

1. How to Bolster Academic Integrity aka "Blackboard Ate My Homework"



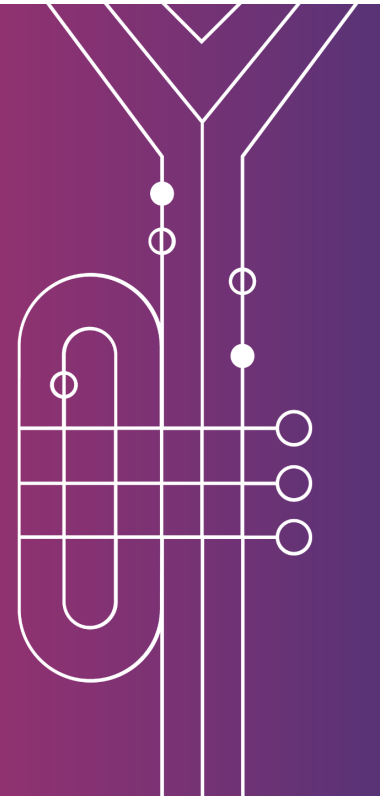
How to Bolster Academic Integrity aka "Blackboard Ate My Homework"

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- Students (and even instructors) report that Blackboard Learn "ate their homework".
- Students claim to have taken an assessment, submitted an assignment, written discussion posts, or other activities in the LMS.
- Some instructors believe them and give the student another chance to submit, but more believe that the student is trying to "pull a fast one", and want validation of the student's activity.
- Academic integrity monitors want reports (and often opinions)
- Using system logs and database queries, the system administrator can track user activity throughout the system and (in)validate claims.
- In this session, we will examine what tools are available, and see how they are used to verify activity.

Instructors have several tools within Blackboard Learn for tracking student activity and promoting academic integrity, including:

- Course Reports
- Test Access Logs
- Grade History
- Grade Details
- Submissions Receipts
- Respondus LockDown Browser/Monitor (or other Proctor Tools)

System Administrators have access to more resources, including:

- System Logs (Authentication, Tomcat Access, and Email are the primary ones)
- Database (Direct Data Access, DDA)
- Blackboard Data

2. Instructor Tools

There are several tools within Blackboard Learn courses that instructors can use to track student activity.

Original Experience Courses:

- Course Reports
- Test Access Logs
- Grade Details
- Assignment Submission Receipts
- Grade History
- Tests: Restrict Location
- Analytics for Learn [Licensed]

Ultra Experience Courses:

- Course Activity Report
- Student Activity (Test)
- Student Activity (Gradebook)
- Discussion Performance and Analytics

- Submission Receipts
- Progress Tracking
- Analytics for Learn [Licensed]

2A. Course Reports (Original)

Instructors can run several types of course reports to view information about course usage and activity. Instructors can view summaries of course usage such as which course areas are used most frequently and course access patterns for specific students.

Course Management Control Panel → Evaluation → Course Reports

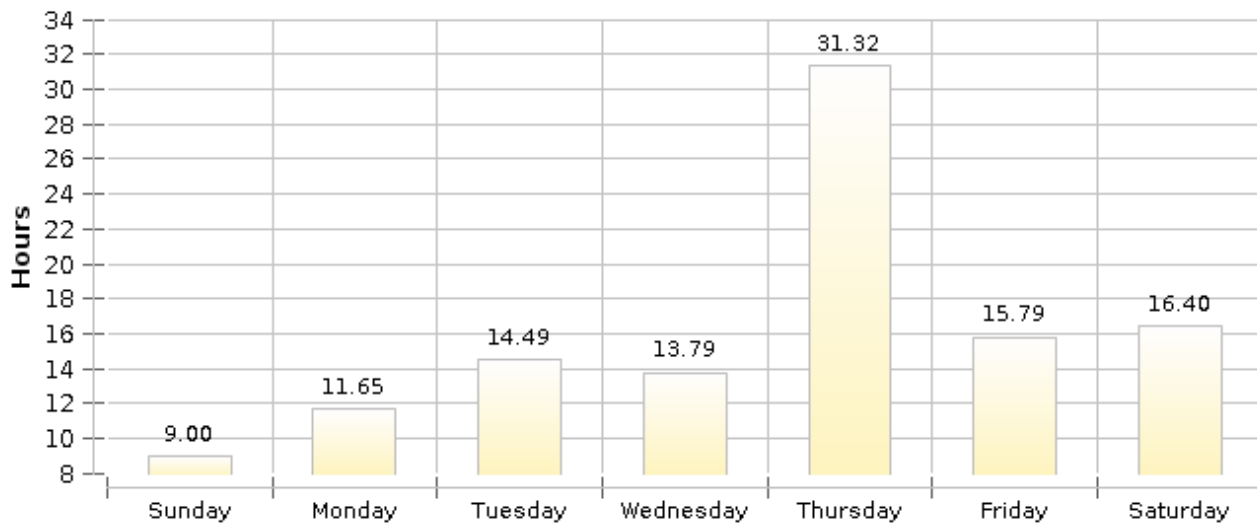
Reports available:

- All User Activity Inside Content Areas
- Course Activity Overview
- Course Coverage Reports
- Course Performance
- Overall Summary of User Activity
- Single Course User Participation Report (Microsoft Excel spreadsheet)
- User Activity in Forums
- User Activity in Groups

Descriptions of report summaries are available on the *Course Reports* page.

Student Overview for Single Course

Student Activity by Day



Student Time in Course	112:26:06 HH:MM:SS
Avg Time Per User	49:17:10 HH:MM:SS
Total Items	33
Total Logins	244
Last Login Date	5/15/23 02:56 PM


Student Activity by Item in the Course

Item Name And Type	Total Time (Hours)	Number of Accesses	Initial Access Date/Time
01.30.23 Video Recording of Lecture LTI Link	1.19	2	Feb 3, 2023, 8:33 AM
02.01.23 Video Recording of Lecture--worksheet on problems LTI Link	0.08	1	Feb 3, 2023, 11:20 AM
03.06.23 Unit 2B. Systematic Approach to Solving Chemical Equilibrium Problems Content Folder	0.00	1	Mar 10, 2023, 10:50 AM
03.06.23 Video Recording of Unit 2B Notes (slides 17-36) Systematic Approach to Solving Chemical Equilibrium Problems LTI Link	0.24	1	Mar 10, 2023, 10:50 AM
ALEKS Link McGraw Hill ALEKS	51.44	101	Jan 18, 2023, 4:14 PM
Achieve Link LTI Link	31.81	56	

2B. Test Access Logs (Original)

Instructors and other users who are granted permission can view a test attempt's *Access Log* for a list of times of various student interactions with the test. The log can help to confirm whether a

student began a test or ran into problems during a test. This is found within *Test Information* when viewing an assessment attempt.

 **Test Information**

Current Grade	76.00000 out of 100 points	
	Grade based on Highest Score	
Status	Completed	
Attempt Score	76 out of 100 points	
Time Elapsed	12 minutes	
Started Date	5/10/23 7:58 PM	Access Log
Submitted Date	5/10/23 8:11 PM	
Due Date	5/12/23 11:59 PM	
Clear Attempt	Clear Attempt	Click Clear Attempt to clear this user's attempt.
Edit Test	Edit Test	Click Edit Test to make changes.

The Access Log shows a detailed list of all the interactions a student had with the test for that attempt. The log shows the time the test was started, when each question was saved, and when it was submitted.

You might interpret an unusual gap in activity as a connectivity problem if the student claims to have had one. However, the system can't determine what caused the time gap. The system can only show that the time gap occurred.

Be aware that the time spent on a question may include the time that the student spent looking at other questions before saving that answer. (*Time Spent column shows the amount of time since the last 'event'.*)

If a test is displayed "All at Once", all questions are shown on the same screen. Students can browse and answer questions in any order. Even though a test can be randomized, the students can randomly choose which questions they answer, similar to a paper exam.

Saving Answers

There are several ways answers can be saved:

- When the student presses "Save Answer".
 - When the student marks a Multiple Choice / True False answer, an Auto-Save occurs. The auto-save happens every 10 seconds, while the question is being answered.
 - Essay and Short Answer questions are auto-saved every ten seconds, once typing begins, and continues as long as there is text entry.
 - When the student presses "Save All Answers".
-
- When "Save and Submit" is pressed.
 - When a test is set to Auto-Submit after a specified period of time.
 - When the test is submitted, Essay and Short Answer questions are re-saved.
 - If "Save and Submit" is pressed directly, the Access Log returns "Test Submitted" followed by "Saved question #" events.
 - If "Save All Answers" is pressed just before "Save and Submit", the Access Log returns "Saved question#" events followed by "Test Submitted".
-
- Un-answered questions are saved upon submitting the assessment, specifying that the answers were blank in the Access Log Access type column.
 - Multiple answer saves, especially for Essay and Short Answer questions will return an Access Log Access Type in the format: *Saved question # multiple times over a period of: ##:##.*
 - Questions with Multiple Answer questions will return an Access Log Access Type in the format: *Saved question # multiple times over a period of: ##:##.*

Creating this example, I marked and changed and saved the answer several times. This is reflected in the Test Access Log:

DATE AND TIME	ACCESS TYPE	TEST TIME	TIME SPENT*
6/4/20 2:00:03 PM	Test started	00:00	00:00
6/4/20 2:01:35 PM	Saved question 1 multiple times over a period of: 01:19	01:32	01:32

Upon submitting the test, the Essay and Short answer questions were re-saved:

6/4/20 6:28:13 PM	Saved question 9	04:06	00:10
6/4/20 6:28:16 PM	Saved question 3	04:09	00:02
6/4/20 6:28:16 PM	Saved question 4	04:09	00:00
6/4/20 6:28:16 PM	Saved question 5	04:09	00:00
6/4/20 6:28:16 PM	Saved question 7	04:09	00:00
6/4/20 6:28:16 PM	Saved question 8	04:09	00:00
6/4/20 6:28:23 PM	Test submitted	04:16	00:06
6/4/20 6:28:23 PM	Saved question 3	04:16	00:00
6/4/20 6:28:23 PM	Saved question 4	04:16	00:00
6/4/20 6:28:23 PM	Saved question 5	04:16	00:00
6/4/20 6:28:23 PM	Saved question 7	04:16	00:00
6/4/20 6:28:23 PM	Saved question 8	04:16	00:00

If some questions were not answered, it will save them upon Submit, specifying that they were blank:

6/4/20 2:02:30 PM	Test submitted	02:27	00:54
6/4/20 2:02:30 PM	Saved question 2 (Answer was blank)	02:27	00:00
6/4/20 2:02:30 PM	Saved question 3 (Answer was blank)	02:27	00:00
6/4/20 2:02:30 PM	Saved question 4 (Answer was blank)	02:27	00:00
6/4/20 2:02:30 PM	Saved question 5 (Answer was blank)	02:27	00:00

Notes:

- When Multiple Answer questions are in a Test, the Access Logs for individual attempts show ambiguous information. The Multiple Answer question as saved twice, and there is no indication of manual or auto save. (Saved question # multiple times over a period of: ##:##).
- When a test is auto-submitted, the students receive the following message: "Test time has ended. The system has saved and submitted your work."

- If a user accesses multiple instances of the same course from the same IP, (for example, opening multiple tabs of the same course), this is known to cause a conflict with the information streams for the platform, and if they are presenting multiple tests at the same time (doing other tests in the course at the same time), the platform will lock the user's session. This is an intended behavior in the platform precisely to prevent conflicting data and a user being able to, for example, open a lesson and the exam for the same lesson at the same time.

2C. Grade Details (Original)


On the *Grade Details* page, you can view a student's attempts and grade history, assign and edit a grade, and clear and exempt grades.

This is found in the Grade Center → Assignment or Assessment submission → View Grade Details

View Grade Details

Exempt Grade

Attempt 11/14/22  

Attempt 3/11/23 

Current Grade:**12.00** out of 36 points Exempt

Grade based on Last Graded Attempt

Due: None

Calculated Grade 12.00

[View Attempts](#)**Attempts**[Manual Override](#)[Column Details](#)[Grade History](#)Delete Last Attempt Go

Date Created	Date Submitted (or Saved)	Value	Feedback to Learner	Grading Notes	Actions
Mar 11, 2019 2:57:55 PM	Mar 11, 2019 2:57:55 PM (Needs Grading)				Grade Attempt Clear Attempt Ignore Attempt Edit Grade
Feb 11, 2019 1:08:12 PM	Feb 11, 2019 1:08:12 PM (Needs Grading)	- Attempt Ignored			Grade Attempt Clear Attempt Do Not Ignore Attempt Edit Grade
			not your work!		
Dec 25, 2018 6:51:13 AM	Dec 25, 2018 6:51:13 AM (Completed)	12.00		BITS Learn Help Resources 2018Jan25.docx	Grade Attempt Clear Attempt Ignore Attempt Edit Grade

[Attempts](#)[Manual Override](#)[Column Details](#)**Grade History**

Date	Last Edited by	Value	Comments
Mar 19, 2019 11:33:42 AM	Blackboard Administrator		Attempt marked as Ignored
Mar 11, 2019 2:57:55 PM	Chris Student		Attempt submitted (needs grading).

[View Complete History](#)

Attempts	Manual Override	Column Details	Grade History
Date	Last Edited by	Value	Comments
Mar 19, 2019 11:33:42 AM	Blackboard Administrator	Attempt marked as Ignored	
Mar 11, 2019 2:57:55 PM	Chris Student	Attempt submitted (needs grading).	
Feb 11, 2019 1:08:12 PM	Chris Student	Attempt submitted (needs grading).	
Dec 25, 2018 6:56:10 AM	Blackboard Administrator	Attempt Grade 12.00	Feedback to Learner not your work! BITS Learn Help Resources 2018Jan25.docx
Dec 25, 2018 6:54:52 AM	Blackboard Administrator	Attempt Grade 12.00	Feedback to Learner not your work! BITS Learn Help Resources 2018Jan25.docx
Dec 25, 2018 6:51:14 AM	Chris Student	Attempt submitted (needs grading).	

Hide Complete History

"No Grade History information is available" = no attempt.

Grade Details

User [redacted] < > Column **Test 1 (Test)** < >

Current Grade:

- out of 10 points Exempt

Grade based on Last Graded Attempt

Due: None

[Attempts](#)

[Manual Override](#)

[Column Details](#)

Grade History

No Grade History information is available.

Grading Recommendations:

- **Ignore Attempt** or **Allow Additional Attempt** instead of *Clear Attempt* for Assignments.
- Do not choose *Clear Attempts for All Users* for Assignments unless you really really mean it.
- **Ignore Attempt** instead of *Clear Attempt* for Assessments.
- Do not choose *Clear Attempts for All Users* for Assessments unless you really really mean it.
- Do not clear attempts.
- If a student does not submit an assignment or test, enter a ZERO for the grade. Otherwise, they might not see it in *My Grades*.


2D. Submission Receipts (Original)

When students submit assignments successfully, the *Review Submission History* page appears with information about their submitted assignments and a success message with a confirmation number. Students can copy and save this number as proof of their submissions and evidence for

academic disputes. For assignments with multiple attempts, students receive a different number for each submission.

Success! Your submission appears on this page. The submission confirmation number is 3c78-434b-9da8-43325f52. Copy and save this number as proof of your submission.

Review Submission History: Week 1 Study Guide Questions

<u>Assignment Instructions</u> ^	Assignment Details v
Add two potential questions that could appear on the Week 1 test. Include the answers. I will compile all submissions for the class to use as a study guide. You're allowed one attempt.	GRADE LAST GRADED ATTEMPT
	ATTEMPT 9/14/16 4:52 PM
	Submission  study_guide_pdurand.c

Students will also receive an email with a confirmation number and other details for each submission.

Your work was received!

You successfully submitted your coursework. Each time you submit coursework, you receive a unique confirmation ID to verify when your submission was received. You can view your submission on your My Grades page.

Submission details:

Submission confirmation ID: 8cd454fb1f904de0ba5f9841b745c57e

Title of course: cbray's messy box (sandbox-cbray-3900_46)

Course ID: sandbox-cbray-3900_46

Title of coursework: Written Assignment

Date/time of submission: Jul 11, 2023 3:13 PM

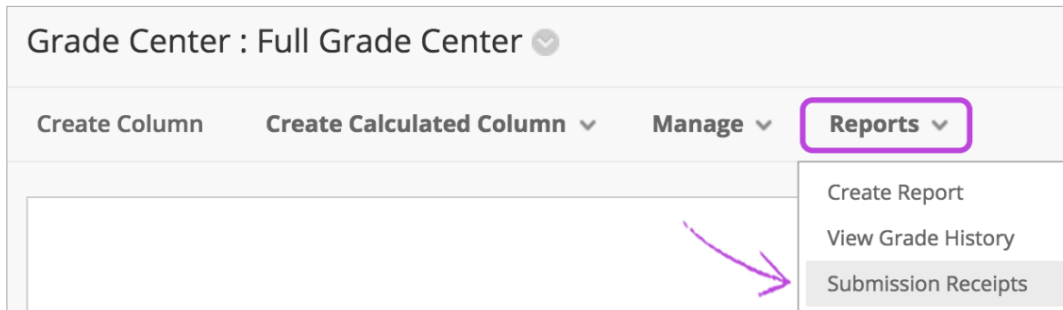
Size of written submission: 9bytes

Size and name of files received:

Unique Item ID (for administrator use only): _6820961_1

Instructors and administrators have a retrievable record in the system even if an attempt, assignment, or student is later deleted from the course. These records are maintained in the course and also retrievable after the archive and restore process.

You can access all of your students' confirmation numbers from the Grade Center. Access the *Reports* menu and select *Submission Receipts*.



On the *Submission Receipts* page, you can view information for each assignment, such as who submitted and when. Group assignments are also logged and the *Submitter* column lists who submitted for the group. In the *Submission* column, view if a student submitted a file or wrote the submission in the assignment's editor.

