = loading content



#BBANALYTICS



# Engagement With Activity

## ACCESSES

- Which item types?
  - Assessment
  - Content
  - Tools
- Which content, specifically?

## MINUTES

- How long are exams taking?
- How many minutes are they viewing a 30 min recorded lecture?

## INTERACTIONS

- Which item types?
  - Assessment
  - Content
  - Tools
- Which content, specifically?



# So What?

## FACULTY

- Course Design
- Student Success
- Formative Feedback

## ADVISING/COACHING

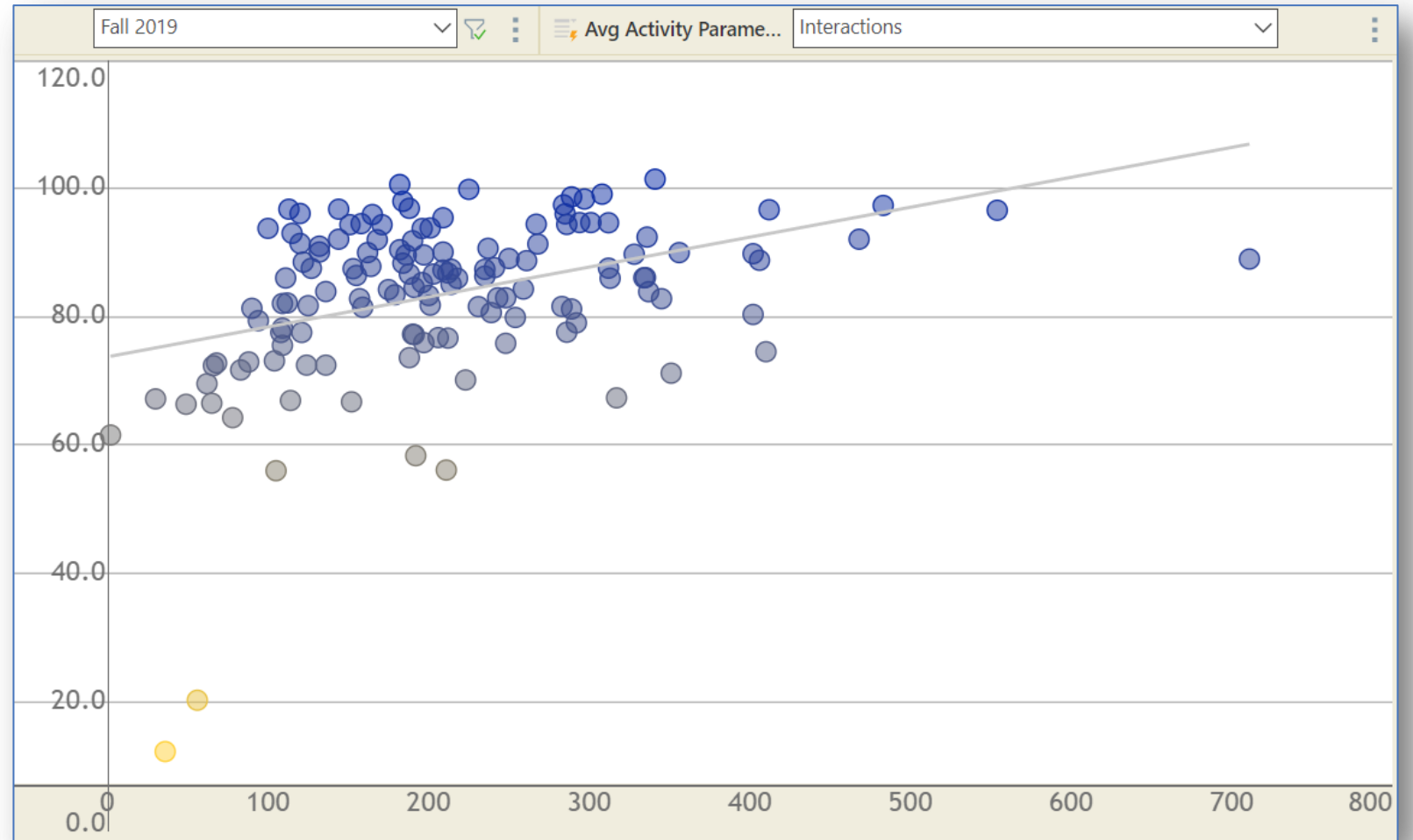
- Engagement Benchmarks
- Mental Health Alerts
- Improvement/effectiveness of intervention

