

Teamable Analytics: A Canvas-Integrated Team Formation and Analytics Tool

Presented by: Bowen Hui and Keyvan Khademi



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 - Only works in small classes
- External tool
 - Usually when 40+ class size

External Tool



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External Tool



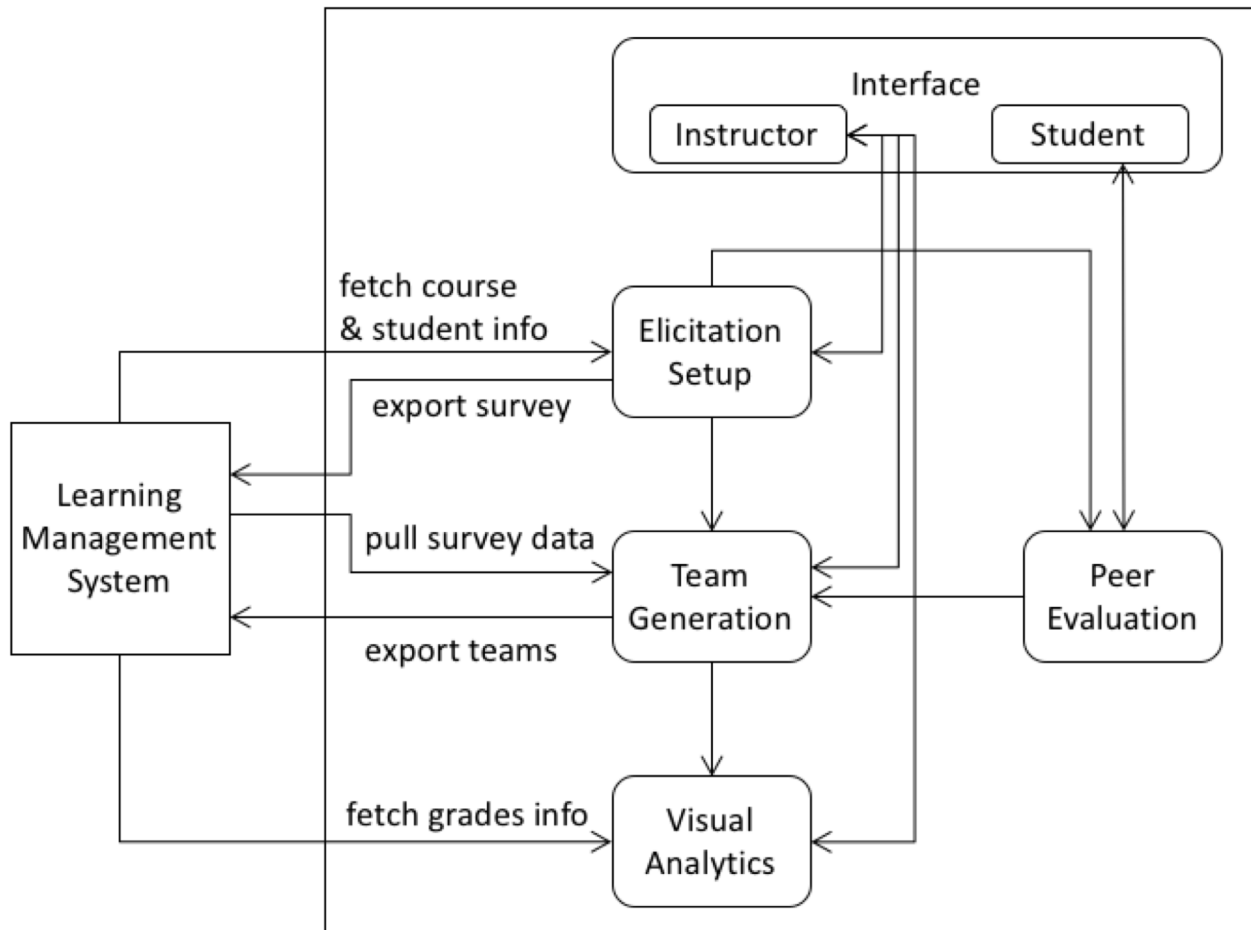
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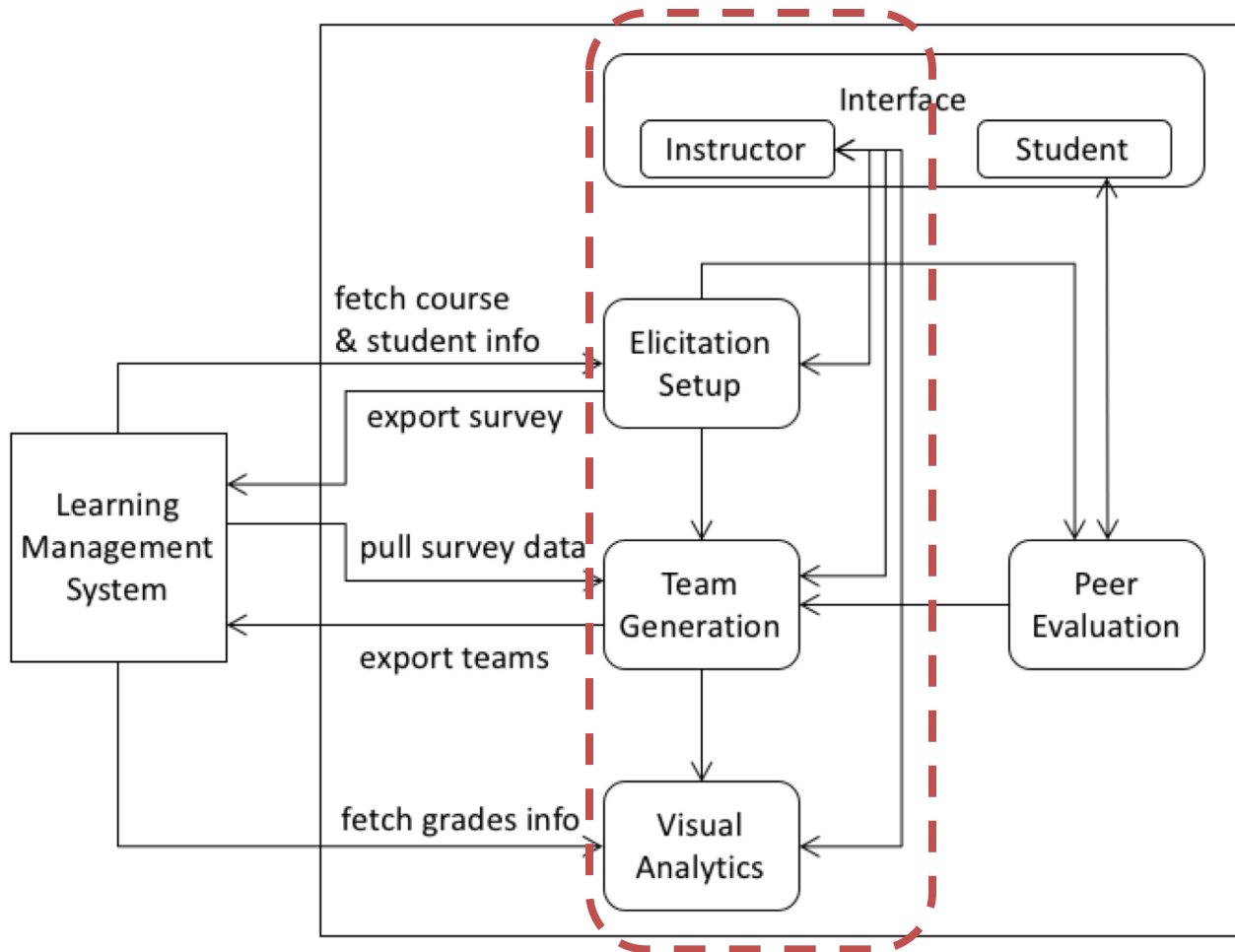