Submission Receipts						
User Name <input type="text"/> Not blank <input type="text"/>				Go	Options <input type="text" value="User Information"/>	
CONFIRMATION NUMBER	STUDENT	SUBMITTER	COURSEWORK	DATE	SUBMISSION	SIZE
9e710457-8d9f-4bdd-b553-7aa3703813e9	Alyssa Dubois	Alyssa Dubois	Week 1 Study Guide Questions	Sep 14, 2016 7:19 PM	study_guide_adubois.doc	29.5kb
41ab7c64-aa91-4879-8711-ba4a8ae8fcf2	Juan Hernandez	Juan Hernandez	Week 1 Study Guide Questions	Sep 14, 2016 6:21 PM	Written submission	0.8kb
21a25e5e-c1e6-46e1-ac66-01a2a1ed1697	Bruce Lopez	Chris Casper	Group Outline	Sep 14, 2016 8:46 PM	grp_outline_casper.docx	113.8kb
21a25e5e-c1e6-46e1-ac66-01a2a1ed1697	Chris Casper	Chris Casper	Group Outline	Sep 14, 2016 8:46 PM	grp_outline_casper.docx	113.8kb
21a25e5e-c1e6-46e1-ac66-01a2a1ed1697	Sarah Spooner	Chris Casper	Group Outline	Sep 14, 2016 8:46 PM	grp_outline_casper.docx	113.8kb

2E. Grade History (Original)

On the *Grade History* page, you can view all grade actions within a course and export the information. You can view all the data for grade submissions for the course within a set date range.

Access the *Grade History* page from the *Reports* menu in the Grade Center.

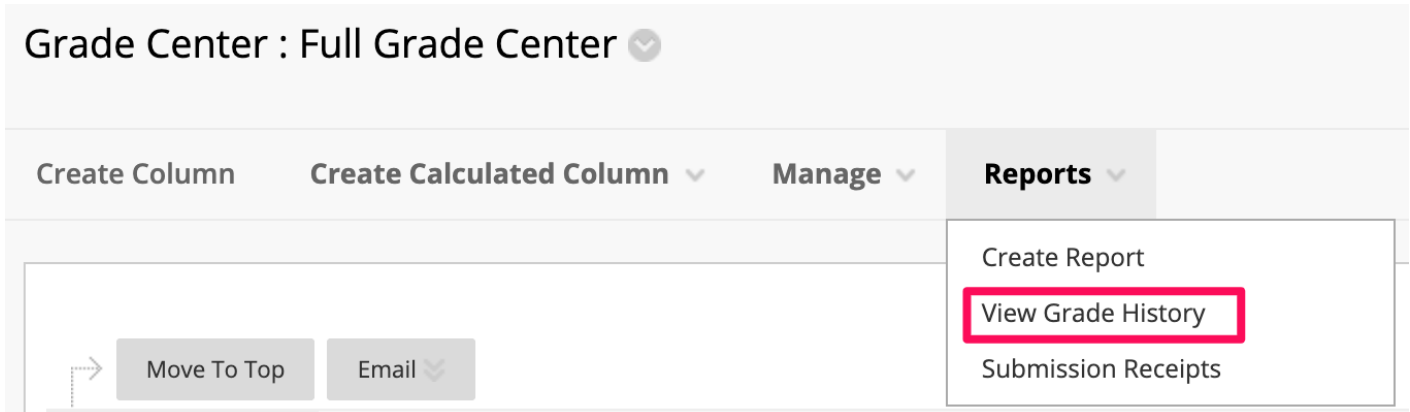
The Grade History is useful to determine:

Who did what to a gradable item or column in the Grade Center

- Did a Student attempt an assessment?
- Did an Instructor (or Teaching Assistant or Grader) clear attempts?
- Did an Instructor (or Teaching Assistant or Grader) change a grade?

You can download the grade history to your computer as a comma or tab delimited file. The file contains more details including the IP address where the item was graded or submitted, Submission Attempt Number, Submission Receipt Number, and Formative Indicator (an Ultra function, confusing!).

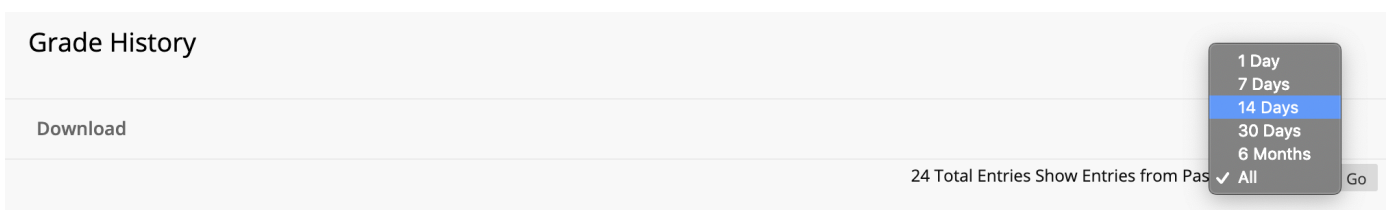
Grade Center → Reports → View Grade History



The screenshot shows the 'Grade Center : Full Grade Center' header. Below the header is a navigation bar with buttons for 'Create Column', 'Create Calculated Column', 'Manage', and 'Reports'. The 'Reports' dropdown menu is open, showing options: 'Create Report', 'View Grade History' (highlighted with a red box), and 'Submission Receipts'. Below the navigation bar, there are 'Move To Top' and 'Email' buttons.

You can filter the data on the *Grade History* page and display entries within a date range.

Access the *Show Entries from Past* menu, select a range, and select Go.



The screenshot shows the 'Grade History' page. At the top left is the title 'Grade History'. Below it is a 'Download' button. On the right side, there is a dropdown menu for filtering entries by date range. The menu is open, showing options: '1 Day', '7 Days', '14 Days' (highlighted in blue), '30 Days', '6 Months', and 'All'. Below the menu, the text '24 Total Entries Show Entries from Past' is visible, followed by a 'Go' button.

In two situations, you may see Blackboard Administrator listed in the Last Edited By column:

- A student started a timed test set to auto-submit but left the test. The system auto-submits the test when the time is up.
- A student was removed from your course and an item's attempt grade was then cleared.

DATE	COLUMN	LAST EDITED BY	USER	VALUE	ATEMPT SUBMITTED
Nov 26, 2018 3:49:56 PM	Terminology Test	Blackboard Administrator	Mei Wong	Attempt submitted (needs grading).	Nov 26, 2018 3:44:56 PM
Nov 22, 2018 1:15:19 PM	Week 2 Test - History of Ocean Science	Blackboard Administrator	Ellie Walker	Attempt Grade Cleared	Oct 30, 2018 7:46:50 AM

Sample downloaded Grade History

Date	Column	Grade Category	Last Edited by: Name	Last Edited by: Username	Last Edited by: Role	Last Edited by: IP Address	User	Username	Submission Attempt Number	Submission Receipt Number	Type	Value	Attempt Activity	Event	Formative Indicator
5/7/23 21:13	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	10	5/7/23 21:12	Attempt Grade	
5/7/23 20:08	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	8	5/7/23 20:04	Attempt Grade	
5/7/23 19:43	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/7/23 19:29	Attempt Grade	
5/7/23 18:28	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	abi15a547d8c347e083cebf669b2fafe	Grade		5/7/23 18:28	Attempt submitted (needs grading).	
5/7/23 17:37	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	10	5/7/23 17:36	Attempt Grade	
5/7/23 16:09	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	10	5/7/23 16:07	Attempt Grade	
5/7/23 16:01	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/7/23 15:54	Attempt Grade	
5/7/23 1:55	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/7/23 1:52	Attempt Grade	
5/6/23 23:38	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	8	5/6/23 23:31	Attempt Grade	
5/6/23 21:09	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/6/23 20:58	Attempt Grade	
5/6/23 20:57	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/6/23 20:49	Attempt Grade	
5/6/23 15:58	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	10	5/6/23 15:53	Attempt Grade	
5/6/23 15:18	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	10	5/6/23 15:13	Attempt Grade	
5/6/23 1:08	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	8	5/6/23 1:04	Attempt Grade	
5/6/23 0:52	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/6/23 0:01	Attempt Grade	
5/6/23 0:05	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	3f8b1c6f29d464a8a321b2a1ad7e42f	Grade		5/6/23 0:05	Attempt submitted (needs grading).	
5/5/23 23:58	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	7d243454e6f4f0a5949a931400370	Grade		5/5/23 23:58	Attempt submitted (needs grading).	
5/5/23 23:56	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	57363468f356431f952802406365479	Grade		5/5/23 23:56	Attempt submitted (needs grading).	
5/5/23 23:54	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	3	9988494ae5a343658f2aadf109747088	Grade		5/5/23 23:48	Attempt submitted (needs grading).	
5/5/23 23:49	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	2	e21bc72466c47e9e4133e13a8a9605	Grade		5/5/23 23:48	Attempt submitted (needs grading).	
5/5/23 23:40	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	34e982a8f29849e80be7294713b9b1d	Grade		5/5/23 23:40	Attempt submitted (needs grading).	
5/5/23 23:37	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	b8221e39f74417803232920679e	Grade		5/5/23 23:37	Attempt submitted (needs grading).	
5/5/23 23:32	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	b511eed253444a2900749596305a406	Grade		5/5/23 23:32	Attempt submitted (needs grading).	
5/5/23 20:52	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	1354596da130445ea7b5ba4980a4c9c1	Grade		5/5/23 20:52	Attempt submitted (needs grading).	
5/5/23 18:30	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	4328e980637e4350bbe1b1e150bd3ab8	Grade		5/5/23 18:30	Attempt submitted (needs grading).	
5/5/23 18:18	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	dfdc2db405dc46bd9d09f8335c0dbab	Grade		5/5/23 18:18	Attempt submitted (needs grading).	
5/5/23 17:58	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	e550664a0bf94bf3b0b89658095dfa8	Grade		5/5/23 17:58	Attempt submitted (needs grading).	
5/5/23 17:14	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/5/23 17:08	Attempt Grade	
5/5/23 17:02	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	10	5/5/23 16:58	Attempt Grade	
5/5/23 16:52	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	9c6db7abeac045879fc9a6cd1ee37d	Grade		5/5/23 16:52	Attempt submitted (needs grading).	
5/5/23 15:17	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/4/23 16:32	Attempt Grade	
5/5/23 15:09	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	10	5/5/23 14:56	Attempt Grade	
5/5/23 15:00	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/5/23 14:49	Attempt Grade	
5/5/23 14:21	Midterm #2	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade		5/5/23 13:19	Attempt submitted (needs grading).	
5/5/23 13:33	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	516b401006c845cda5ec8bd1107395c	Grade		5/5/23 13:33	Attempt submitted (needs grading).	
5/5/23 12:10	Paper #3	Assignment	redacted name	redacted username	S	redacted IP	redacted name	redacted username	1	4a8432b2c6e64181bdad199aa59b7002	Grade		5/5/23 12:10	Attempt submitted (needs grading).	
5/5/23 10:26	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/5/23 10:23	Attempt Grade	
5/4/23 20:38	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/4/23 20:32	Attempt Grade	
5/4/23 19:23	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	10	5/4/23 19:13	Attempt Grade	
5/4/23 18:43	Week #15 quiz	Test	redacted name	redacted username	S	redacted IP	redacted name	redacted username			Grade	9	5/4/23 18:36	Attempt Grade	

2F. Test IP Filter (Original)

High-stakes tests are often delivered to students in proctored lab environments to ensure that students can be identified and monitored while taking a test. However, if the Blackboard Learn test can be accessed from any location during the testing window, students could conspire to take a test from a different location or have someone else take the test from another location on their behalf, compromising the security of the testing environment.

IP addresses identify specific ISPs and locations and are a good method to enforce these location-restriction requirements described. You can specify the locations and IP addresses students can use to access tests in Blackboard Learn. Instructors can then enforce the location restriction for a given assessment.

Administrator Panel --> Course Settings --> Grading Security Settings

I worked with my networking team to get the list of IP addresses used in our VPN NAT range, to exclude them.

IP Filter Rules:

```
BLOCK *
ALLOW 130.184.*
BLOCK 130.184.0.128/130.184.0.255
BLOCK 130.184.252.117/130.184.252.119
BLOCK 130.184.252.112/130.184.252.116
```

Student Help Text:

You must take this test using a device on the University of Arkansas network. Network connections using GlobalProtect, the campus VPN, are blocked.

You will not be able to take this test while using the campus, or a personal, VPN.

In Test Options, Instructors can select the Restriction Location. I have additional notes for instructors delivered via the JavaScript Hack Building Block (shown in red).

You can require students to take a test or survey in a specific location. Students outside of this location aren't able to take the test or survey. The default value is 'No restrictions'. Choose 'UA Campus Network' to require students to be logged in from the campus network IP range (130.184.**).

Note: If students are on-campus and are not allowed to take a test, please have them verify that their device is not connected to the campus VPN (GlobalProtect) or they are not using a personal VPN.

Restrict Location

✓ No restrictions

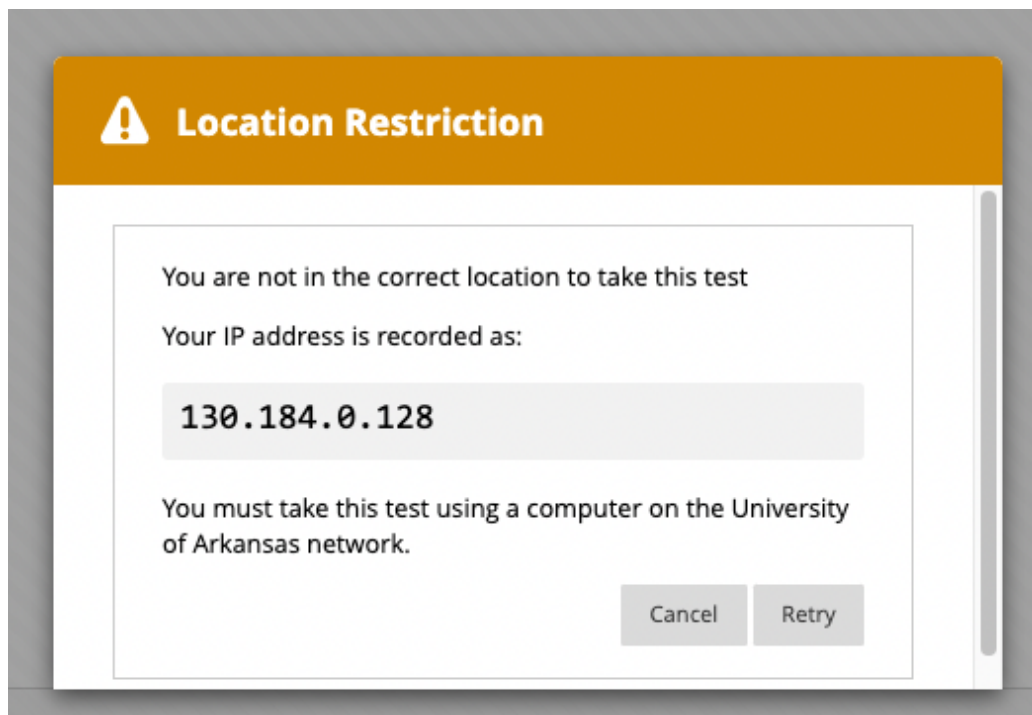
UA Campus Network

from a specific location (range of IP addresses).

You can require students to take a test or survey in a specific location. Students outside of this location aren't able to take the test or survey. The default value is 'No restrictions'. Choose 'UA Campus Network' to require students to be logged in from the campus network IP range (130.184.*.*).

Note: If students are on-campus and are not allowed to take a test, please have them verify that their device is not connected to the campus VPN (GlobalProtect) or they are not using a personal VPN.

If a student tries to take a test with IP Restriction from a different IP, they'll get a warning:



3A. Course Activity Report (Ultra)

The *Course Activity* report, helps you understand how well your students are performing and how much they are interacting with your course. All roles with the privilege to view grades can access the *Course Activity* report. Turn on the *Overall Grade* feature to enhance your experience with the *Course Activity* report. You can:

- Identify struggling students based on their overall grade, the number of hours they spend in your course, and the number of days since their last access
- Message students who are falling behind and encourage them to increase their course activity
- Congratulate students performing well in your course and ask them to be mentors
- Customize your activity stream alerts for when a student's overall grade drops below a specific value or a student hasn't accessed the course for a certain number of days
- Notify students based on course alerts when the days since their last access or their grade in the course is below expected

- Download the table view to a CSV (comma-separated values) file to analyze the data with other tools
- Download the scatter plot as a PDF or image to share information with other instructors or mentors of the course

Select *Course Activity* in the course's *Analytics* tab.

Content Calendar Discussions Gradebook Messages **Analytics** Student Preview

Course Activity Question Analysis SCORM Reports

This report shows student performance and activity in your course. Alert Settings
 Overall grade and hours in course updates every 24 hours. [Learn more](#)




Send message Download

2 students selected




<input type="checkbox"/>	Student ↕	Overall Grade ↓	Hours in Course ↕	Days of Inactivity ↕
<input checked="" type="checkbox"/>	Carly Carla Muller she/her	80%	1.47	35
<input checked="" type="checkbox"/>	Luke Lucas White L o o k u h s he/him ID 462484	80%	9.52	1
<input type="checkbox"/>	Cami Camila Rodriguez kə mi lə - ro ðri ʒes they/them	70%	3.15	2
<input type="checkbox"/>	Malika Farsi ID 725482	40%	0	188

Select a student on the table to bring up the *Student Overview* to check the student's additional information, grades, progress, and more.

Biology



  **Cami | Camila Rodriguez** 

Current Grade **70%**

Last access: 3/14/23, 10:05 AM  Student Activity  Accommodations  Send Message

Username: std9
Pronouns: they/them | Pronounce as: kə mi lə - ro ðri yəs

Grades Progress

Item Name	Due Date	Status	Grade	Feedback
 Discussion: What Could Happen if Dinosaurs Never Went Extinct? First participated on 8/1/22		Completed	35 / 50	...
 Quiz: Genetics and Evolution	12/15/22	Completed	45 / 50	...