## ID/SR ADMINS

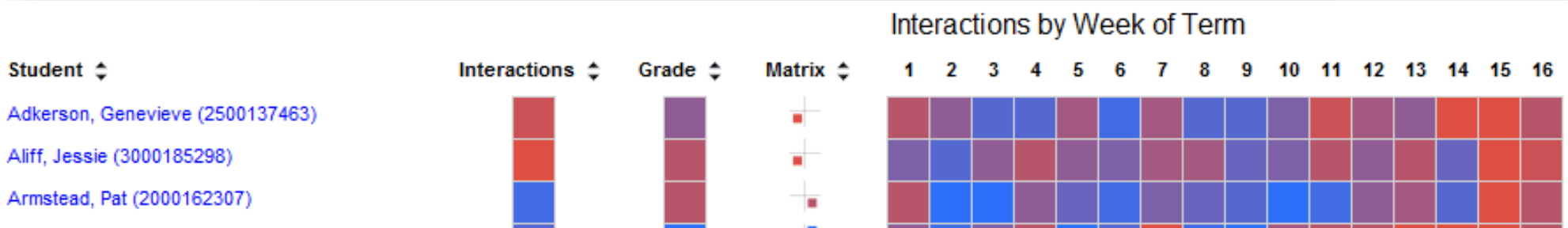
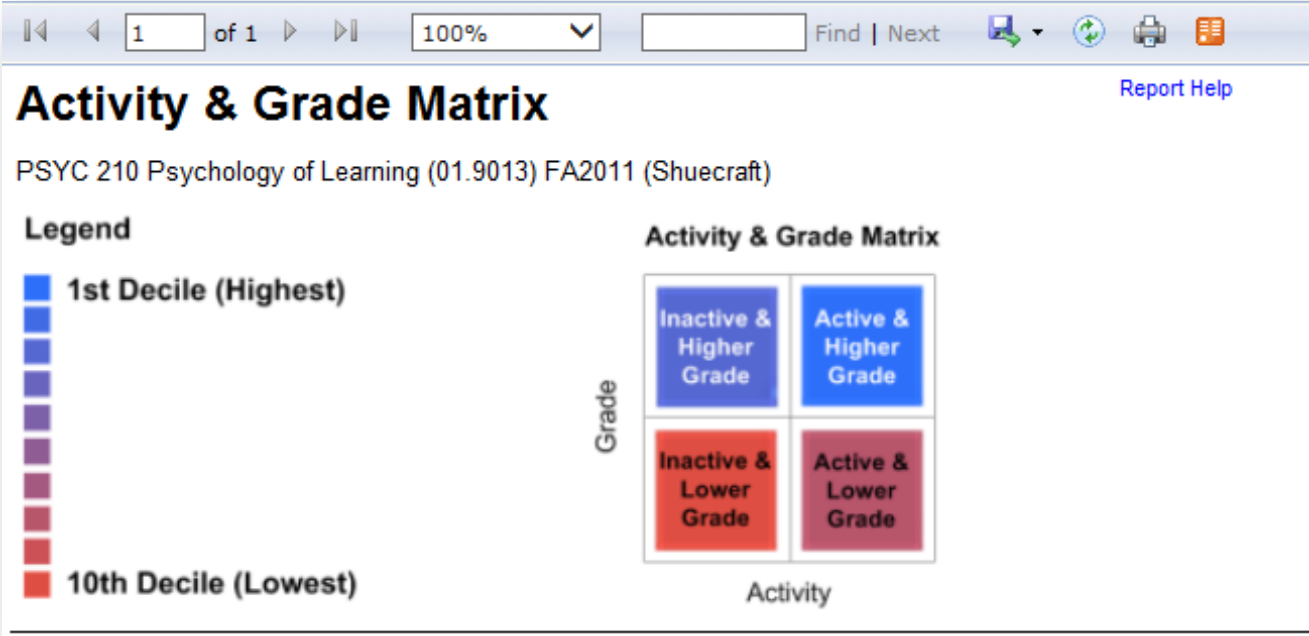
- Course Design
- Faculty Bright Spots
- Resource Deployment