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 - Cost, complex interface, has self/peer eval, some analytics, cannot modify team membership
- Common Issues
 - No integrated with LMS (more initial setup and data transfer from peer evals)
 - Focus on diversifying (not clustering) students
 - No project support
 - Focus is on team formation, not team analytics

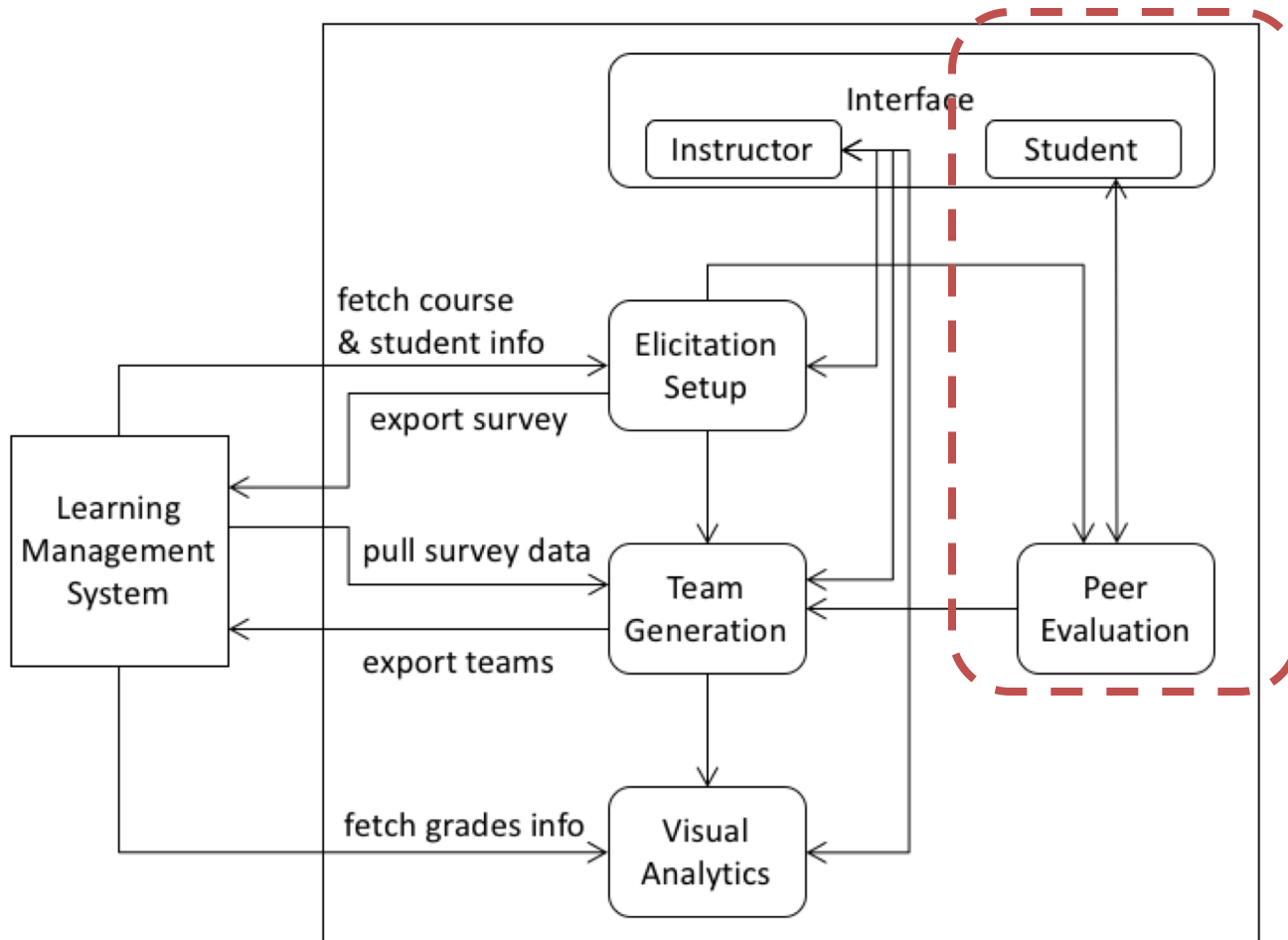
Teamable Analytics System Architecture



Teamable Analytics System Architecture



Teamable Analytics System Architecture



Overview of Teamable Analytics

The screenshot displays the 'Team Formation' interface. At the top, a dark navigation bar contains 'Team Formation' and 'How Does It Work?' on the left, and 'Admin Stats' and 'Logout' on the right. Below this is a horizontal process flow with seven steps: 1. Sections (highlighted in blue), 2. Students, 3. Attributes, 4. Projects, 5. Surveys, 6. Teams, and 7. Peer Evaluations. The main content area shows the breadcrumb 'Courses / Test Course' and a large instruction box for 'Step 1: Import Sections'. This box contains the following text: 'The first step is to import data from your course into the Team Formation tool. You can do this by clicking 'Import Course Data'. You can view a list of your students in the 'Students' tab. If you want to form teams by sections and those sections do not appear with your students, then that means that your course was not set up with the required section format on Canvas. In this case, you may manually create sections for your students by clicking 'Create New Section'. At the bottom of the box is a 'Go to Sections' link. Below the instruction box is a 'Team Formation Steps:' section with a list of steps and links: 'Step 1 - Import Sections' (Go to Sections), 'Step 1.1 - Create or Edit Sections' (Create a Section), 'Step 2 - View Students' (Go to Students), and 'Step 3 - What are Attributes?' (Go to Attributes).

Team Formation How Does It Work? Admin Stats Logout

1 Sections 2 Students 3 Attributes 4 Projects 5 Surveys 6 Teams 7 Peer Evaluations