3B. Student Activity (Ultra Tests)

As an instructor, you can see when your students opened, started, and submitted tests and assignments with the Student Activity report.


Access *Student Activity* data from the *Course Content* page. Access an assessment's menu and select *Student Activity*. A panel with student activity information opens.

 **Test: Hummingbird trivia**
Due date: 10/28/20, 1:00 PM | Time limit: 10 minutes

 Visible to students

Hummingbirds are amazing creatures, beloved by gardeners and bird watchers just as astonishing as the myths, confirming these tiny birds truly deserve knowledge on them:

↑↓ ...

-  Edit
-  Conversation
-  Student Activity
-  Question Analysis
-  Delete

 **Assign w Essay**
Due date: 10/28/20, 1:30 PM

 Visible to students

The *Student Activity Overview* provides aggregate information about your students' performance on the assessment, such as the number who reviewed instructor feedback.

The top of the page shows you an overview of information, including the course average submission time, time to open, time before due date, and submission activity for all students. The *Grade Distribution* shows the grades you've assigned to students.

Student Activity Overview

Submission time

11 min

Course average

Time to open

--

Course average

Time before due date

19 hours

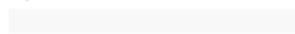
Course average

Submission Activity

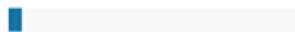
Unopened **14**



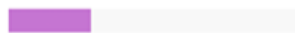
Opened **0**



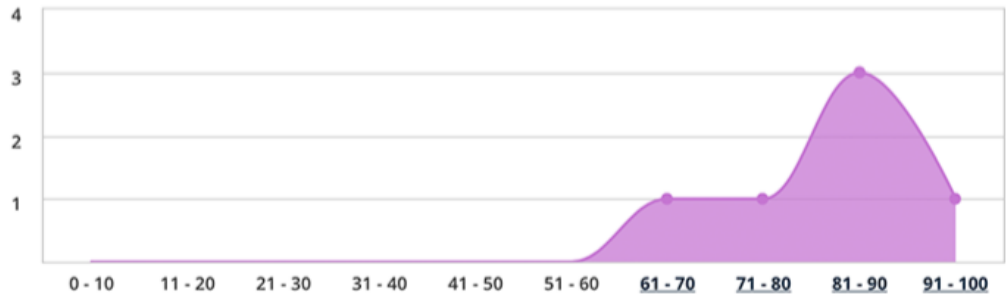
Drafts Started **1**



Submitted **6**



Grade Distribution



Student Activity Details






Student	Activity Timeline	Start to Finish	Grade
Oliver Albe No submission		None	-- / 100
Hunter Brown Submitted: 5/10/18		5 minutes	76 / 100
Duncan Carroll No submission		None	-- / 100
Chris Casper Submitted: 5/10/18		5 minutes	92 / 100
Emily Churchill Submitted: 5/11/18		9 minutes	85 / 100
Ashby Cooper Submitted: 5/11/18		38 minutes	90 / 100

The report provides you with analytics for your students' performance in your course. You can view a student's hours in course and changes in overall grade from week to week. The report makes it easy to see when a student's hours in course drops or if a student begins to earn lower grades. You can use the report to guide and inform your instruction in many ways.




- Identify struggling students, students who are improving over time, or students whose grades start trending downwards
- Message students who are falling behind with encouragement and advice
- Congratulate students performing well in your course and ask them to be mentors
- Set up an appointment with all students in the course to follow-up on strategies to improve student performance and activity
- Download the report's table view as a CSV (comma-separated values) file to analyze the data with other tools
- Download the report's line chart as a PDF or image to share information with other instructors or mentors of the course

Select the *Student Activity* icon in the *Student Overview* to access the report.


Biology

  **Luke | Lucas White** 

Current Grade --

Last access: 3/27/23, 2:32 PM  Student Activity  Accommodations  Send Message

Username: std1 ID: 462484

Pronouns: he/him | Pronounce as: L oo k uh s 



Grades Progress


Biology

Luke | Lucas White's Details



Luke | Lucas White's Course activity per week (hours in course)

 Download

Date	Average hours in course	Range of average hours	Activity hours
7/19/21	0	0 - 0	0
7/26/21	0	0 - 0	0
8/2/21	0	0 - 0	0
8/9/21	0	0 - 0	0
8/16/21	0	0 - 0	0

The table view of the *Student Activity Details* report has four columns: *Date*, *Average hours in course*, *Range of average hours*, and *Activity hours*. Data is presented in rows organized by week. Each week begins on Monday. The current week's information is updated every 24 hours in the early morning.

- *Average hours in course* are the average hours in a course spent by all students per week.
- *Range of average hours* are the average hours in a course spent by all students per week, plus or minus the standard deviation.
- *Activity hours* are the hours in a course accumulated by a student per week. Hours in course are counted from the time students select something within the course to when students select something outside the course. If a student is logged out from their course session for inactivity, only the time before their last action within the course is counted.
- Select the *Download* button to download the table as a CSV (comma-separated values) file.

Overall Grade



Date	Average grade in course	Range of average grade	Overall Grade
8/1/22	57.5%	9.47% - 105.53%	90%
8/8/22	57.5%	9.47% - 105.53%	90%
8/15/22	55.57%	8.95% - 102.19%	90.9%
8/22/22	55.57%	8.95% - 102.19%	90.9%
8/29/22	34.46%	2.11% - 66.82%	47.61%

3D. Discussion Performance and Analytics (Ultra)

Discussion analytics provide you with insights to forum participants and activity. This information can help you identify students who are participating or may need help and encouragement. You can access discussion analytics from the *Discussions* or *Course Content* pages.


1. Open the menu next to a discussion and select *View Analytics*.
2. View information about the discussion:
 - *Active students*
 - *Average posts per student*
 - *Average word count*
 - *Average discussion grade*
 - *Participation*
 - *Students who haven't participated*
 - *Responses with the most replies*
 - *Top participants*

From the *Discussion Analytics* page, you can take a closer look at individual discussion posts and participation.


Active students 18 of 22	Average posts per student 2.67	Average word count 64.35	Average discussion grade N/A
-----------------------------	-----------------------------------	-----------------------------	---------------------------------

81% participation 81% opened discussion


Students who haven't participated ...




Zoe
Spooner



Oliver
Albe




Monica
Gonzales



Andy
Farrell


Displaying 4 of 4

Responses with the most replies



"<https://www.youtube.com/watch?v=YQNBSPY4QUc> This clip contains ex..."
By Chris Casper | 8 Replies

Top participants



Chris Casper
🗨️ 3 📄 5

From a discussion's *Grade & Participation* page, select a student to view responses, replies, and analysis.

Discussion Analysis



as of 8/8/19, 8:29 AM



Substantive Posts

Class Average: 1

1 of 4

Sentence Complexity

7th grade

Class Average: 7th grade

Lexical Variation

8 **Content Words**
cellular, building, etc.

17 **Functional Words**
to, be, are, is, etc.

Critical Thinking Level

36.84%

Class Average: 41%



■ Student

■ Class Average

Word Variation

45.16%

Class Average: 41%



■ Student

■ Class Average

Discussion Details	Student's Participation	Class Average
Responses	3	2
Replies	7	1.5
Average Word Count	7.75	7.14

3E. Submissions Receipts (Ultra)


When a student submits an assignment or test, they receive a submission receipt in the form of a modal window with a submission confirmation number. Students can download a copy of the receipt directly from the modal. They also receive a copy of their submission receipt via an automatic email confirmation. Students are encouraged to save their submission receipts should they ever need to prove that they have submitted their work.

You can look up and view the receipt confirmation number for each attempt a student makes.

Receipts display the following information:

- Assessment name.
- Assessment grade.
- Number of attempts for an assessment.
- The student who submitted the assessment.
- Size of any file included with the submission, which gives you an idea of what a student has attached.
- Submission date and time stamp.

Your submission was successful! ✕



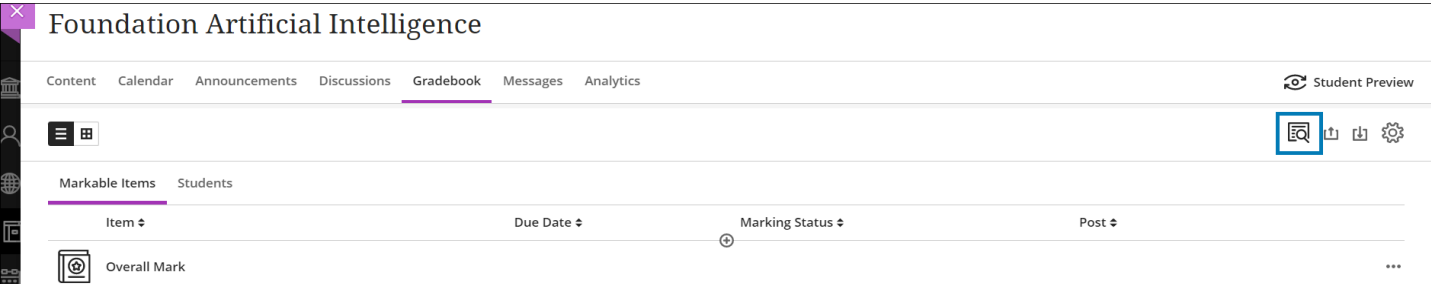
Submission date:
6/13/23, 5:55 PM

Confirmation number:
4b921ca425b142218dd4aa76288a7554

You'll receive an email confirmation shortly.
You can also download your submission receipt (.txt).

Close Download

To find a submission with the receipt number in the gradebook, select the *Search by submission receipt number* icon at the top right corner of the Gradebook.



Foundation Artificial Intelligence

Content Calendar Announcements Discussions **Gradebook** Messages Analytics Student Preview

Markable Items **Students**

Item Due Date Marking Status Post

Overall Mark

In the receipt search panel, type the submission receipt number provided to you by the student to look up the corresponding submission.

If a submission is found, you can select the information to go to the grading page for the submission. The receipt number is also displayed on the grading page.

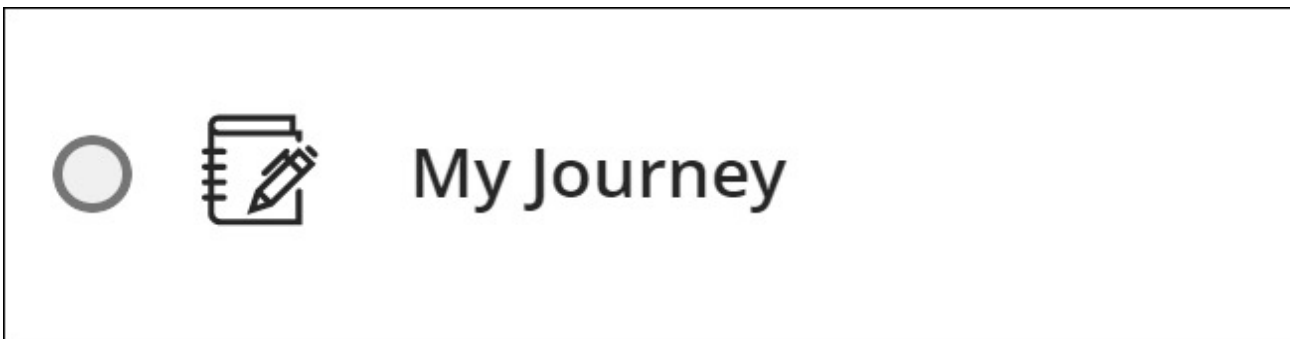
If no submission is found, you will see the message "Sorry! No submission receipt was found for that number. Check the receipt number and try again."

3F. Progress Tracking (Ultra)

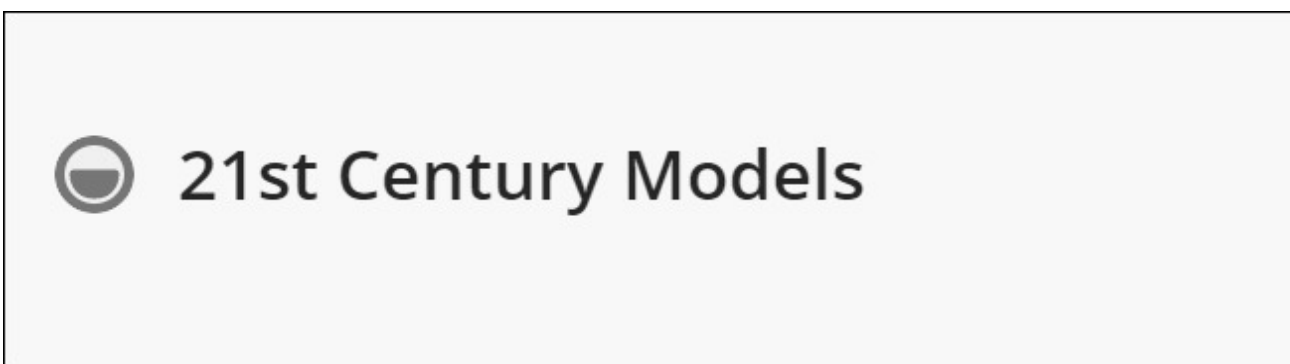
You can turn on this function to give your students an easy way to keep track of what they've done in your course. You can turn progress tracking on at any time. If you turn on progress tracking after the beginning of the course, participatory items are retroactively marked as complete. For example, assessments previously submitted by students are marked as complete. Non-participatory items, such as Ultra Documents, will still need to be manually marked by students.

Once on, your students will now see their progress in the course. All content displays an icon showing a student's progress. When all content in a folder or module has been completed, the entire folder is automatically marked as complete.

Before a student has accessed content, the *Progress* icon is an empty circle:



After a student has accessed content, the *Progress* icon is a half-filled circle:







If a student has marked content as complete, the *Progress* icon is a green checkmark:




The Agrarian Revolution

The *Student Progress* tab helps you track individual student progress in a course. You can see completed and uncompleted tasks for each student. You can access the tab by selecting *Progress* in a student's overview.






 **Zeen | Farzeen Muhammad** Current Grade **103 / 150**

Last access: 3/14/23, 1:08 PM  Student Activity  Accommodations  Send Message

Username: farzeen
Pronouns: they/them/their | Pronounce as: 

Grades **Progress**

Content availability
Visible to students ▼




Item name	Status
  My Journey	Unopened
  The Agrarian Revolution	Completed 3/3/23, 3:44 PM
 21st Century Models	Started 3/9/23, 12:05 PM ▼

Student Progress Report for course content

21st Century Models - Student progress

Progress Summary



<input type="checkbox"/>	Student Name ↑	Progress Status ↕
<input type="checkbox"/>	 Meg Bear any pronouns	Unopened
<input type="checkbox"/>	 April Flores	Started 3/14/23, 1:34 PM
<input type="checkbox"/>	 Joyce Lo she/her/hers	Completed 3/14/23, 1:42 PM

3G. Analytics for Learn (Original & Ultra)

Analytics for Learn is an optional service that allows you to run different reports for your courses that keep track of how your students are performing. Analytics for Learn extracts data from Blackboard Learn, transforms it, and brings it into an analytics framework where it's combined with data from your institution's SIS system.

Analytics for Learn provides these reports:

- **Course at-a-Glance:** Interactions, submissions, and time in course compared to similar courses in your department.
- **Activity and Grade Scatter Plot:** A scatter plot of your course activity and your grades in the course.
- **Activity Matrix:** This report compares each student's number of submissions to the average across all students in that course. The report includes a graph of submission trends over the entire term, number of submissions, the average number of submissions in the course, days since the student's last submission, and last submission type.
- **Course Submission Summary Report:** Submission information for each student including assignments, tests, surveys, and graded discussions, blogs, journals, and wikis.

- Activity Compared to Others (student only): Students can select this option to view their activity compared to others in their course. Information includes the number of submissions and time spent in course in Learn.

9876 Course Settings

Mathematics

Content Calendar Announcements Discussions Gradebook Messages **Analytics** Student Preview

Course Activity **Premium Reports** Question Analysis SCORM Reports

Report	Description	Last Run	
Course at-a-Glance	Compare this course to others in the same department	6/8/22, 3:20 PM	Run Report
Activity and Grade Scatter Plot	This report plots the distribution of student activity against their grades in this course.	3/28/22, 11:23 AM	Run Report
Activity Matrix	View a representation of student activity in this course.	5/19/22, 10:59 AM	Run Report
Course Submission Summary	View a summary of user submissions for this course.	5/19/22, 10:59 AM	Run Report

You can export the list of students from the reporting system and import the list into an application such as Microsoft® Excel® for further analysis.

4. System Administrator

There are several tools within Blackboard Learn that administrators can use to track user activity.

We will take a look at

1. What data is tracked
2. What data is collected, during analysis
3. System Logs
4. Database, via Direct Data Access (DDA)

4A. System Administrator - Tracking

Using the system database and server logs, the following can be discovered:

Connection Details

- When someone logged in, logged out, or quit using the system (without logging out)
- When someone did not login
- Application server
- The user's IP address (geo-trackable)
- Device type (Mac, Windows, iPhone, Android, Chromebook, ...)
- Device Operating System and Version
- Browser (Chrome, Safari, Respondus LockDown Browser, Edge, Firefox)

Accesses

- System
- Course
- Content Areas
- Content (files, videos, images, etc.)
- Tools
- Time spent / Time idle

Gradable Objects

- Assignments (followed link, download attachments, submissions)
- Assessments (start, saved answers, question navigation, submissions)
- Discussions
- Time & IP of submissions
- Time & IP of Instructor grading/changes
- Submission Receipts

4B. System Administrator - Data Collection & Analysis

What's in the Report?

- Original Request Text
- "Short Summary"
- Collected Forensic Data with annotations
- Base-Line Comparison Data
- Splunk activity charts and log references
- DDA report of User Activity in Course/System
- Microsoft Azure (SAML) Sign-In Logs

What are we looking for?

- Accesses on specific day/time
- Did they enter the course?
- Did they enter a Content Area?
- Use a course tool or integration?