# Activity & Grade Scatter Plot

To what extent does increased activity correspond to increased performance?

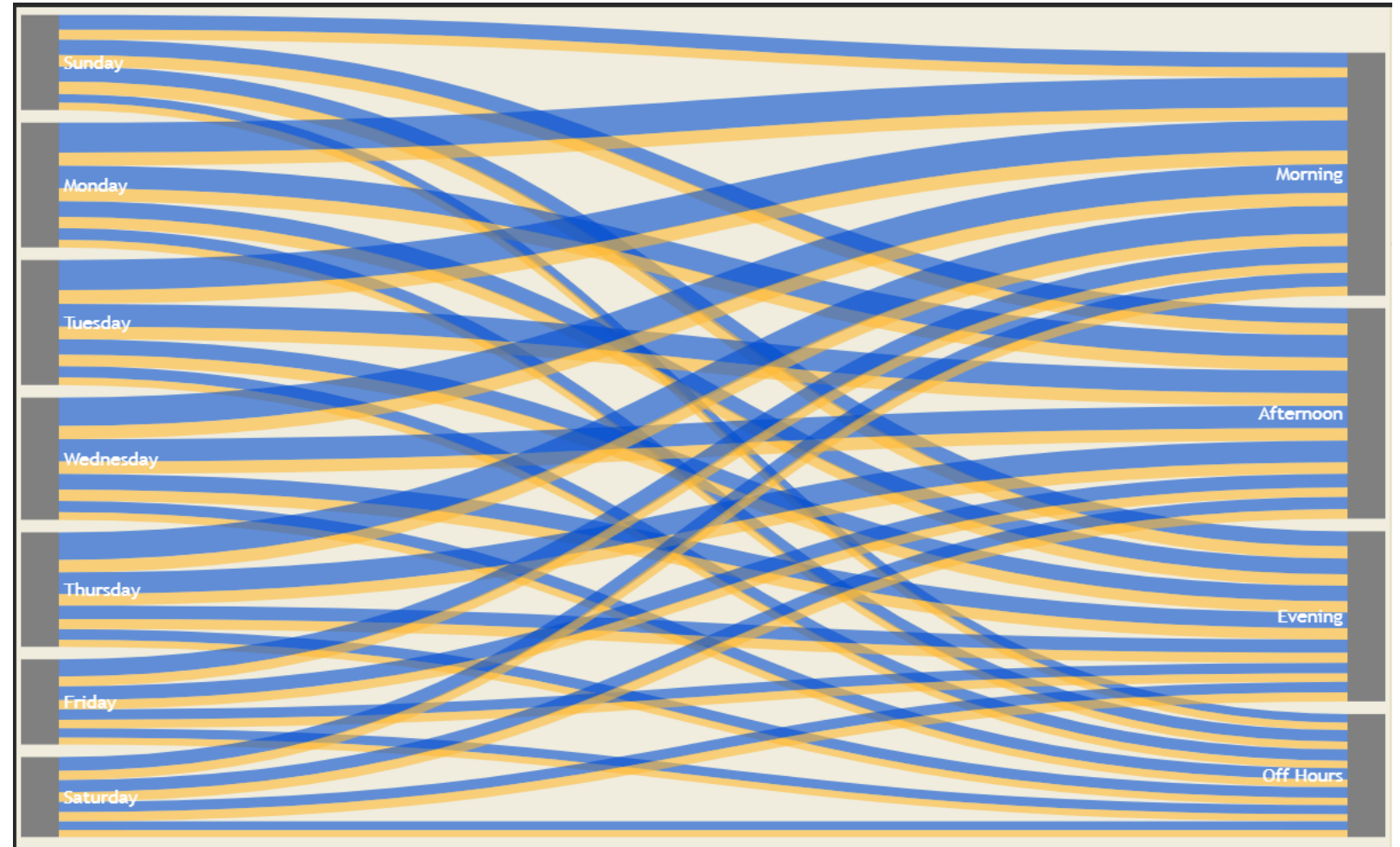