Courses / Test Course

Step 1: Import Sections ⓘ

The first step is to import data from your course into the Team Formation tool. You can do this by clicking 'Import Course Data'.

You can view a list of your students in the 'Students' tab. If you want to form teams by sections and those sections do not appear with your students, then that means that your course was not set up with the required section format on Canvas. In this case, you may manually create sections for your students by clicking 'Create New Section'.

[Go to Sections](#)

Team Formation Steps:

- Step 1 - Import Sections [Go to Sections](#)
- Step 1.1 - Create or Edit Sections [Create a Section](#)
- Step 2 - View Students [Go to Students](#)
- Step 3 - What are Attributes? [Go to Attributes](#)







Overview of Teamable Analytics

What are Attributes? ⓘ

List of Attributes

+ Create New Attribute

Show 10 entries Search:











Name	Type	Number of Questions	Actions
Academic History	Multiple Choice	1	  
Big 5 Personality Test - Conscientiousness	Complex Multipart	9	  

Showing 1 to 3 of 3 entries

Previous 1 Next

List of Available Attributes to Import

Show entries Search:

Name	Type	Number of Questions	Actions
Academic History	Multiple Choice	1	 
Big 5 Personality Test - Agreeableness	Complex Multipart	9	 
Big 5 Personality Test - Conscientiousness	Complex Multipart	9	 
Big 5 Personality Test - Extraversion	Complex Multipart	8	 
Big 5 Personality Test - Neuroticism	Complex Multipart	8	 

Overview of Teamable Analytics

Team Formation [How Does It Work?](#) [Admin Stats](#) [Logout](#)

1 Sections — 2 Students — 3 Attributes — 4 Projects — 5 Surveys — 6 Teams — 7 Peer Evaluations

[Courses](#) / [COSC Team Analytics](#) / Teams

Generate Teams ⓘ

List of Team Sets


Show entries Search:

[+ Generate Teams](#)

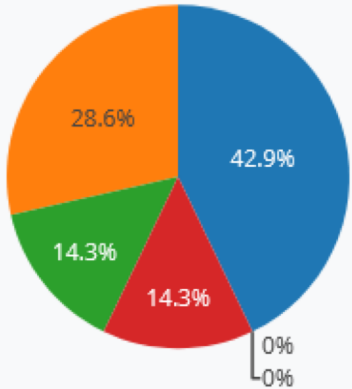
Team Set	T↓ Number of Teams	T↓ Added to Canvas	T↓ Actions
Term 1 Assignment Groups	5	✓	View Delete
Term 2 Teams	3	✗	Refresh Edit Add View Delete