Base Line Comparison

- Find a student who did complete the task (or replicate it yourself)
- Grab their log data, and search for the appropriate keywords
- Clean up sensitive information, and include this in your report.

For most requests, the following data is collected:

Original Correspondence:

Short Summary:

Full analysis:

Name:	
Username	
User PK1	

System interactions:

Course ID	
Course PK1	
Instructor	

Course interactions:

Content/Artifact Name:	
Content/Artifact Location:	
Content/Artifact ID:	
Availability Period:	

Content/Artifact Interactions:

Academic Integrity Policy Notice:

I am including the academic integrity office in this reply because the information in this report points to a potential violation of the [academic integrity policy](#). As you are probably aware, the AI policy mandates that faculty report any potential violations of the policy, and these reports must be submitted within 5 working days after determining that there is a potential violation.

This might be considered a Level One Violation (Falsification of attendance and/or participation or Providing false information, or withholding pertinent or applicable information, which could result in gaining an academic advantage.), based on <http://honesty.uark.edu/sanction-rubric/index.php>.

If you decide that the information in this report could be a potential violation of the [academic integrity policy](#), please reach out to honesty@uark.edu. As you are probably aware, the AI policy mandates that faculty report any potential violations of the policy, and these reports must be submitted within 5 working days after determining that there is a potential violation.

4C. Logs and Locations

In SaaS, you can find system logs in the Content Collection. From the *Administrator Panel*, select *Manage Content* in the *Content Management* section. Select *internal > logs*. Logs are stored in a folder structure by year, month, day, and hour.

Each hour, there is one gzipped log file per application server. It's a JSON-like file when expanded.

SaaS logs contain one hour of log data per Blackboard Learn node and are stored in a compressed format. If eight nodes run in an hour, you will see eight files. When decompressed, the result is a text file containing log events stored in JSON objects. Each JSON object starts and ends with a curly brace and has the following fields:

- path, which shows the file on the Blackboard Learn server where the event originated
- @timestamp, the time the event occurred
- clientId
- version
- host, the IP address for the Blackboard Learn node where the event originated
- message, the information Blackboard Learn included in the log file about the event

Administrator Panel --> Logs --> System Logs includes a `convertlogs.py` script, which can be used to expand the log files, if needed.

Historically, most useful data related to academic integrity is found in the TomCat access logs, email, and authentication logs.

I transfer my Learn logs to a campus server using a combination of WebDAV and rsync. The logs are then sent to Splunk for analysis.

4D. Authentication Logs

- When did they login?
- When did they logout?
- Did they logout or was their session automatically expired after ~ 3 hours?
- Login Created = someone used the built-in "Login As" functionality
- GUI version contains only recent events.
- Back-end authentication log contains historic data

Event Type	Type	Username	IP Address	Date	Provider Name
LOGOUT	Session Expired	chris		Jul 13, 2023 3:48:32 PM CDT	Unassociated to any provider
LOGOUT	Session Expired	chris		Jul 12, 2023 1:22:40 PM CDT	Azure (UARK)
LOGIN		chris	130.184.0.128	Jul 12, 2023 10:12:28 AM CDT	Azure (UARK)
LOGOUT	Session Expired	chris		Jul 11, 2023 6:14:40 PM CDT	Unassociated to any provider
LOGOUT	Session Expired	chris		Jul 11, 2023 6:14:35 PM CDT	Azure (UARK)
LOGIN		chris	136.226.59.29	Jul 11, 2023 2:59:35 PM CDT	Unassociated to any provider
LOGIN		chris	136.226.59.29	Jul 11, 2023 2:59:35 PM CDT	Unassociated to any provider
LOGIN CREATED		chris		Jul 11, 2023 2:59:31 PM CDT	Unassociated to any provider
LOGOUT	Manual Logout	chris	130.184.0.128	Jul 11, 2023 2:30:52 PM CDT	Azure (UARK)
LOGIN		chris	130.184.0.128	Jul 11, 2023 2:29:22 PM CDT	Azure (UARK)
LOGIN		chris	130.184.0.128	Jul 11, 2023 2:07:37 PM CDT	Azure (UARK)
LOGOUT	Session Expired	chris		Jul 10, 2023 8:20:22 PM CDT	Azure (UARK)
LOGIN		chris	108.234.61.148	Jul 10, 2023 12:53:09 PM CDT	Azure (UARK)
LOGOUT	Session Expired	chris		Jul 7, 2023 3:14:56 PM CDT	Azure (UARK)
LOGIN		chris	130.184.0.128	Jul 7, 2023 11:57:08 AM CDT	Azure (UARK)
LOGOUT	Manual Logout	chris	130.184.0.128	Jul 5, 2023 9:38:08 AM CDT	Azure (UARK)

Clicking on an Event Type will returned detailed information about the session:

Event: Login

Event Subtype: null

Username: chris

IP Address: 136.226.59.29

Date: Jul 11, 2023 2:59:35 PM CDT

Provider Name: Unassociated to any provider

Appserver Id: ip-10-146-238-46.ec2.internal

Destination Server: learn.uark.edu

User Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko)

Chrome/114.0.0.0 Safari/537.36

Log Message:

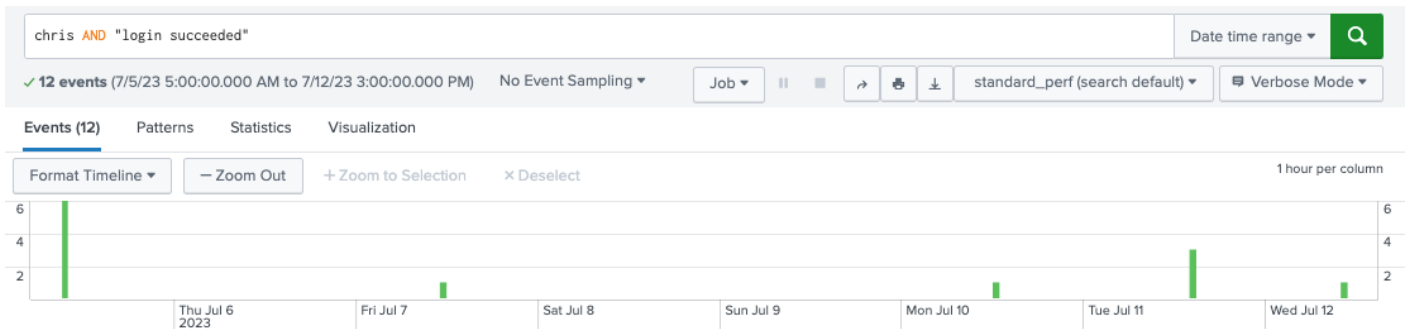
timestamp=Jul 11 2023 14:59:35.108

CDT|app_vend=blackboard|app_name=learn|app_ver=3900.69.0-

rel.26+d229c27|evt_code=0|evt_name=login
succeeded|sev=8|cat=authentication|authnprovider=|dhost=learn.uark.edu|outcome=success|src_ip=136.226.59.29|duid=_930092_1|duser=chris|text=login succeeded for token <51ead559-6b43-4feb-a9a7-590f3fca4048>|authnmethod=one time login tool|http_useragent=Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/114.0.0.0 Safari/537.36

Splunk View:

My authentication logs are also sent into Splunk, so I can search for a username (or pk1) and see the logins:



4E. Tomcat Access Logs

In release 9.0 and later, tracking users movements throughout the application is logged in the tomcat access logs.

SaaS location: ~/Logs/ip-10-146-226-9/logs/tomcat/bb-access-log.2020-04-01.txt

Log format: standard access log in W3C common format, enhanced

```
72.204.54.23 172.16.120.124 connector-212 _1170550_1 [17/Jul/2019:23:39:23 -0500] "GET /webapps/blackboard/content/listContentEditable.jsp?content_id=_7120434_1&course_id=_223243_1 HTTP/1.1" 200 17248 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_14_5) AppleWebKit/605.1.15 (KHTML, like Gecko) Version/12.1.1 Safari/605.1.15"
```

Returned Data	Description
72.204.54.23	client's IP-address (or load-balancer address)
172.16.120.124	Load-balancer IP address
connector-212	Tomcat request processing thread #
_1170550_1	pk1-value of the user or {unset id}
[17/Jul/2019:23:39:23 -0500]	%t date and time
"GET /webapps/blackboard/content/listContentEditable.jsp? content_id=_7120434_1&course_id=_223243_1	%r request string https://blackboard.secure.force.com/apex/btb_b_articleview?id=kAC700000000004E includes a table of common values.
"Mozilla/5.0 (Macintosh; Intel Mac OS X 10_14_5) AppleWebKit/605.1.15 (KHTML, like Gecko) Version/12.1.1 Safari/605.1.15"	User-agent string

Tomcat Access Log - Activity Values (Request Strings)

[Tracking User Activity in the Webserver Logs](#) (Article No.: 000014571) has a list of user activities paired with the request string to look for.

Information Desired	Searchable Value
User Activity	_pk1_
Course Activity	_pk1_ or course_id=_pk1_
Open Assignment Submission	/webapps/blackboard/execute/uploadAssignment
Assignment Submitted	/webapps/blackboard/execute/uploadAssignment? action=submit
Course Content	content_id=_pk1_
Clicking upload file in course files	/webapps/cmsmain/webui/courses/"Course_id"? action=upload&subaction=uploadFiles
Submitting an upload file	/webapps/cmsmain/webui/courses/"Course_id"? action=upload&subaction=file
Creating a folder in course files	/webapps/cmsmain/webui/courses/"Course_id"? action=upload&subaction=createdirectory
Deleting a folder in course files	/webapps/cmsmain/dwr_open/call/plaincall/FileFolderRemoval
Submitting SafeAssign Assignment	/webapps/mdb-sa-
Clicking on create assessment in content area drop down	/webapps/assessment/do/content/assessment? action=ADD
Clicking the create test button on page	/webapps/assessment/do/content/addAssessment
Filling in the test information and clicking submit	/webapps/assessment/do/authoring/modifyAssessmentInfo
Filled in question form and submitted	/webapps/assessment/do/authoring/modifyTrueFalseQuestion
Clicking edit from chevron for test content item	/webapps/assessment/do/content/assessment? action=MODIFY

Student taking test	/webapps/assessment/take/take.jsp
Student saving attempt	/webapps/assessment/do/take/saveAttempt
Student submitting test	/webapps/assessment/take/submitted.jsp
Editing content folder	/webapps/blackboard/content/manageFolder.jsp
Clicking discussion board link in course navigation menu	/webapps/blackboard/content/manageFolder_proc.jsp
Click create forum button in a course	/webapps/discussionboard/do/forum? action=create&nav=discussion_board_entry
Submitting the forum creation page	/webapps/discussionboard/do/forum?action=save
Clicking grade for discussion board using chevron	/webapps/discussionboard/do/grades? action=forum&nav=discussion_board_entry
Clicking chevron > edit for a graded forum	/webapps/discussionboard/do/forum? action=modify&nav=discussion_board_entry
Saving a graded discussion board after edit	/webapps/discussionboard/do/forum?action=save
Deleting a post/forum both in mass or a single deletion	/webapps/discussionboard/do/forum? action=deleteThread&do=delete&type=thread&forum_title
Student clicking on a forum from the list of discussion board pages	/webapps/discussionboard/do/forum? action=list_threads&nav=discussion_board_entry
Student clicking on a thread	/webapps/discussionboard/do/message? action=list_messages&forum_id
Deleting a course from the admin tab	/webapps/blackboard/execute/modifyCourseNavItemBasedContextMenuGenerator? sourceType=COURSES&course_id
Course User Manager	/webapps/blackboard/execute/userManager?
Delete User in User Search	/execute/userManager?course_id=#contextMenu

Change User password in User Search	/execute/launcher?type=UserAdminPasswordChange&id=
Instructor using the in-course batch upload tool:	/execute/batchAddEnrollUsers?course_id=
User with Enrollment privileges manually adding or changing enrollments in the Course Search page:	/execute/editCourseEnrollment?course_id=
SIS Feed File Upload	/execute/uploadFeed?

Searching the Tomcat Access Logs

Collect all server tomcat logs in one hierarchy

app01/ app02/ app03/ app04/ app05/ app06/

Searching

- `grep -h _[pk1] app0?/tomcat/bb-access-log* >> username.log`
- `grep -h _[pk1] app0?/tomcat/bb-access-log.2013-03-0[6-9]*`
- `zgrep _[pk1] app0?/tomcat/bb-access-log*.gz >> username.log`

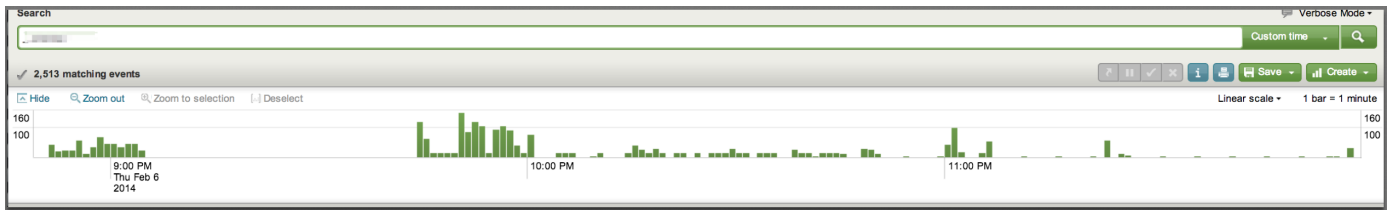
This can get tedious very quickly.

In SaaS, it's better since the logs are collected in the Content Collection, so all application server/node logs are in one place.

In 2014, I started pushing all of my tomcat access logs and authentication logs into *Splunk* for log analysis.

What's great about this is I have a web interface to search the logs, with activity (event) graphs.

Instructors love the graphs, especially compared to raw log data.



4F. Common Lookups

User PK1:

The easiest way to get the User PK1 in the GUI is to look in the Authentication Logs. In the Log Message, look for the *duid*. `duid=_930092_1`.

Course PK1:

Look in the course URL: https://bb.campus.edu/ultra/courses/_363485_1/cl/outline

Content ID / pk1

This can be found in the URL of the Content Item / Assignment / Assessment.

[https://bb.campus.edu/webapps/blackboard/content/launchAssessment.jsp?
course_id=_31285_1&content_id=_6121403_1&mode=cpview](https://bb.campus.edu/webapps/blackboard/content/launchAssessment.jsp?course_id=_31285_1&content_id=_6121403_1&mode=cpview)

[https://learn.uark.edu/webapps/blackboard/content/launchLink.jsp?
course_id=_46297_1&content_id=_1531973_1&mode=cpview](https://learn.uark.edu/webapps/blackboard/content/launchLink.jsp?course_id=_46297_1&content_id=_1531973_1&mode=cpview)

[https://learn.uark.edu/webapps/blackboard/content/listContent.jsp?
course_id=_33749_1&content_id=_1110936_1](https://learn.uark.edu/webapps/blackboard/content/listContent.jsp?course_id=_33749_1&content_id=_1110936_1)

Common Application Log References

assessment = test

uploadAssignment = assignments

InstanceNotFound = third-party cookies not set

courseTocLabel = course menu

discussionboard = discussions

listContent = student page listing

listContentEditable = instructor page listing

getSafeFileName = a file was uploaded, and with odd special characters removed

5: Report With Template

Original Correspondence:

From: Student

Subject: Lost quiz grades

Date: May 2, 2019

There are 3 of my quiz grades of MGMT4583 section 2 not showing.

I was wondering if you could get my grades back.

Looking forward to hearing from you.

Short Summary:

- Student claims that three quizzes (2,3, and 5) were completed and the grades are now missing.
- There were no attempts for those 3 quizzes in the course.
- For Quiz 2, the student did not access the course during the availability period.
- For Quiz 3, the student did not access the course during the availability period.
- For Quiz 5, the student did access the course during the availability period, for a total of 46 seconds over two days.
- This might be considered a Level One Violation (falsification of attendance and/or participation), based on <http://honesty.uark.edu/sanction-rubric/index.php>.

Academic Integrity Policy Notice:

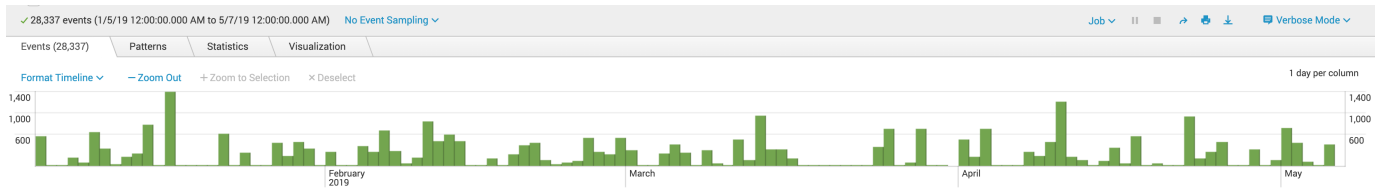
I am including the academic integrity office in this reply because the information in this report points to a potential violation of the [academic integrity policy](#). As you are probably aware, the AI policy mandates that faculty report any potential violations of the policy, and these reports must be submitted within 5 working days after determining that there is a potential violation.

This might be considered a Level One Violation (Falsification of attendance and/or participation or Providing false information, or withholding pertinent or applicable information, which could result in gaining an academic advantage.), based on <http://honesty.uark.edu/sanction-rubric/index.php>.

Full analysis:

Name:	<i>redacted</i>
Username	<i>redacted</i>
User PK1	_1115435

System interactions:



Course ID	MASTER-1193-THEUA-MGMT-1234-SEC001
Course PK1	332497
Instructor	<i>redacted</i>

Course interactions:



Content/Artifact Name:	Quizzes
Content/Artifact Location:	TOC
Content/Artifact ID:	6668514
Availability Period:	

Content/Artifact Interactions:



Assessment results from 3 days this semester in the course:



- 2/10 6668564 Quiz 1
- 3/24 6668567 Quiz 4
- 4/22 6668529 Exam

Content/Artifact Name:	Quiz 2
Content/Artifact Location:	Quizzes TOC
Content/Artifact ID:	6668565
Availability Period:	02/17/2019 11:59 PM - Feb 26, 2019 2:00 PM

Content/Artifact Interactions:


No accesses.