# Activity & Grade Matrix



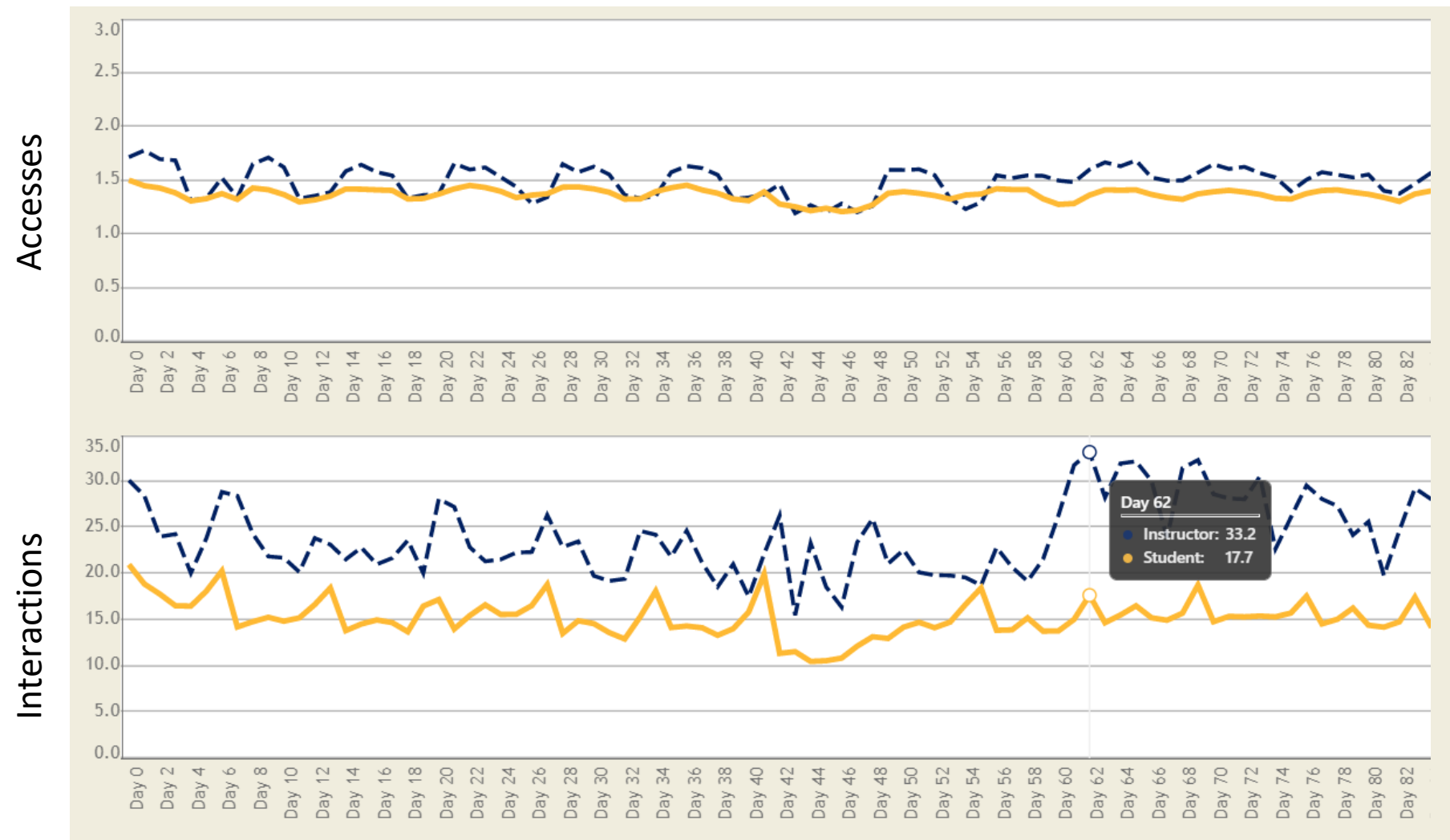
# Time of Day / Day of Week

When do we need IT Support?  
When should I offer office hours?