Showing 1 to 2 of 2 entries Previous 1 Next

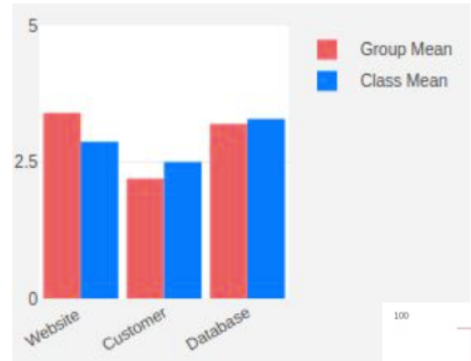
Developed by Jeff Bulmer, Opey Adeyemi, Mathew de Vin, Keyvan Khademi, Bri Marshnew, Dr. Bowen Hui, Callum Takasaka, Kanishka Verma

 THE UNIVERSITY OF BRITISH COLUMBIA

Visual Analytics Component



- Male
- Female
- Non-Binary
- Other
- Prefer not to say
- No Answer Provided



Operating Systems

Windows: 0
 Linux: 3
 MacOS: 4
 Other: 0

Mobile Game - iOS

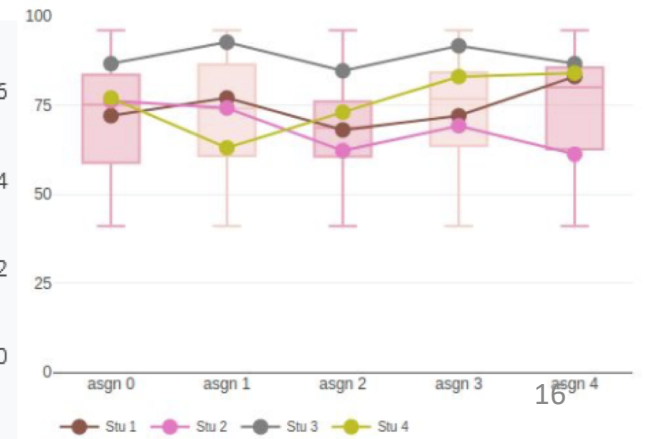
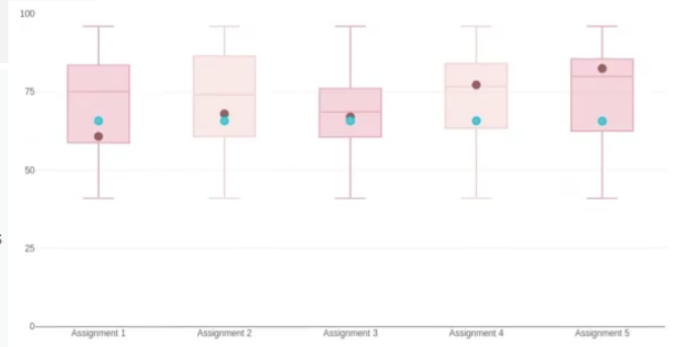
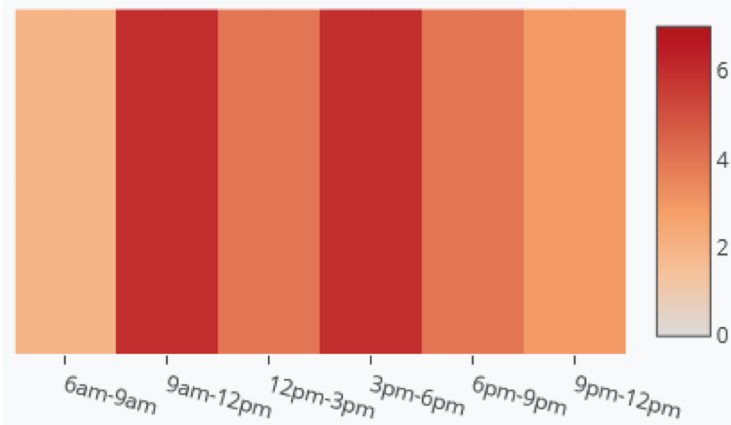
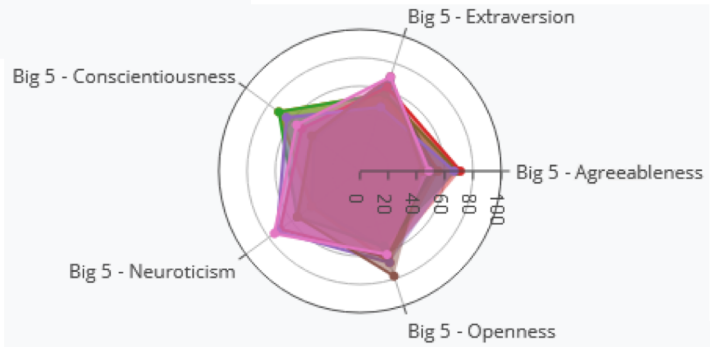
7 Students