There were no course accesses during the availability window:

✓ 0 events (2/17/19 12:00:00.000 AM to 2/28/19 12:00:00.000 AM) [No Event Sampling](#) ✓

Events (0) Patterns Statistics Visualization

[Format Timeline](#) ✓ [– Zoom Out](#) [+ Zoom to Selection](#) [× Deselect](#)

 No results found.

Content/Artifact Name:	Quiz 3
Content/Artifact Location:	Quizzes TOC
Content/Artifact ID:	6668566
Availability Period:	03/03/2019 11:59 PM - Mar 13, 2019 5:30 PM

Content/Artifact Interactions:


No accesses.

No course accesses during the availability period:

✓ 0 events (3/3/19 12:00:00.000 AM to 3/15/19 12:00:00.000 AM) [No Event Sampling](#) ✓

Events (0) Patterns Statistics Visualization

[Format Timeline](#) ✓ [– Zoom Out](#) [+ Zoom to Selection](#) [× Deselect](#)

 No results found.

Content/Artifact Name:	Quiz 5
Content/Artifact Location:	Quizzes TOC
Content/Artifact ID:	6668568
Availability Period:	03/31/2019 11:59 PM - Apr 16, 2019 2:00 PM

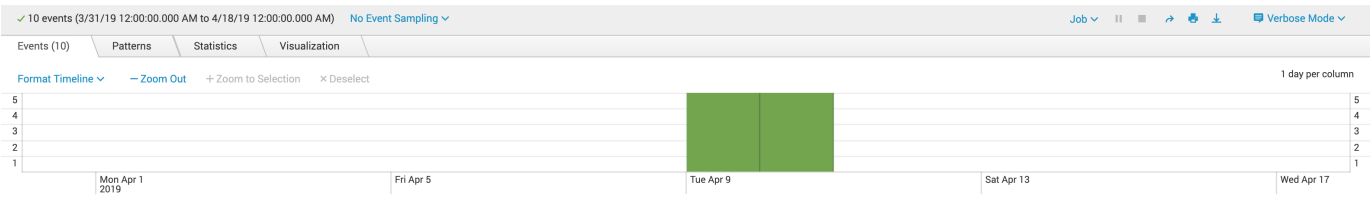
Content/Artifact Interactions:

No accesses.

There were some course accesses on 4/09 and 4/10 for a total of 46 seconds.

4/09: entered course from 11:11:45 - 11:11:46 AM (1 second)

4/10: checked grades from 01:11:57 - 1:12:42 PM. (45 seconds)



5A. Missing Quiz

I completed a quiz last night and in the morning I had a zero and when i contacted my teacher she said there was no attempt for the quiz from me.

I was wondering why this happened and if there is some setting that could be messing with the attempts because any attempt i completed on another computer is in there but any i did on my own computer there is like 50/50 chance it went through...

It was in CMJS 3043 and it was quiz 10. There were others in the past that i didnt realize wernt submitted but i dont know which ones those were for sure but all the ones that I completed on another computer are in there for sure.

duid = _1398574

CMJS 3043 - THE POLICE & SOCIETY (1173-THEUA-CMJS-3043)

course_id=_113231

Lessons > Chapter 11: Accountability and Ethics > Quiz 10 (Ch. 11 Accountability and Ethics)
12/04/2016

Lessons: content_id=_4089902

Ch 11: content_id=_4102056_1&course_id=_113231

Quiz 10: course_id=_113231_1&content_id=_4102062

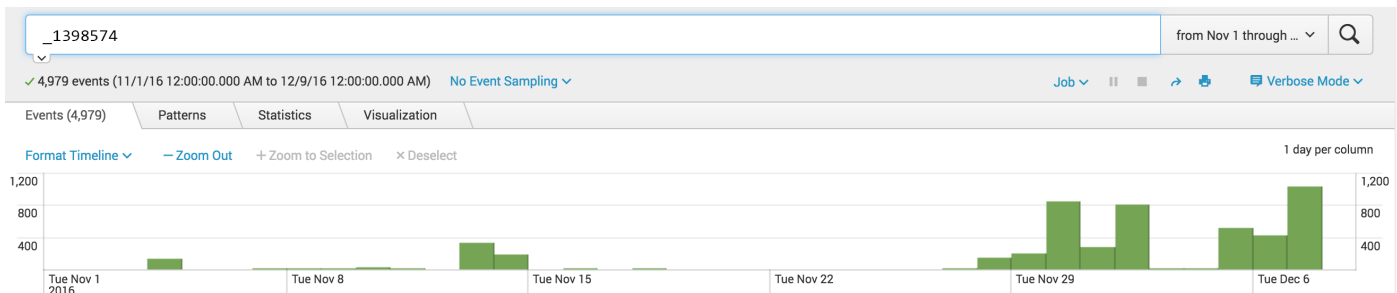
Availability: Item is no longer available. It was last available on Nov 20, 2016 11:59 PM.

Due Date  

Enter dates as mm/dd/yyyy. Time may be entered in any increment.

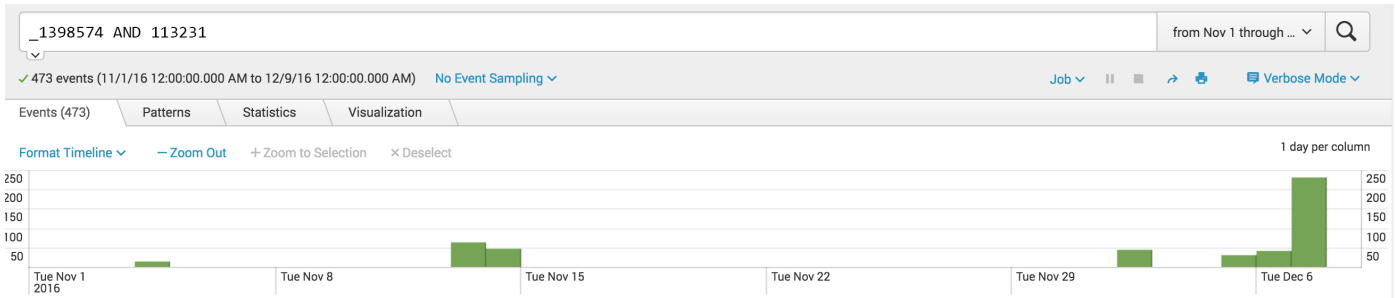
That quiz was due on 11/20/2016, and not visible after that day, therefore she could not have attempted the quiz on 12/04/2016.

System Accesses from 11/01/2016 - 12/06/2016:

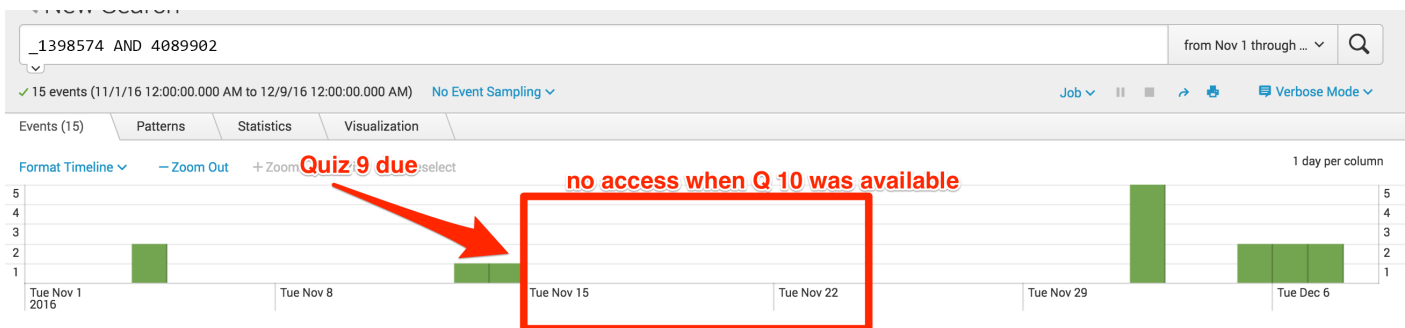


On 12/04, their only access was using the Blackboard Mobile Learn app, without any course access other than Grades...

Course accesses during this time period:

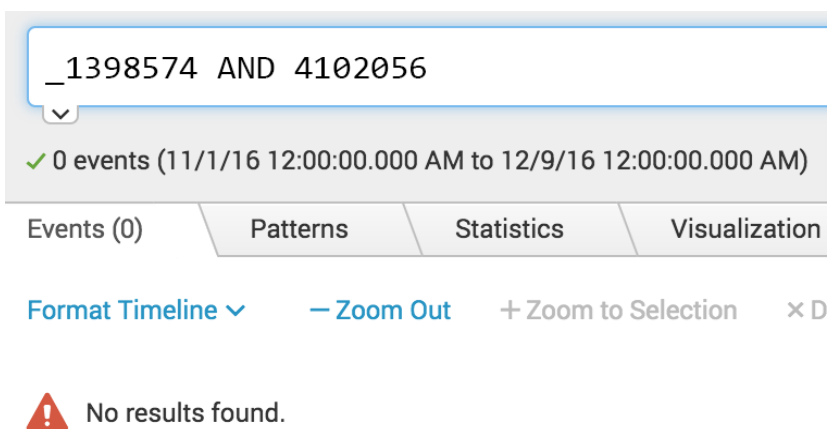


Going back, access to Lessons folder:



Quiz 9 was due on 11/14, which was their last access in the course until 12/02.

Access to Chapter 11 folder: None.



Looking back at activity for all assessments, I only see submissions for Quiz #2,3, 5, and the Final:

"jdoe","1173-THEUA-CMJS-3043",2016-09-04
12:55:32,"COURSE_ACCESS",""/webapps/assessment/take/submitted.jsp","Quiz 2 - (Ch. 2 Police

History)",4091893,155612472

"username","1173-THEUA-CMJS-3043",2016-09-07

19:15:25,"COURSE_ACCESS","","/webapps/assessment/take/submitted.jsp","Quiz 3 (Ch. 3 Legal Issues)",4096277,155917499

"jdoe","1173-THEUA-CMJS-3043",2016-09-27

13:40:03,"COURSE_ACCESS","","/webapps/assessment/take/submitted.jsp","Quiz 5 (Ch. 5 Police Management)",4097730,157812774

"jdoe","1173-THEUA-CMJS-3043",2016-12-07

01:57:06,"COURSE_ACCESS","","/webapps/assessment/take/submitted.jsp","FINAL EXAM",4390865,163976684

Quiz 9 did have some attempt at an attempt, but it was past due at the time:

"jdoe","1173-THEUA-CMJS-3043",2016-11-14

15:18:03,"COURSE_ACCESS","","/webapps/assessment/do/pastDue","Quiz 9 (Ch. 10 Force and Coercion)",4102054,162120915

"jdoe","1173-THEUA-CMJS-3043",2016-11-14

15:28:13,"COURSE_ACCESS","","/webapps/assessment/do/pastDue","Quiz 9 (Ch. 10 Force and Coercion)",4102054,162120915

"jdoe","1173-THEUA-CMJS-3043",2016-11-14

15:28:52,"COURSE_ACCESS","","/webapps/assessment/do/pastDue","Quiz 9 (Ch. 10 Force and Coercion)",4102054,162120915

"jdoe","1173-THEUA-CMJS-3043",2016-11-14

15:29:38,"COURSE_ACCESS","","/webapps/assessment/do/pastDue","Quiz 9 (Ch. 10 Force and Coercion)",4102054,162120915

"jdoe","1173-THEUA-CMJS-3043",2016-11-14

15:34:21,"COURSE_ACCESS","","/webapps/assessment/do/pastDue","Quiz 9 (Ch. 10 Force and Coercion)",4102054,162120915

5B. Attached File to Assignment

Subject: Help!

I had an assignment 3 due on blackboard for my Art Lecture class (ARHS 1003) and I submitted it but I guess there was an issue and my teacher never received the submission. I called blackboard tech and they said that I might of just exited out too early before it processing all the way. My teacher just needs proof that I actually tried submitting the assignment! So if you could just email me back saying you checked and say I tired submitting it or did that would be great!

janedoe

user_id=_1104473

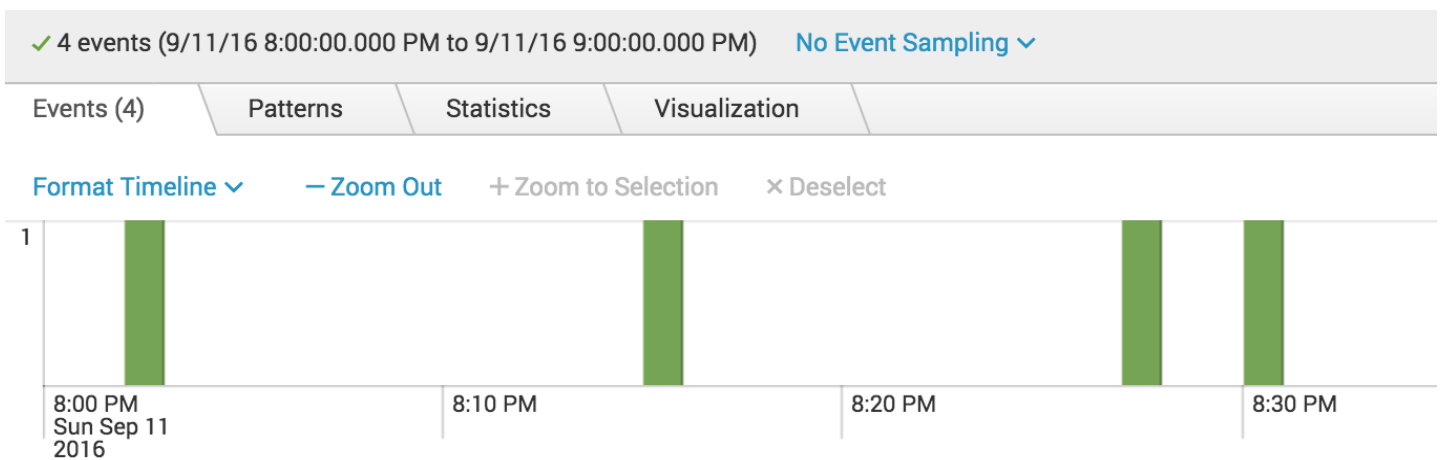
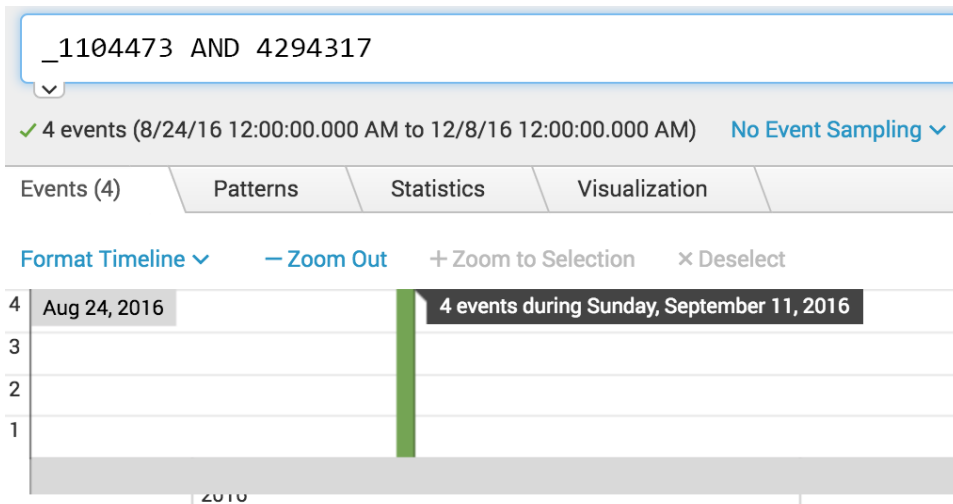
MASTER-1169-THEUA-ARHS-1003-SEC902

course_id=_126286

Assignment #3: content_id=_4294317

Due 09/11/2016 11:59 PM

Clicks on Assignment #3:



```
98.186.92.254 172.16.120.124 connector-46 [11/Sep/2016:20:30:04 -0500] "GET /webapps/assignment/uploadAssignment?course_id=_126286_1&content_id=4294317_1&mode=view HTTP/1.1" 200 21796 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/52.0.2743.116 Safari/537.36" "JSESSIONID=A56FD567506C2DD732AD0B8358409BCC; NSC_210018_wjq_69.196.229.112*443=ffffffff090d190c45525d5f4f58455e445a4a4229a0; JSESSIONID=68E2D0BFF3BF46E4CB86D1F7DD5219A8; web_client_cache_guid=0d81f622-de74-4876-b6a8-6c820b588820; __utmt=1; wl_auth=client_id=000000004C110F3E&status=notConnected; __utma=65023795.499763241.1473285465.1473285465.1473642045.2; __utmb=65023795.22.10.1473642045; __utmc=65023795; __utmz=65023795.1473285465.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none); session_id=73BF5E63E084311E02E01B50B45DBA32; s_session_id=0869659E4FFF21D3D0A9BF1E7E34DBB2" 455 21796
```

```
98.186.92.254 172.16.120.124 connector-31 [11/Sep/2016:20:27:05 -0500] "GET /webapps/assignment/uploadAssignment?content_id=4294317_1&course_id=_126286_1&assign_group_id=&mode=view HTTP/1.1" 200 26056 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/52.0.2743.116 Safari/537.36" "JSESSIONID=A56FD567506C2DD732AD0B8358409BCC; NSC_210018_wjq_69.196.229.112*443=ffffffff090d190c45525d5f4f58455e445a4a4229a0; JSESSIONID=68E2D0BFF3BF46E4CB86D1F7DD5219A8; web_client_cache_guid=0d81f622-de74-4876-b6a8-6c820b588820; __utmt=1; wl_auth=client_id=000000004C110F3E&status=notConnected; __utma=65023795.499763241.1473285465.1473285465.1473642045.2; __utmb=65023795.21.10.1473642045; __utmc=65023795; __utmz=65023795.1473285465.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none); session_id=73BF5E63E084311E02E01B50B45DBA32; s_session_id=0869659E4FFF21D3D0A9BF1E7E34DBB2" 399 26056
```