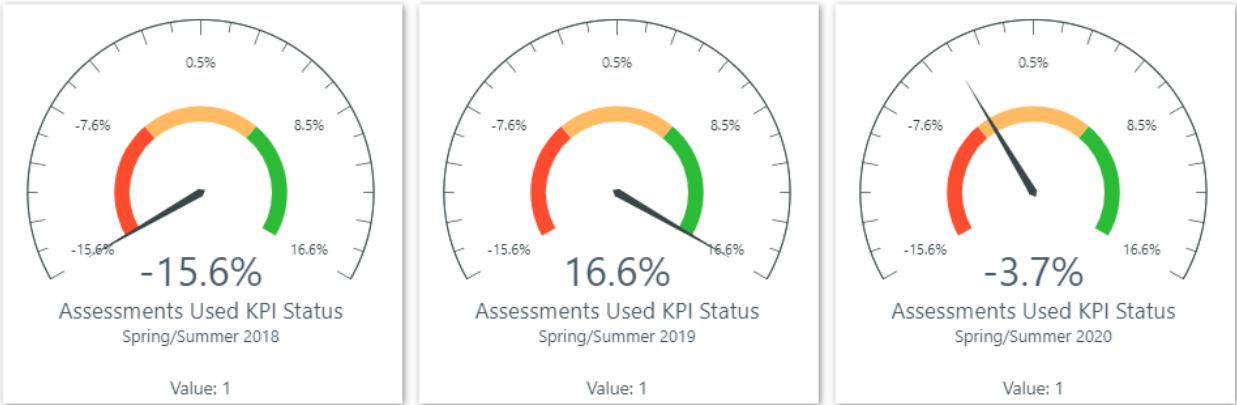


# Week by Week Activity



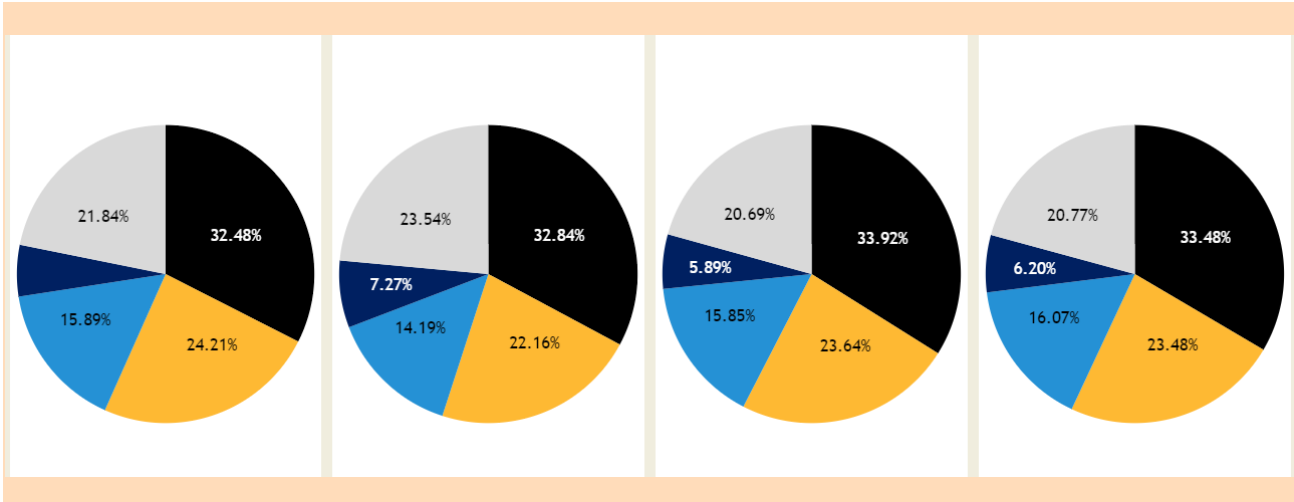
Instructor  
Student

# Item Usage / Tool Adoption



## Key Performance Indicator Item Usage

## Assessment Content Discussions Tool