



Research-informed Framework for Using LMS data to Improving Teaching Practices

Guieswende Rouamba, Ph.D




Context



Context

Course Overview



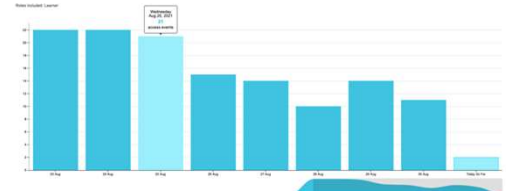
1 person visited this course today.

No quizzes have been submitted today.

Context

Course Access

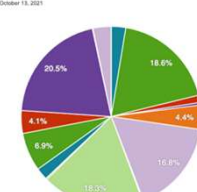
Number of users who accessed The 2021-EDU 3020-EDU 3000-EDU 4110-107 - Fall 2021-EDU 3020-EDU 3000-EDU 4110-107 Course per day



Context

Interactions per tool for DEV - Guieswende Rouamba - Guieswende Sandbox Fall 2020 - dev/te/guieswende-guieswende-sandbox-202110

Notes included: instructor
October 1, 2021 - October 13, 2021



Tool	Percent class	Total views (Last 10 months)
Dev	2.9%	41
Engagements	14.6%	200
Discussions	1.3%	14
Assessments	0.5%	7
Canvas	4.2%	57
Grades	10%	140
Survey	0.2%	3
Calendar	0%	0
Canvas	14.3%	198
Email	0.2%	4

Context

Class Progress


Filter to: All Users

Use agents to automate feedback

Name	Content Completed	Quizzing	System Access	Grades
Balaji Kuruvadi, Sathvik 999792504	3% Completed: 3 / 102	12%	System Accesses: 153	Need Improvement
Bishop, Larry lax_student8	5% Completed: 5 / 102	No scores received	No system accesses	Need Improvement
Bocker, Nick guieswamba_student10	0% Completed: 0 / 102	No scores received	No system accesses	Failing
Butler, Alexander butler231	0% Completed: 0 / 112	No scores received	No system accesses	No grades

Benefits of Learning Analytics


- 01 Improve teaching practices
- 02 Identifies learners' difficulties
- 03 Predict at-risk students
- 04 Increased learner content retention



Problem

“The process of using data to inform decisions in real-world educational settings is a decidedly non-trivial one”.

Wise & Jung (2019)



Data Sense-making




Data Sense-making

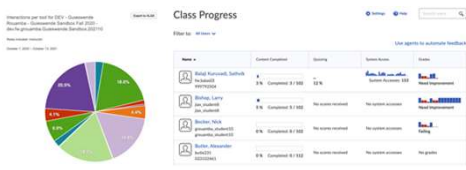
- Data awareness
- Asking questions
- Reading interpretation and action

Data Sense-making

01 Data awareness



Step 1: Data awareness - Dashboard



Dashboards show a graphic representation of students' data using charts and graphs.





Step 1: Data awareness - Dashboard

Mirroring dashboards: faculty have to do the work of interpreting the data

Class Progress Settings New

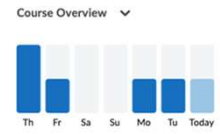
Filter by: All items

Use agents to automate feedback

Name	Content Completed	Quizzes	System Access	Grades
 Bahij Karoufeh, Sethik Faculty02 99797024	3% Completed: 3 / 100	12%	View Log View Profile System Access: 133	View Edit Head Management
 Bishop, Larry luc_student 91124680	5% Completed: 5 / 100	No scores received	No system access	View Edit Head Management
 Becker, Nick groumha_student02 groumha_student02	0% Completed: 0 / 100	No scores received	No system access	View Edit Fading
 Butler, Alexander butl021 00000264	0% Completed: 0 / 112	No scores received	No system access	No grades

Step 1: Data awareness - Dashboard

Advising dashboard do the work for you



1 person visited this course today.

No quizzes have been submitted today.

Step 2: Asking Questions

Goal-oriented questions



Step 2: Asking Questions

Problem-oriented questions



Step 2: Asking Questions

Instructional modification questions



Step 3: Reading, interpretation, and action

- Comparison
- Patterns
- Absolute or relative reference points



Recommendations

The infographic features three blue bars of varying heights. The first bar is the shortest, the second is the tallest, and the third is medium height. Each bar is topped with a small icon: a document for 'Time', a paperclip for 'Join', and two people for 'Collaborate'. The text is centered above each bar.

Recommendation	Description
Time	Learning analytics takes time
Join	Join a learning analytics community
Collaborate	Collaborate with peers

Visit us at CELT Attend our Workshops

An illustration of a person in a light blue shirt and dark pants standing next to a large, curved digital screen. The screen displays a computer monitor and keyboard, with the text 'Technology Personalize' visible. The person is pointing at the screen. The background is a light blue wash with some abstract shapes.