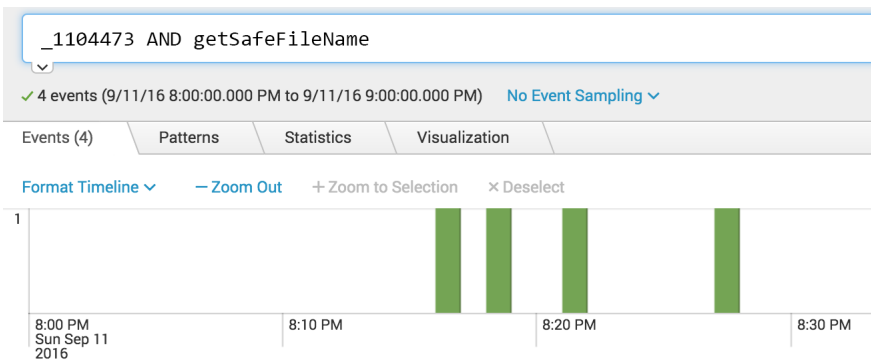
```
98.186.92.254 172.16.120.124 connector-59 [11/Sep/2016:20:15:42 -0500] "GET /webapps/assignment/uploadAssignment?content_id=4294317_1&course_id=_126286_1&assign_group_id=&mode=view&mode=view HTTP/1.1" 200 26049 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/52.0.2743.116 Safari/537.36" "JSESSIONID=A56FD567506C2DD732AD0B8358409BCC; NSC_210018_wjq_69.196.229.112*443=ffffffff090d190c45525d5f4f58455e445a4a4229a0; JSESSIONID=68E2D0BFF3BF46E4CB86D1F7DD5219A8; web_client_cache_guid=0d81f622-de74-4876-b6a8-6c820b588820; __utma=65023795.499763241.1473285465.1473285465.1473642045.2; __utmb=65023795.14.10.1473642045; __utmc=65023795; __utmz=65023795.1473285465.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none); session_id=73BF5E63E084311E02E01B50B45DBA32; s_session_id=0869659E4FFF21D3D0A9BF1E7E34DBB2" 250 26049
```

```
98.186.92.254 172.16.120.124 connector-7 [11/Sep/2016:20:02:54 -0500] "GET /webapps/assignment/uploadAssignment?content_id=4294317_1&course_id=_126286_1&assign_group_id=&mode=view&mode=view HTTP/1.1" 200 26056 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/52.0.2743.116 Safari/537.36" "NSC_210018_wjq_69.196.229.112*443=ffffffff090d190c45525d5f4f58455e445a4a4229a0; JSESSIONID=68E2D0BFF3BF46E4CB86D1F7DD5219A8; __utmt=1; web_client_cache_guid=0d81f622-de74-4876-b6a8-6c820b588820; __utma=65023795.499763241.1473285465.1473285465.1473642045.2; __utmb=65023795.11.10.1473642045; __utmc=65023795; __utmz=65023795.1473285465.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none); session_id=73BF5E63E084311E02E01B50B45DBA32; s_session_id=0869659E4FFF21D3D0A9BF1E7E34DBB2" 248 26056
```

After pressing "Browse My Computer" in an Assignment, and selecting a file, the system outputs the following to the tomcat access log:

"POST /webapps/assignment/dwr/call/plaincall/AssignmentDWRFacade.getSafeFileName.dwr HTTP/1.1"

Attached files to an assignment:



98.186.92.254	172.16.120.124	connector-39	[11/Sep/2016:20:27:13 -0500]	"POST /webapps/assignment/dwr/call/plaincall/AssignmentDWRFacade.getSafeFileName.dwr HTTP/1.1" 200 138 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/52.0.2743.116 Safari/537.36" "JSESSIONID=A56FD567506C2DD732AD0B8358409BCC; NSC_210018_wjq_69.196.229.112*443=ffffffff090d190c45525d5f4f58455e445a4a4229a0; JSESSIONID=68E2D0BFF3BF46E4CB86D1F7DD5219A8; web_client_cache_guid=0d81f622-de74-4876-b6a8-6c820b588820; __utmt=1; wl_auth=client_id=000000004C110F3E&status=notConnected; __utma=65023795.499763241.1473285465.1473285465.1473642045.2; __utmb=65023795.22.10.1473642045; __utmc=65023795; __utmz=65023795.1473285465.1.1.utmcsr=(direct) utmccn=(direct) utmcmd=(none); session_id=73BF5E63E084311E02E01B50B45DBA32; s_session_id=0869659E4FFF21D3D0A9BF1E7E34DBB2" 7 138
98.186.92.254	172.16.120.124	connector-33	[11/Sep/2016:20:21:19 -0500]	"POST /webapps/assignment/dwr/call/plaincall/AssignmentDWRFacade.getSafeFileName.dwr HTTP/1.1" 200 138 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/52.0.2743.116 Safari/537.36" "JSESSIONID=A56FD567506C2DD732AD0B8358409BCC; NSC_210018_wjq_69.196.229.112*443=ffffffff090d190c45525d5f4f58455e445a4a4229a0; JSESSIONID=68E2D0BFF3BF46E4CB86D1F7DD5219A8; web_client_cache_guid=0d81f622-de74-4876-b6a8-6c820b588820; __utmt=1; __utma=65023795.499763241.1473285465.1473285465.1473642045.2; __utmb=65023795.15.10.1473642045; __utmc=65023795; __utmz=65023795.1473285465.1.1.utmcsr=(direct) utmccn=(direct) utmcmd=(none); session_id=73BF5E63E084311E02E01B50B45DBA32; s_session_id=0869659E4FFF21D3D0A9BF1E7E34DBB2" 7 138
98.186.92.254	172.16.120.124	connector-50	[11/Sep/2016:20:18:24 -0500]	"POST /webapps/assignment/dwr/call/plaincall/AssignmentDWRFacade.getSafeFileName.dwr HTTP/1.1" 200 143 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/52.0.2743.116 Safari/537.36" "JSESSIONID=A56FD567506C2DD732AD0B8358409BCC; NSC_210018_wjq_69.196.229.112*443=ffffffff090d190c45525d5f4f58455e445a4a4229a0; JSESSIONID=68E2D0BFF3BF46E4CB86D1F7DD5219A8; web_client_cache_guid=0d81f622-de74-4876-b6a8-6c820b588820; __utmt=1; __utma=65023795.499763241.1473285465.1473285465.1473642045.2; __utmb=65023795.15.10.1473642045; __utmc=65023795; __utmz=65023795.1473285465.1.1.utmcsr=(direct) utmccn=(direct) utmcmd=(none); session_id=73BF5E63E084311E02E01B50B45DBA32; s_session_id=0869659E4FFF21D3D0A9BF1E7E34DBB2" 166 143
98.186.92.254	172.16.120.124	connector-57	[11/Sep/2016:20:16:43 -0500]	"POST /webapps/assignment/dwr/call/plaincall/AssignmentDWRFacade.getSafeFileName.dwr HTTP/1.1" 200 143 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_5) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/52.0.2743.116 Safari/537.36" "JSESSIONID=A56FD567506C2DD732AD0B8358409BCC; NSC_210018_wjq_69.196.229.112*443=ffffffff090d190c45525d5f4f58455e445a4a4229a0; JSESSIONID=68E2D0BFF3BF46E4CB86D1F7DD5219A8; web_client_cache_guid=0d81f622-de74-4876-b6a8-6c820b588820; __utmt=1; __utma=65023795.499763241.1473285465.1473285465.1473642045.2; __utmb=65023795.15.10.1473642045; __utmc=65023795; __utmz=65023795.1473285465.1.1.utmcsr=(direct) utmccn=(direct) utmcmd=(none); session_id=73BF5E63E084311E02E01B50B45DBA32; s_session_id=0869659E4FFF21D3D0A9BF1E7E34DBB2" 8 143

5C. Many Missing Quizzes

I am a student at the UARK Fayetteville, and in my BIOL 3863 class they say that I have not turned in many of my quizzes, and though I did miss a few, I'm certain that I did more than five overall. Is there any way that you could check on my activity for this class? They were due on Fridays, if that helps.

1163-THEUA-BIOL-3863-SEC001

- Quiz 4 02/14 — 02/17
- Quiz 6 02/28 — 03/03
- Quiz 7 03/07 — 03/10
- Quiz 8 03/14? — 03/17?
- Quiz 10 04/11 — 04/14

Summary:

- Student is missing 4 quizzes that were given through Blackboard (4, 6, 7, 10)
- Student did not click the link for any of the 4 quizzes.
- Student is also missing a grade for Quiz 8, which appears to be an in-class assessment.

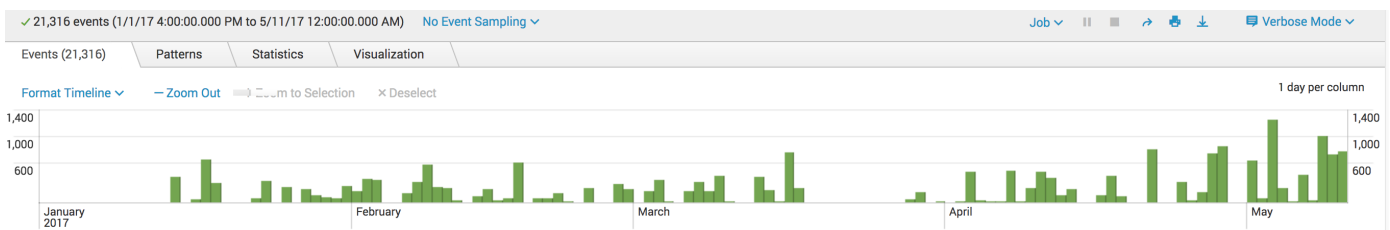
Full analysis:

John Doe

jdoe

duid=_129155

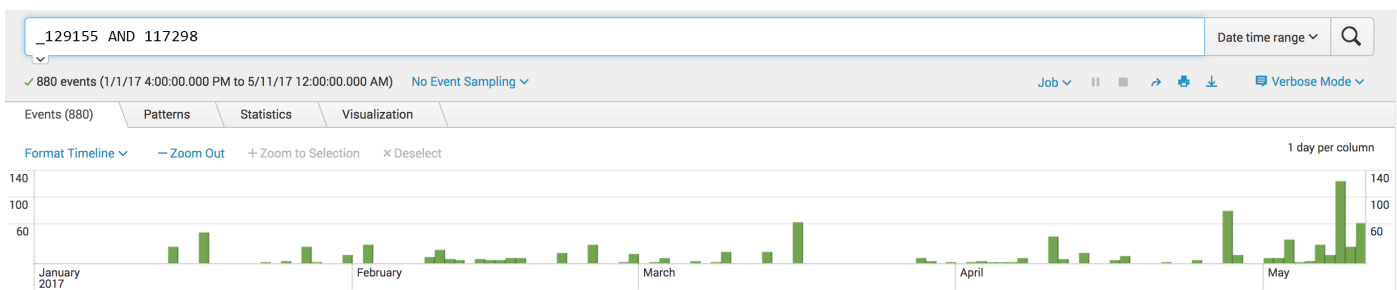
Full system accesses:



1163-THEUA-BIOL-3863-SEC001

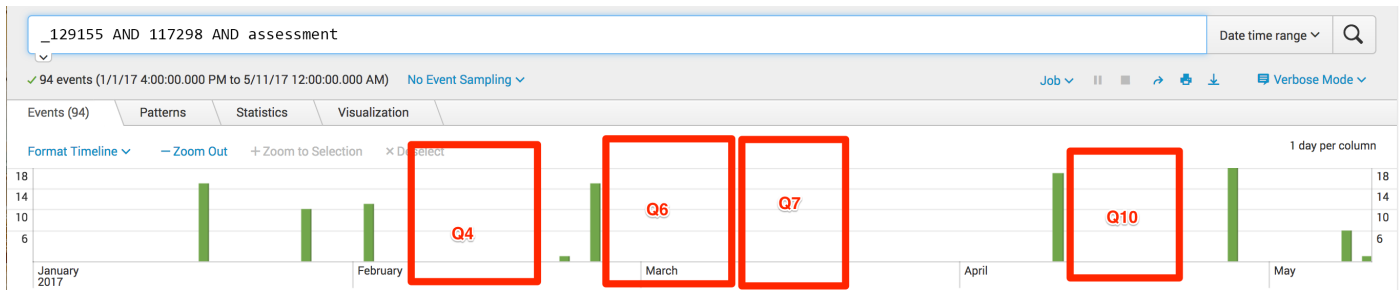
course_id=_117298

BIOL 3863 Course accesses



Course Assessment Events:

Missing Quiz availability times are shown.



5D. Forged Submission Receipt

Original Correspondence:

Could you please check into the issue in the email below? We could see no indication anything had been submitted by this student, but he received an email from Blackboard.

From: Student

Sent: Tuesday, February 19, 2019 4:48 PM

Subject: HW2 Submission proof

Here is the proof of submission that I was referring to. I also attached my word document containing all of my work. I understand that there was an error that occurred at some point, and I would like to resolve this however possible. Please let me know if there's anything I can do to help.

Submission received



do-not-reply@blackboard.com

Thu 2/14, 7:03 PM



Reply all | v

Inbox

Your work was received!

You successfully **submitted** your coursework. Each time you submit coursework, you receive a unique confirmation ID to verify when your submission was received. You can view your submission receipts on your My Grades page.

Submission details:

Submission confirmation ID: 07ad7181b6da48d88f3ce08153951490

Title of course:

Course ID:

Title of coursework: HW2

Date/time of submission: Feb 14, 2019 7:03 PM

Size of written submission: 0bytes

Size and name of files received: Ergo HW2.docx (8.58mb)

Unique Item ID (for administrator use only): _1209687_1

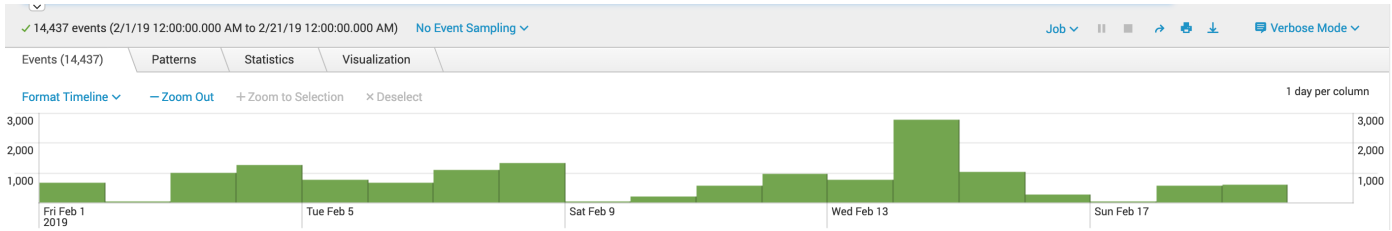
Getting too much email from do-not-reply@blackboard.com? [You can unsubscribe](#)

Short Summary:

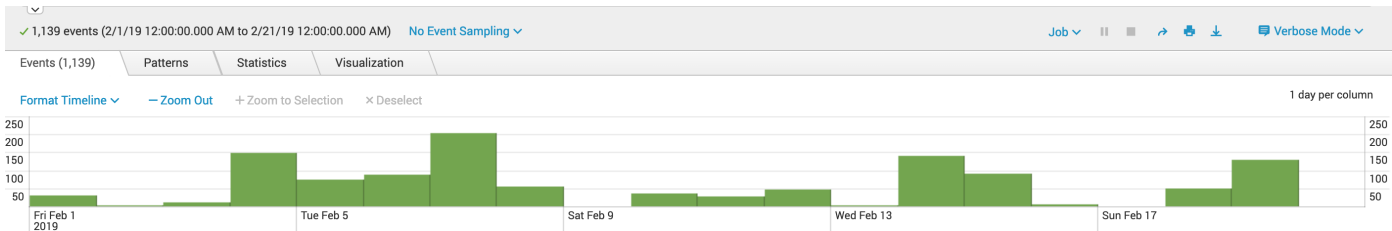
- The student did go into the assignment twice on Feb 14th, beginning at 8:52:17.000 PM.
- There are indications that he did attach and upload files to an assignment coinciding with his access times.
- Submission Receipt screen shot
 - The font for the time and date is a different font than the rest of the header information.
 - The confirmation email that the student supplied shows the submission time as 7:03 PM, which is way before his initial access to the assignment.
 - The confirmation ID in the screenshot of the Feb 14 2019 7:03 PM assignment confirmation from the student contained the confirmation ID for his initial "Lab 1 Report (FINAL)" assignment on Feb 7 2019 7:03 PM.
 - The confirmation IDs would be unique.
 - The confirmation timestamp would not be the same.
 - The Unique ID for student's Feb 7th assignment was 1201687. It appears that he changed one digit in the middle of the number, to make it appear as a different ID, in the screen shot.
 - No emails were sent out to student regarding "Submission Received" on 2/14.
 - It is my opinion that his screenshot is a forgery.
- The student supplied header information for the email shown in the submission receipt screen shot.
 - The MessageID in his Feb 14th email is identical to the Feb 7th email, except for the middle digits.
 - The MessageID value is a unique value.
 - Searching back through two years of logs, there are no similar MessageIDs. The only one containing the prefix was the Feb 7th email.
 - There was a Received from: line with a mismatch of application server IDs that would not occur in a verified email.
 - It is my opinion that the supplied email headers is a forgery.
- The student was not active in the course between 6:14 PM and 8:52 PM on 2/14.
- This might be considered a Level One Violation (falsification of attendance and/or participation), based on <http://honesty.uark.edu/sanction-rubric/index.php>.