Video/URL



# At a Glance Reports



ITEM COUNT (SAME INSTRUCTION METHOD)			
ITEM	COURSE	DEPARTMENT AVG	% DIFFERENCE
Assessment	154	123.0	
Content	13	10.0	
Tool	80	29.0	

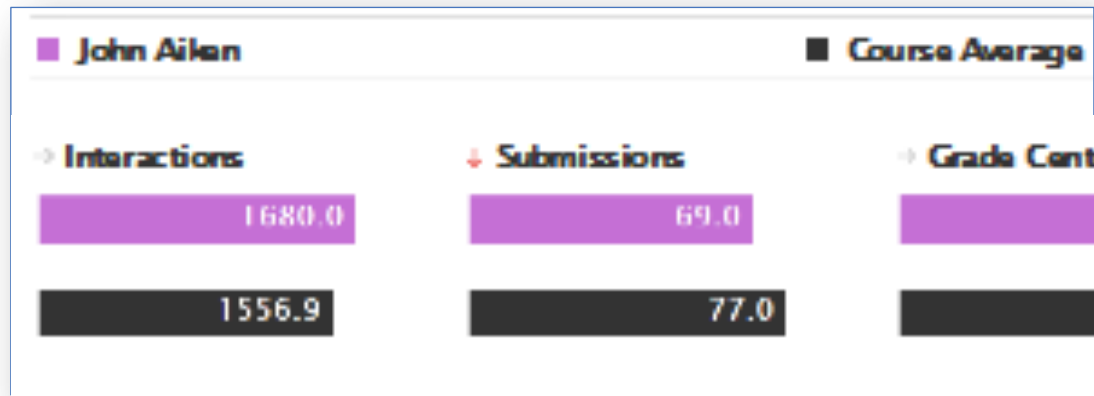
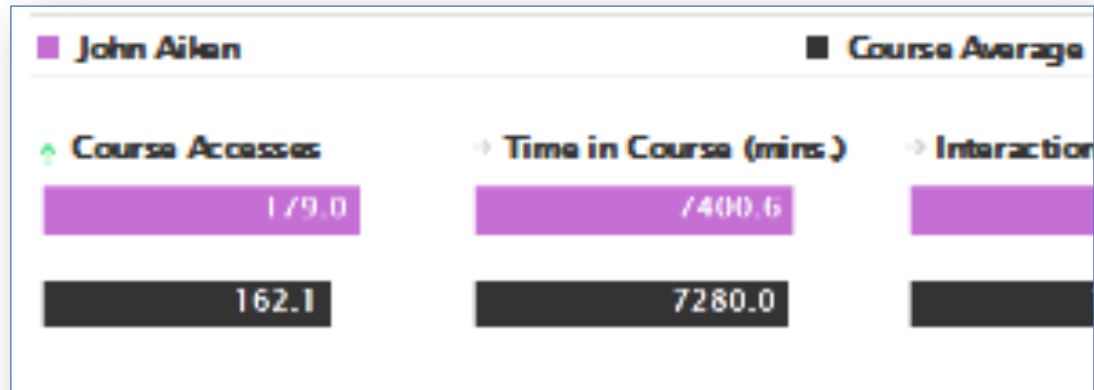
  