Capstone Project Preference

Satisfaction Level: 86%

[View Members](#)

Name	Capstone Project Preference
CTLB	Mobile Game - iOS: ✓ Community Garden Planner: ✗
CTLC	Youth Sports Tournament Creator: ✗ Mobile Game - iOS: ✓
CTLD	Youth Sports Tournament Creator: ✗ Community Garden Planner: ✗



Peer Evaluation Component

Courses / COSC Team Analytics / Peer Evaluations

Preview Peer Evaluations

List of Peer Evaluations [Back to Instructor View](#)

Hello, **UBCO CTLA**. You can complete a peer evaluation or view the results if they are released by your instructor.

Show 10 entries Search:

Peer Evaluation	Completion	Closing Date	Actions
Milestone 1 Evaluation	0 / 5	Oct. 9, 2021, noon	View Next

Showing 1 to 1 of 1 entries [Previous](#) [1](#) [Next](#)

Courses / COSC Team Analytics / Peer Evaluations / Milestone 1 Evaluation

Peer Evaluation - Milestone 1 Evaluation [Back to Instructor View](#)

Hello, **UBCO CTLA**. Please select who to evaluate from the list of team members below.

Show 10 entries Search:

Name	Progress	Actions
UBCO CTF	0%	Start Evaluation
UBCO CTLL	0%	Start Evaluation
UBCO CTLN	0%	Start Evaluation
UBCO CTLQ	0%	Start Evaluation
UBCO CTLS	0%	Start Evaluation

Showing 1 to 5 of 5 entries [Previous](#) [1](#) [Next](#)

Courses / COSC Team Analytics / Peer Evaluations / Milestone 1 Evaluation

Peer Evaluation - Milestone 1 Evaluation [Back to Instructor View](#)

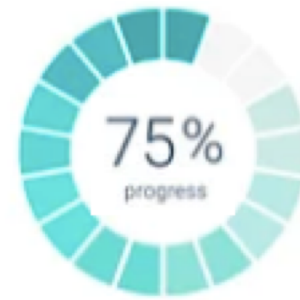
Hello, **UBCO CTLA**. Please select who to evaluate from the list of team members below.

Show 10 entries Search:

Name	Progress	Actions
UBCO CTF	100%	Edit Response
UBCO CTLL	67%	Continue Evaluation
UBCO CTLN	0%	Start Evaluation
UBCO CTLQ	0%	Start Evaluation
UBCO CTLS	0%	Start Evaluation

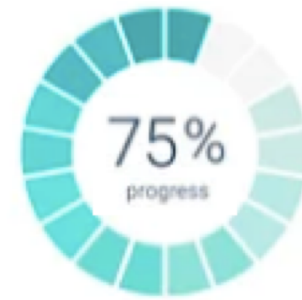
Showing 1 to 5 of 5 entries [Previous](#) [1](#) [Next](#)

Project Status



- Initial studies [Bulmer 2021]
 - 4 CS upper-level class (09/2019-04/2021)
 - Between 41 and 161 students
 - Criteria based on student characteristics, some had projects
 - Generally positive student satisfaction and activity cover

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 - Criteria based on student characteristics, some had projects
 - Generally positive student satisfaction and activity cover
- Classroom pilots completed in W2021T1-2
 - 7 interdisciplinary pilots (15 - 539 students)
 - Diversify student skills, diversify majors, cluster student goals, one class used peer evaluations
 - 93% neutral/positive student feedback, Visual Analytics difficult to use in large classes, need for “social” algorithm

Thank You!



- Development team



- Next steps

- Seeking collaborators

- Visual analytics research
- Pilot in your course?

- Contact: Dr. Bowen Hui bowen.hui@ubc.ca