Full analysis:

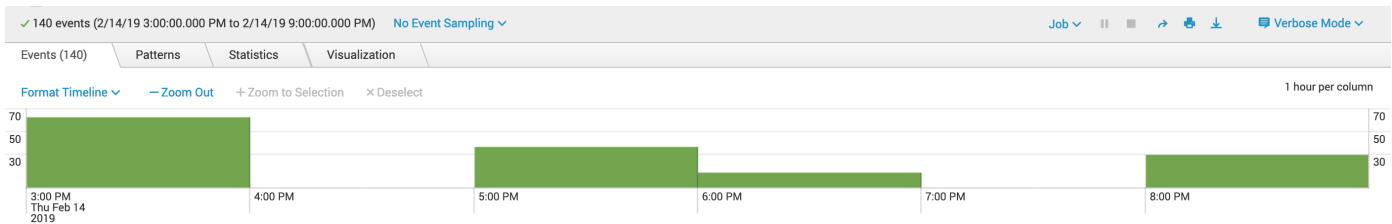
System interactions:



Course interactions:



No access in course in the 7PM hour on 2/14:



4 assignment submissions in this course:

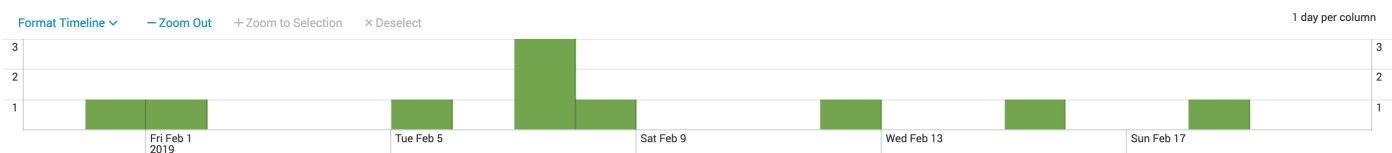
CONFIRMATION NUMBER	STUDENT	SUBMITTER	COURSEWORK	DATE	SUBMISSION	SIZE
07ad7181-b6da-48d8-8f3c-e08153951490	[REDACTED]	[REDACTED]	Lab 1 Report (FINAL)	Feb 7, 2019 7:03 PM	Works Methods & Ergonomics Lab 1.docx	508.5kb
c3dc52e2-fd4b-44d5-a8d0-a3c40839c1e2	[REDACTED]	[REDACTED]	Lab 1 Report (FINAL)	Feb 7, 2019 4:53 PM	Works Methods & Ergonomics Lab 1.docx	508.4kb
933588fe-d849-4b1c-abf3-d5b68e1122f6	[REDACTED]	[REDACTED]	Lab 2 Report (DRAFT)	Feb 7, 2019 4:38 PM	Works Methods & Ergonomics Lab 1.docx	508.4kb
f4bba8ed-ee68-432a-a6a6-64d83ca67387	[REDACTED]	[REDACTED]	HW1	Jan 31, 2019 3:53 PM	Ergo HW1.docx	245kb

10 "Submission Received" emails were sent out to student between Jan 31st and Feb 18th. None were sent out on Feb 14th.

Search: [redacted] AND MessageID AND [redacted] AND "Submission Received" from Jan 30 through... [Q]

✓ 10 events (1/30/19 12:00:00.000 AM to 2/21/19 12:00:00.000 AM) No Event Sampling

Events (10) Patterns Statistics Visualization



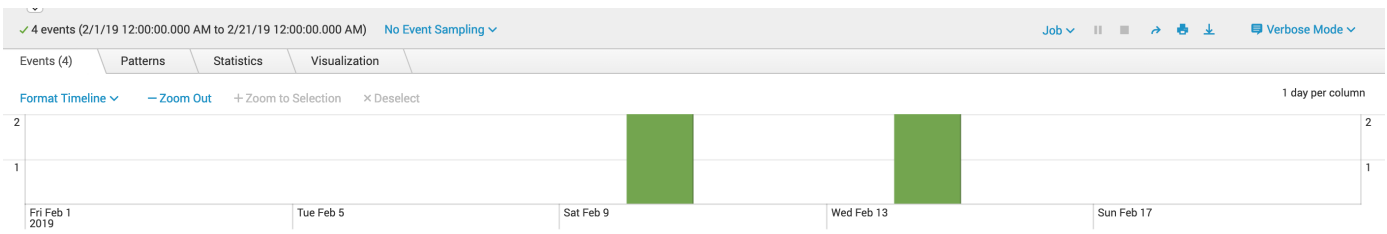
i	Time	Event
>	2/18/19 8:42:12.000 PM	2019-02-18 20:42:12 -0600 - [DEBUG] SUCCESS: "MessageID: <181144826.55418.1550544132257.JavaMail.bbuser@fgprd-210018-152896-app003.mhint>", "Monday, February 18, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email
>	2/15/19 2:27:18.000 PM	2019-02-15 14:27:18 -0600 - [DEBUG] SUCCESS: "MessageID: <943424677.46550.1550262438233.JavaMail.bbuser@fgprd-210018-152896-app006.mhint>", "Friday, February 15, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email
>	2/12/19 11:43:43.000 PM	2019-02-12 23:43:43 -0600 - [DEBUG] SUCCESS: "MessageID: <76926804.46644.1550036623054.JavaMail.bbuser@fgprd-210018-152896-app003.mhint>", "Tuesday, February 12, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email
>	2/8/19 11:40:26.000 AM	2019-02-08 11:40:26 -0600 - [DEBUG] SUCCESS: "MessageID: <1724891143.38659.1549647626665.JavaMail.bbuser@fgprd-210018-152896-app003.mhint>", "Friday, February 8, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email
>	2/7/19 7:03:32.000 PM	2019-02-07 19:03:32 -0600 - [DEBUG] SUCCESS: "MessageID: <671956905.37624.1549587812393.JavaMail.bbuser@fgprd-210018-152896-app003.mhint>", "Thursday, February 7, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email
>	2/7/19 4:53:06.000 PM	2019-02-07 16:53:06 -0600 - [DEBUG] SUCCESS: "MessageID: <1143911772.37437.1549579986790.JavaMail.bbuser@fgprd-210018-152896-app003.mhint>", "Thursday, February 7, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email
>	2/7/19 4:38:31.000 PM	2019-02-07 16:38:31 -0600 - [DEBUG] SUCCESS: "MessageID: <44507992.37404.1549579111422.JavaMail.bbuser@fgprd-210018-152896-app003.mhint>", "Thursday, February 7, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email
>	2/5/19 10:58:44.000 PM	2019-02-05 22:58:44 -0600 - [DEBUG] SUCCESS: "MessageID: <375054272.29804.1549429123912.JavaMail.bbuser@fgprd-210018-152896-app002.mhint>", "Tuesday, February 5, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email
>	2/1/19 10:20:01.000 AM	2019-02-01 10:20:01 -0600 - [DEBUG] SUCCESS: "MessageID: <1851679780.25718.1549038000941.JavaMail.bbuser@fgprd-210018-152896-app003.mhint>", "Friday, February 1, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email
>	1/31/19 3:53:12.000 PM	2019-01-31 15:53:12 -0600 - [DEBUG] SUCCESS: "MessageID: <1791785060.24654.1548971591906.JavaMail.bbuser@fgprd-210018-152896-app003.mhint>", "Thursday, January 31, 2019", "do-not-reply@blackboard.com"; ", "Submission received", " " sourcetype = bb_email

Content/Artifact Name:	HW2
Content/Artifact Location:	Content --> Homework and Case Studies - Spring 2019
Content/Artifact ID:	6712554
Availability Period:	Feb 14, 2019 11:59 PM

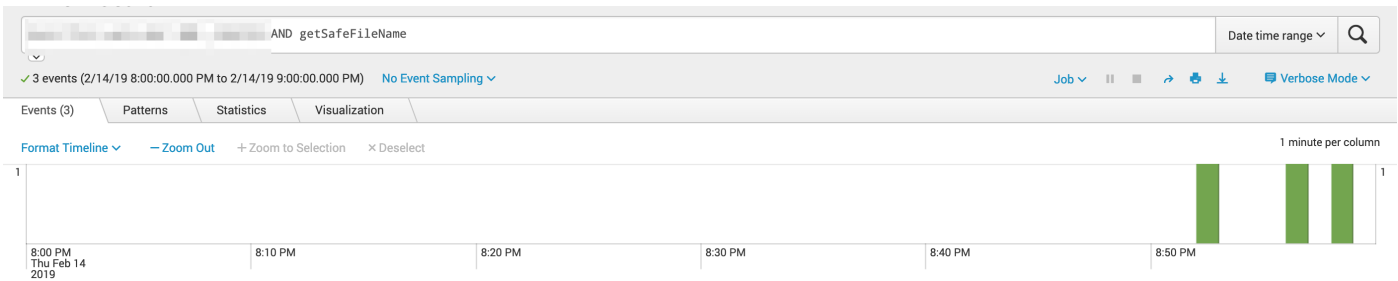
Content/Artifact Interactions:

2/10 - mobile app data acquisition

2/14 - he went into the assignment at 8:52:17.000 PM and 8:58:05.000 PM, but there was no submission.



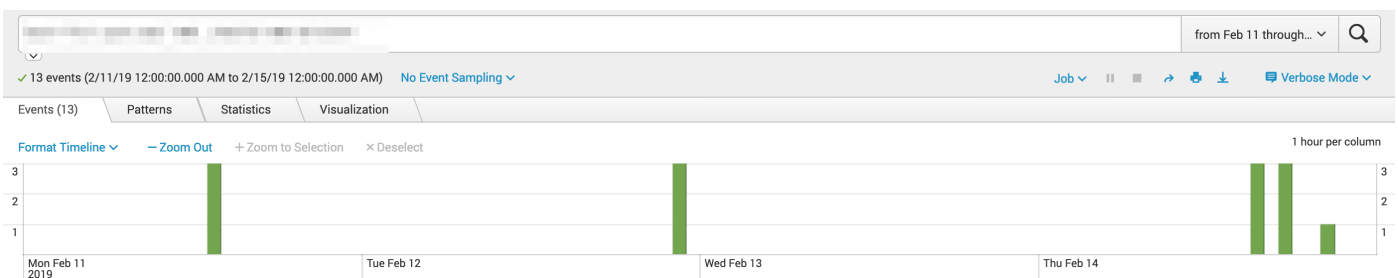
I do see assignment file upload attempts at 8:52:24.000 PM, 8:56:57.000 PM, and 8:58:12.000 PM.



Content/Artifact Name:	"HW2 - S19.pdf"
Content/Artifact ID:	https://server/bbcswebdav/pid-6712553-dt-content-rid-82122591_1/xid-82122591_1 https://server/bbcswebdav/pid-6712553-dt-content-rid-82122591_1/courses/1193-THEUA-INEG-3714-SEC001-6229/HW2%20-%20S19%281%29.pdf

Content/Artifact Interactions:

HW2 pdf file was accessed multiple times from Feb 11th - Feb 14th.



Submission Receipt Analysis

The student submitted the following screen shot of his "submission receipt", which appears to be a forgery. Note: student highlighted the word "submitted" in the screen shot, so the image was modified by the student.

Notes:

- The font for the time and date is a different font than the rest of the header information.
- The "Unique item ID" is listed as 1209687.
 - This matches a Unique ID for an assignment submitted on 2/10/2019 in [another course] by another student.
 - This ID is an incremental value.
 - The Unique ID for student's Feb 7th assignment was 1201687. It appears that he changed one digit in the middle of the number, to make it appear as a different ID.
 - The confirmation email that the student supplied shows the submission time as 7:03 PM, which is way before his initial access to the assignment.
 - The confirmation ID in the screenshot of the Feb 14 2019 7:03 PM assignment confirmation from the student contained the confirmation ID for his initial "Lab 1 Report (FINAL)" assignment on Feb 7 2019 7:03 PM.

Submission received



do-not-reply@blackboard.com

Thu 2/14, 7:03 PM

Date/time has a different font.



Reply all | v

Inbox

Your work was received!

You successfully **submitted** your coursework. Each time you submit coursework, you receive a unique confirmation ID to verify when your submission was received. You can view your submission receipts on your My Grades page.

Submission details:

Submission confirmation ID: 07ad7181b6da48d88f3ce08153951490

Title of course: [REDACTED]

Course ID: [REDACTED]

Title of coursework: HW2

Date/time of submission: Feb 14, 2019 7:03 PM

Size of written submission: 0bytes

Size and name of files received: Ergo HW2.docx (8.58mb)

Unique Item ID (for administrator use only): **_1209687_1**

Unique ID similar to Feb 7th submission.
Matches ID for another student's
submission in another course.

Getting too much email from do-not-reply@blackboard.com? [You can unsubscribe](#)

Email "header" analysis

Feb 7th submission email:

```
2019-02-07 19:03:32 -0600 - [DEBUG] SUCCESS: "MessageID:
<671956905.37624.1549587812393.JavaMail.bbuser@fgprd-210018-152896-app003.mhint>",
"Thursday, February 7, 2019", "do-not-reply@blackboard.com; ", "Submission received",
"student@uark.edu Student Name; "
```

February 7th email was sent out from app003, where the student did his work.

There is a mismatch in the following row, for the server where the email was sent:

```
Received: from fgprd-210018-152896-app003.mhint (fgprd-210018-152896-app005.mhint
[10.5.9.12])
```

This does not occur in other emails where I inspected the headers. This row was forged.

The Message ID is identical, except for the middle digits: Message-ID:
<671956905.46550.1549587812393.JavaMail.bbuser@fgprd-210018-152896-app005.mhint>

Reference: <https://en.wikipedia.org/wiki/Message-ID>:

- **Message-ID** is a unique identifier for a digital message, most commonly a globally unique identifier used in email and Usenet newsgroups.
- Message-IDs are required to have a specific format which is a subset of an email address^[2] and to be globally unique. That is, no two different messages must ever have the same Message-ID. A common technique used by many message systems is to use a time and date stamp along with the local host's domain name, e.g., 950124.162336@example.com.

Supplied by student, does not include email content, just the header:

Here are the copy and pasted view message details information:

```
Received: from BYAPR04MB3814.namprd04.prod.outlook.com (2603:10b6:805:de::24)
by SN6PR04MB3822.namprd04.prod.outlook.com with HTTPS via
```


SN5PR0601CA0022.NAMPRD06.PROD.OUTLOOK.COM; Thu, 14 Feb 2019 01:03:24 +0000
Received: from CO2PR04CA0104.namprd04.prod.outlook.com (2603:10b6:103:4::27)
by SN6PR04MB3825.namprd04.prod.outlook.com (2603:10b6:805:43::34) with
Microsoft SMTP Server (version=TLS1_2,
cipher=TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384) id 15.20.1618.19; Thu, 14 Feb
2019 01:03:23 +0000

Received: from DM6NAM03FT042.eop-NAM03.prod.protection.outlook.com
(2a01:111:f400:7e48::204) by CO2PR04CA0104.outlook.office365.com
(2603:10b6:103:4::27) with Microsoft SMTP Server (version=TLS1_2,
cipher=TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384) id 15.20.1618.19 via Frontend
Transport; Thu, 14 Feb 2019 01:03:23 +0000

Authentication-Results: spf=fail (sender IP is 148.163.148.202)
smtp.mailfrom=blackboard.com; uark.edu; dkim=pass (signature was verified)
header.d=blackboard.com;uark.edu; dmarc=pass action=none
header.from=blackboard.com;compauth=pass reason=100

Received-SPF: Fail (protection.outlook.com: domain of blackboard.com does not
designate 148.163.148.202 as permitted sender)

receiver=protection.outlook.com; client-ip=148.163.148.202;
helo=mx0b-0014ea01.pphosted.com;

Received: from mx0b-0014ea01.pphosted.com (148.163.148.202) by
DM6NAM03FT042.mail.protection.outlook.com (10.152.81.159) with Microsoft SMTP
Server (version=TLS1_2, cipher= TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384) id
15.20.1580.10 via Frontend Transport; Thu, 14 Feb 2019 01:03:22 +0000

Received: from pps.filterd (m0096090.pops.net [127.0.0.1])
by mx0b-0014ea01.pphosted.com (8.16.0.27/8.16.0.27) with SMTP id x180sTEF010037
for <student@uark.edu>; Thu, 14 Feb 2019 20:03:22 -0500

Received: from mail-relay4-va2.blackboard.com (mail-relay1-va2.blackboard.com [69.196.241.4])
by mx0b-0014ea01.pphosted.com with ESMTP id 2qd34udsdx6-1
(version=TLSv1.2 cipher=ECDHE-RSA-AES256-GCM-SHA384 bits=256 verify=NOT)
for <student@uark.edu>; Thu, 14 Feb 2019 20:02:22 -0500

Received: from fgprd-210018-152896-app003.mhint (fgprd-210018-152896-app005.mhint
[10.5.9.12])

by mail-relay4-va2.blackboard.com (Sentrion-MTA-4.3.2/Sentrion-MTA-4.3.2) with
ESMTP id x181dR02219897

for <student@uark.edu>; Thu, 14 Feb 2019 24:34:05 GMT

DKIM-Filter: OpenDKIM Filter v2.7.5 mail-relay4-va2.blackboard.com x181dR02219897

DKIM-Signature: v=1; a=rsa-sha256; c=relaxed/relaxed; d=blackboard.com;

s=sep2018; t=1512387945;

bh=F2oUwbhVYFGzlcTSHwXVOCdaaeX/NdjDR1f9xGMMZ7tM=;

h=Date:From:Reply-To:To:Subject;

b=h6/TabazCe+hHi0K0HSvgwQ04mVsa1sLmQtkTnoacKDWYTKhyJNOfsLn/IGBIYZvo
50MsVPjAsBDiMM9XcuRsm++qcOu2C2ytYKeX1zWjwxviN3wl3Ph0fyXRRYpTcgUGNY
R9nrIM22cTWyUVCeCbqYiJP/SuBXFDuTrOYUPD9347C6kxUhNpw3ojArraPdgExs7K
ubZwVbbR2xy5gxWmWn9zX2FshCleHEX1ZTNUmwW/5h5dbAcMfatC7PjAXH9XgoSpr6
2KJ4D/vgdxDHsCEmlIVSBlojBmSOeqsikP9M75C7BTKr83zKxw7+OyGAKqkHp9oLHu
kaHyivUePab4g==

Date: Thu, 14 Feb 2019 19:03:24 -0600 (CST)

From: do-not-reply@blackboard.com

Reply-To: do-not-reply@uark.edu

To: student@uark.edu

Message-ID: <671956905.46550.1549587812393.JavaMail.bbuser@fgprd-210018-152896-
app005.mhint>

Subject: Submission received

MIME-Version: 1.0

Content-Type: multipart/alternative;

boundary="----=_Part_37548_1744295708.1544987812193"

Return-Path: do-not-reply@blackboard.com

X-MS-Exchange-Organization-ExpirationStartTime: 14 Feb 2019 23:37:34.2478
(UTC)

X-MS-Exchange-Organization-ExpirationStartTimeReason: OriginalSubmit

X-MS-Exchange-Organization-ExpirationInterval: 2:00:00:00.0000000

X-MS-Exchange-Organization-ExpirationIntervalReason: OriginalSubmit

X-MS-Exchange-Organization-Network-Message-Id:

6bgd1faa-e602-5d98-627b-08d69d61420c

X-EOPAttributedMessage: 0

X-EOPTenantAttributedMessage: 79c742c4-e61c-4fa5-be89-a3cb566a80d1:0

X-MS-Exchange-Organization-MessageDirectionality: Incoming

X-Matching-Connectors:

131940614145434374;();(a6c60116-7a50-4293-d7c7-08d38f1ea22b)

X-Forefront-Antispam-Report:

CIP:148.163.148.202;IPV:NLI;CTRY:US;EFV:NLI;SFV:SKA;SFS:;DIR:INB;SFP:;SCL:-1;SRVR:BYAPR04
MB3814;H:mx0b-0014ea01.pphosted.com;FPR:;SPF:None;LANG:en;

X-MS-Exchange-Organization-AuthSource:

DM6NAM03FT042.eop-NAM03.prod.protection.outlook.com

X-MS-Exchange-Organization-AuthAs: Anonymous

X-MS-PublicTrafficType: Email

X-MS-Office365-Filtering-Correlation-Id: 6bgd1faa-e602-5d98-627b-08d69d61420c

6. Databases

Direct Data Access, DDA, is a near-realtime replica of your Blackboard Learn Database, which you can query.