% OF ITEMS ACCESSED (SAME INSTRUCTION METHOD)			
ITEM	COURSE	DEPARTMENT AVG	% DIFFERENCE
Assessment	82.3%	39.6%	
Content	69.2%	61.6%	
Tool	0.0%	4.1%	

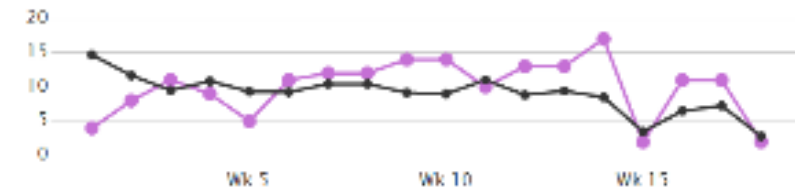
ACTIVITY (SAME INSTRUCTION METHOD)			
ITEM	COURSE AVG	DEPARTMENT AVG	% DIFFERENCE
Accesses	162	73.0	
Minutes	7,280	3,381.0	
Interactions	1,557	616.8	
Submissions	77	30.6	

-200%   -100%   0%   100%   200%

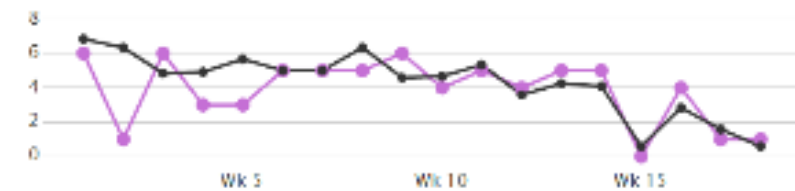
# At a Glance Reports



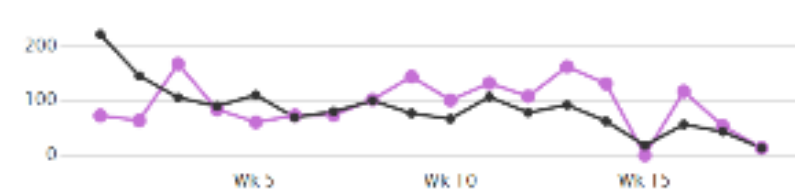
Accesses vs Course Average



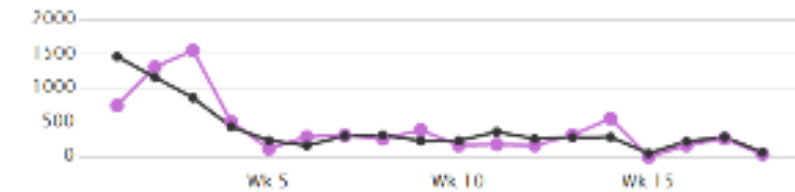
Submissions vs Course Average



Interactions vs Course Average



Time in Course vs Course Average





# Early Alerts & Predictive Analytics

Early-alert systems not only enhance communication between faculty, advisors, and students, but also interrupt disruptive behavior (Hudson, 2005)

Academic advisors contacted students who were reported as having excessive absences

Conversations **helped facilitate** students' **reentry** to class

Mitigated students' fear of stigmatization (Hudson, 2005)

Surprised students that 'someone cared' enough to reach out (p. 225)

“simply making students aware that they are at risk of not completing a course motivates them to seek help and change their academic behaviour”

- (Jayaprakash, Moody, Lauría, Regan, & Baron, 2014, p. 12)

## Now What?

For the next week, track the number of 'who' and 'how many' questions you ask

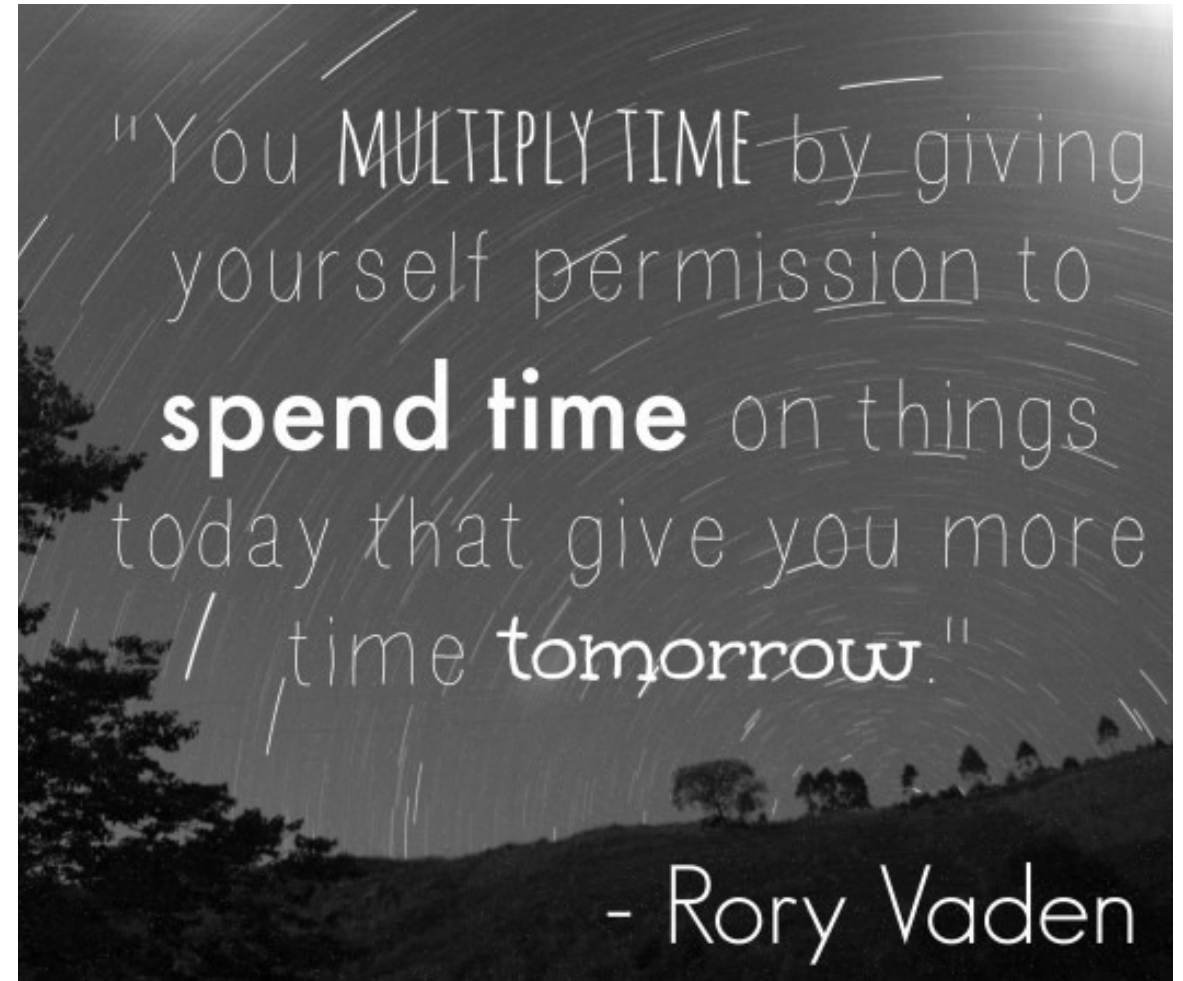
Write a list of the reports you need, that are either

- A: difficult to acquire
- B: time consuming to compile

consider the impact you could have on students with the time given back to you

- Data that are easier to access
- Reports that are current and on-demand

*What Can You Do Today – that will give you more time tomorrow?*



# Where to begin? What to know?



Data Warehouse = like a “pantry”  
Organized, Refined, Complex



Data Lake = Farmer’s Market  
High quality, ‘raw’ ingredients, flexibility



Data “Diet” - You can’t do a temporary data binge and expect lasting impact. It takes a ‘lifestyle’ change to shift your cultural towards data-informed decision making



If you need an in-house nutritionist/chef .

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