Blackboard Data has pre-made reports that can be accessed but it can also be queried directly using Snowflake or other database tools.

Blackboard Data contains a subset of your Learn database, but also data from Collaborate and Telemetry (Caliper) events.

6A. DDA: User Activity Report

This is a common DDA query that I run, to get a user's activity in the system and/or a specific course. It also returns the title of the content that they were accessing.

https://github.com/zenandjuice/bbLearnDDA/blob/main/activity_and_auth/user_activity.sql

```
-- main query that I use for tracking user activity in the system
-- uncomment lines for different search criteria
```

```
SELECT u.pk1,      u.lastname,    u.firstname,    u.user_id,      -- u.uuid as "User UUID",
       cm.course_id,  -- cm.uuid as "Course UUID",
       aa.timestamp,  cc.title,
       aa.data,      aa.internal_handle,  aa.content_pk1,  aa.session_id,  aa.event_type
FROM activity_accumulator aa
INNER JOIN users u ON aa.user_pk1 = u.pk1
LEFT JOIN course_main cm ON aa.course_pk1 = cm.pk1
-- left join because some entries like journals don't have a content object associated
left JOIN course_contents cc ON aa.content_pk1 = cc.pk1
WHERE aa.timestamp between '01/01/2023 00:00:00' and '03/13/2023 23:59:59'
-- username
AND u.user_id = '[username]'
--AND u.user_id IN ('[username#1]', '[username#2]')
-- exclude ally rest user (replace username with your system's REST user)
--and u.user_id not in ('bbrally')
-- Return data from specific course
and cm.course_id = '[course_id]'
--and cm.course_id like '%[course_id string]%'
--OR cm.course_id IS NULL
--AND cm.course_id IN ('[course_id#1]', '[course_id#2]', '[course_id#3]', '[course_id#4]')
```

```

--AND cc.title LIKE 'Homework%'
--and aa.data not like '%handler%'
--and aa.data like '%assessment%'
--AND aa.DATA LIKE '%assignment%'
--and aa.data = 'mobile.submit.assignment'
--and aa.internal_handle like '%journal%'
--and aa.internal_handle like '%assessment%'
--and aa.content_pk1 = '12345678'
-- handles to return the Building Block page
--and aa.internal_handle in ('pa_ext', 'admin_plugin_manage')
--ORDER BY u.user_id, aa.timestamp ASC
ORDER BY aa.timestamp asc

```

timestamp	Title	data
7/1/23 12:04	Quiz 3	/webapps/assessment/take/launchAssessment.jsp
7/1/23 12:04	Quiz 3	/webapps/assessment/take/launch.jsp
7/1/23 12:05	Quiz 3	/webapps/assessment/take/take.jsp
7/1/23 12:05	Quiz 3	/webapps/assessment/take/take.jsp
7/1/23 12:06	Quiz 3	/webapps/assessment/take/take.jsp
7/1/23 12:17	Quiz 3	/webapps/assessment/take/take.jsp
7/1/23 12:18	Quiz 3	/webapps/assessment/take/take.jsp
7/1/23 12:18	Quiz 3	/webapps/assessment/take/take.jsp
7/1/23 12:18	Quiz 3	/webapps/assessment/take/submitted.jsp
7/1/23 12:18	Quiz 3	/webapps/assessment/review/review.jsp

In DDA, in activity_accumulator.data, you'll find references to "handler".

Ultra courses with enabled Progress Tracking are similarly to Original courses when "Statistics Tracking" is enabled on items.

This doesn't mean that the student clicked the link for that specific item, or read it. It just happened to load in their course stream, or if they're a Blackboard mobile user, that course item was aggregated by the app.

timestamp	Title	data
7/1/23 4:14	Week 1 (5 week)	Week 1 (5 week)
7/1/23 4:14		{"handler":"resource/x-bb-file","title":"OpenAstroChap06 Math Examples.pptx","parent":"_13636491_1","synthetic":true}
7/1/23 4:14		{"handler":"resource/x-bb-file","title":"OpenAstroChap06 Lecture(1).pptx","parent":"_13636491_1","synthetic":true}
7/1/23 4:14		{"handler":"resource/x-bb-file","title":"OpenAstroChap05 Math Examples.pptx","parent":"_13636491_1","synthetic":true}
7/1/23 4:14		{"handler":"resource/x-bb-file","title":"OpenAstroChap05 Lecture.pptx","parent":"_13636491_1","synthetic":true}
7/1/23 4:14	Homework 2	{"handler":"resource/x-bb-blti-link","title":"Homework 2","parent":"_13636491_1","synthetic":true}
7/1/23 4:14	Homework 1	{"handler":"resource/x-bb-blti-link","title":"Homework 1","parent":"_13636491_1","synthetic":true}
7/1/23 4:14	Homework 5	{"handler":"resource/x-bb-blti-link","title":"Homework 5","parent":"_13636491_1","synthetic":true}
7/1/23 4:14	Homework 4	{"handler":"resource/x-bb-blti-link","title":"Homework 4","parent":"_13636491_1","synthetic":true}
7/1/23 4:14	Homework 3	{"handler":"resource/x-bb-blti-link","title":"Homework 3","parent":"_13636491_1","synthetic":true}
7/1/23 4:14		{"handler":"resource/x-bb-folder","title":"Week 1 PowerPoints","parent":"_13636491_1","synthetic":false}
7/1/23 4:14		Week 1 PowerPoints
7/1/23 4:14		{"handler":"resource/x-bb-document","title":"Week 1 PowerPoints","parent":"_13636529_1","synthetic":true}

7/1/23 6:40	START HERE	{"handler":"resource/x-bb-folder","title":"START HERE","parent":"_13623214_1","synthetic":true}
7/1/23 6:40	ROOT	{"handler":"resource/x-bb-folder","title":"ROOT","synthetic":false}
7/1/23 6:40	ROOT	ROOT

The main schema only contains 180 days of data in the activity_accumulator table.

You can query the _stats schema for older data.

```
-- Uses _stats schema to get Course activity older than the 180 days stored in the main
schema activity_accumulator table
-- alter schema to be _stats
```

```
SELECT u.user_id AS Username, u.uuid as "User UUID", u.pk1 as "User PK1", cm.pk1 as
"Course PK1", cm.course_id, aa.timestamp, aa.event_type, aa.internal_handle, aa.data,
aa.session_id
FROM activity_accumulator aa
JOIN course_main cm ON aa.course_pk1 = cm.pk1
JOIN users u ON aa.user_pk1 = u.pk1
WHERE cm.course_id = '[course_id]'
AND aa.timestamp between '03/01/2018 00:00:00' and '03/13/2023 23:59:59'
--AND u.user_id = '[username]'
ORDER by timestamp DESC
```

6B. DDA: Submission Receipts

-- returns a student's assignment attempts along with the Submission Receipt UUID, file name, and file size

```
SELECT ar.pk1, cm.course_id, aru.user_id, gm.title, a.grade, a.attempt_date, ar.UUID AS
"Submission Receipt", ar.gradebook_title, ar.submission_date, ar.num_of_submission_attempt as
"Submission Number",arf.file_name, arf.file_size, ar.gradable_item_pk1, gm.*
FROM attempt a
INNER JOIN gradebook_grade gg ON a.gradebook_grade_pk1 = gg.pk1
```

```
INNER JOIN gradebook_main gm ON gg.gradebook_main_pk1 = gm.pk1
INNER JOIN attempt_receipt ar ON a.pk1 = ar.attempt_pk1
LEFT JOIN attempt_receipt_file arf ON ar.pk1 = arf.attempt_receipt_pk1
LEFT JOIN attempt_receipt_user aru ON ar.pk1 = aru.attempt_receipt_pk1
LEFT JOIN course_main cm ON ar.crs_main_pk1 = cm.pk1
WHERE aru.user_id = 'chris'
-- ar.pk1 = the "Unique Item ID" listed i the email.
--and ar.pk1 = '5823126'
--submission receipt number
--and ar.uuid like 'b9e92%'
--AND cm.course_id = '1229-THEUA-ENGL-1013-SEC003'
ORDER by ATTEMPT_DATE
```

-- returns a course's assignment attempts along with the Submission Receipt UUID, file name, and file size

```
SELECT cm.course_id, aru.user_id, gm.title, a.grade, a.attempt_date, ar.UUID AS "Submission Receipt", ar.num_of_submission_attempt as "Submission Number", ar.gradebook_title, ar.submission_date, arf.file_name, arf.file_size
FROM attempt a
INNER JOIN gradebook_grade gg ON a.gradebook_grade_pk1 = gg.pk1
INNER JOIN gradebook_main gm ON gg.gradebook_main_pk1 = gm.pk1
INNER JOIN attempt_receipt ar ON a.pk1 = ar.attempt_pk1
LEFT JOIN attempt_receipt_file arf ON ar.pk1 = arf.attempt_receipt_pk1
LEFT JOIN attempt_receipt_user aru ON ar.pk1 = aru.attempt_receipt_pk1
LEFT JOIN course_main cm ON ar.crs_main_pk1 = cm.pk1
WHERE cm.course_id = '1229-THEUA-ENGL-1013-SEC003'
ORDER by ATTEMPT_DATE
```


title	attempt_date	Submission Receipt	File Name	File size
Assignment 1	8/30/22 9:02 AM	fe78684417e546eab91a0211fe56021f	Assignment1.docx	17161
Assignment 1	8/30/22 2:41 PM	55039f208aaf48808d2ddb5c8f181851	assignment.docx	13868
Assignment 1	9/1/22 1:20 PM	fe8118a4eb324bf4924476f048bbf472	Assignment1.pdf	47362
Assignment 1	9/1/22 11:33 PM	b10eb7b50e1e4b10ac46ee194520be7f	chris assignment1.docx	7809
Assignment 1	9/2/22 1:21 PM	b2ccfeb0550f4e5f8a62cc3d04757558	assignment.docx	14423
Assignment 1	9/2/22 1:42 PM	ae9cfa7bcb634d68b66f3a6e8f93374b	assignment one.pdf	38683

6C. DDA: IP Submissions

There are times that we need to verify the IP address where items were submitted or graded, or to see if some students may have submitted from the same location.

https://github.com/zenandjuice/bbLearnDDA/blob/main/attempt_and_grades/grade_history.sql

```
select
cm.course_id as "Course ID",
gl.username as "Student Username", gl.firstname as "Student Firstname", gl.lastname as
"Student Lastname",
gm.title as "Gradebook Title", gl.grade as "Grade", gl.numeric_grade as "Numeric Grade",
ar.UUID AS "Submission Receipt", ar.num_of_submission_attempt as "Submission Number",
gm.grades_released, gm.auto_post_grades_ind,
gl.attempt_creation as "Attempt Date", gl.modifier_ipaddress as "IP Address",
gl.modifier_username as "Modifier Username", gl.modifier_firstname as "Modifier Firstname",
gl.modifier_lastname as "Modifier Lastname",
```

```

gl.modifier_role as "Modifier Course Role", gl.event_key, gl.date_logged as "Date Logged",
gl.graded_anonymously_ind as "Graded Anonymously?", gl.anonymizing_id,
gl.deletion_event_ind as "Deleted Y or N", gl.exempt_ind as "Exemption Indicator",
gl.instructor_comments, gl.for_student_comments
from gradebook_log gl
JOIN gradebook_main gm ON gm.pk1 = gl.gradebook_main_pk1
JOIN course_main cm ON cm.pk1 = gm.crsmain_pk1
left join attempt a on a.pk1 = gl.attempt_pk1
left join attempt_receipt ar on ar.attempt_pk1 = a.pk1
where cm.course_id = '[course_id]'
-- specific Gradebook name
--and gm.title like '%Exam 3'
-- specific username
and gl.username = '[student username]'
-- use modifier_username to see rows modified by a specific user, such as a REST user
-- and gl.modifier_username = '[modifier username]'
-- exclude preview users
-- and gl.modifier_username NOT LIKE '%preview%'
-- only for certain date ranges
--and gl.date_logged between '01/25/2023 00:00:00' and '05/02/2023 23:59:59'
-- access from specific IP
and gl.modifier_ipaddress = '[IP Address]'
ORDER by cm.course_id, username, date_logged

```

7. Resources

Shameless Plugs:

- Teaching Innovation & Pedagogical Support: <https://tips.uark.edu/>
- Learning Management System (LMS) Policy: <https://provost.uark.edu/policies/123000.php>
- cbray Github: <https://github.com/zenandjuice>
- cbray DDA Github: <https://github.com/zenandjuice/bbLearnDDA>

Community Resource:

- BBADMIN-L (<http://is.asu.edu/instruction/faq/usingBBADMIN-L.html>)
- BLKBRD-L (<http://is.asu.edu/instruction/faq/usingBLKBRD-L.html>)
- Blackboard Community: <https://community.blackboard.com/>
- Anthology Idea Exchange: <https://anthology-teachingandlearning.ideas.aha.io/ideas>

- Slack: <https://blackboardtechies.slack.com>

Administrator Help

- <https://help.blackboard.com/Learn/Administrator>
- Logs: https://help.blackboard.com/Learn/Administrator/SaaS/System_Management/Logs
- IP Filter: https://help.blackboard.com/Learn/Administrator/SaaS/Security/IP_Filter

Database

- DDA: https://help.blackboard.com/Learn/Administrator/SaaS/Integrations/Direct_Data_Access
- DDA Schema: <https://bbprepo.blackboard.com/#browse/browse:public:bbdn%2Fschema>
- Mobile Usage Activity:
https://help.blackboard.com/Learn/Administrator/Hosting/System_Management/Mobile_Usage_Activity
- Blackboard Data: <https://data.blackboard.com>
- Blackboard Data: https://help.blackboard.com/Blackboard_Data

Instructor Help (Original Course Experience)

- *Course Reports*: https://help.blackboard.com/Learn/Instructor/Original/Performance/Course_Reports
- *Test Access Log*: https://help.blackboard.com/Learn/Instructor/Original/Tests_Pools_Surveys/Resolve_Issues_With_Tests
- *Grade History*: https://help.blackboard.com/Learn/Instructor/Original/Grade/Grade_History
- *Grade Details*: https://help.blackboard.com/Learn/Instructor/Original/Grade/Grading_Tasks/View_Grade_Details

Instructor Help (Ultra Course Experience)

- *Course Activity Report*:
https://help.blackboard.com/Learn/Instructor/Ultra/Performance/Course_Reports/Course_Activity_Related_to_Grades
- *Student Activity (Test)*:
https://help.blackboard.com/Learn/Instructor/Ultra/Performance/Course_Reports/Student_Activity_Details
- *Student Activity (Gradebook)*:
https://help.blackboard.com/Learn/Instructor/Ultra/Performance/Course_Reports/Course_Activity_Related_to_Grades/View_Individual_Student_Course_Activity_Data
- *Discussion Performance and Analytics*:
https://help.blackboard.com/Learn/Instructor/Ultra/Interact/Discussions/View_Discussion_Performance

- *Progress Tracking:*
https://help.blackboard.com/Learn/Instructor/Ultra/Courses/Progress_Tracking
- *Analytics for Learn:*
https://help.blackboard.com/Learn/Instructor/Ultra/Performance/Analytics_for_Learn#ultra-access-analytics-for-learn-reports

Behind the Blackboard:

- Blackboard Logs (BtBb Article # [000074707](#))
- *Tracking User Activity in the Webserver Logs* (BtBb Article # [000014571](#))
- *Apache Logs and the Activity Accumulator* (BtBB Article # [000014497](#))

Tracking:

- *InfoSniper* (<http://www.infosniper.net/>)
- *User Agent String* (<http://www.useragentstring.com/>)

8. How to Bolster Academic Integrity

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Presentation will be made available at <http://bbadmin.uark.edu/at23/>



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