

# BYU Technology Transfer

## CONFIDENTIAL INVENTION DISCLOSURE FORM Cover Sheet

Disclosure Number (TTO Use Only)

2022-038

LED

Date: 10-21-2022

Descriptive Title:

Team-Based Learning Tool

### PLEASE ANSWER ALL OF THE FOLLOWING:

1. Are you aware of any sponsored research or consulting agreements that may relate to this disclosure? \_\_\_\_\_ Yes ☒ No
2. Was any federal funding used in the research associated with the subject matter of this disclosure? \_\_\_\_\_ Yes ☒ No

Funding Source / Organization

Grant Number / Reference

Award Amount

\$ \_\_\_\_\_  
\$ \_\_\_\_\_  
\$ \_\_\_\_\_

**Name all persons who contributed to the conception of the invention\*.  
Each inventor must initial each page of this invention disclosure and sign on the last page.**

*\* Note: The threshold question in determining inventorship is who conceived the claimed invention. Unless a person contributes to the conception of the invention, he is not an inventor. Insofar as defining an inventor is concerned, reduction to practice, per se, is irrelevant.*

Full Name	BYU Net ID	Phone	Home Address & Email Address	Status (Select One)	Citizenship
Michael C. Johnson					
Lance Davidson					
				<input type="checkbox"/> Faculty/Staff/Admin <input type="checkbox"/> Undergrad Student <input type="checkbox"/> Masters Student <input type="checkbox"/> Doctoral Student <input type="checkbox"/> Non-BYU	

Received by BYU Technology Transfer:

10/26/2022

Date

David M. Brown

TTO Licensing Professional (Name)

David M. Brown

TTO Licensing Professional (Signature)



# BYU Technology Transfer



## CONFIDENTIAL INVENTION DISCLOSURE FORM

### Instructions

The following Confidential Disclosure will officially document the details of an Invention and establish an official record of its conception and/or reduction to practice by the date of this submission. Complete this form as carefully and completely as possible. The information contained herein may be used in legal actions to defend the patent and will be used to determine whether BYU will pursue a patent application and/or commercial development. **Sections I (The Invention(s)), II (Advantage), and III (Detailed Description) below may also be used in the initial preparation of the patent application.** Do not withhold any key elements of the invention(s) in Sections I, II, and III. A complete description is essential to an enforceable patent. This form may suggest the necessity of additional information. If possible, please obtain such information prior to submission.

Pursuant to the BYU Intellectual Property Policy and as a condition of employment at BYU all employees (i.e., faculty, staff, administration and students) assign all rights to any Invention or Creative Work which is conceived, developed and/or reduced to practice within the scope of said employment and/or which utilizes substantial BYU resources.\* An "Assignment and Royalty Agreement" to confirm the assignment and to acknowledge the university's commitment to share any royalties or other income with the inventor should be executed by each inventor, and an "Income Distribution Agreement" should be completed to designate the distribution of royalties between multiple inventors.

Note: When completed, this Invention Disclosure Form is an important legal document. Care should be taken in its preparation. If you desire assistance, call the Technology Transfer Office at (801) 422-6266. Information contained in this document is maintained in confidence by the Technology Transfer Office and normally will not be released to others except with attorney-client privilege, to research sponsors as required by contract, or under appropriate secrecy agreements, until a patent application is filed, the information is published, a determination not to file a patent application is made, or as may be required by law. The information contained should not be disclosed to others outside the university without the approval of the Technology Transfer Office.

Return the completed form to:

BYU Technology Transfer Office  
3760 HBLL  
Provo, UT 84602  
(801) 422-6266

*\* Inventions which are not within the field of employment and did not employ BYU resources should not be disclosed on this form, but a brief, non-confidential description of the Invention should be submitted to the Technology Transfer Office with a copy to the employee's chairman or director to request release of the Invention to the employee. Non-employed students have no obligation to disclose, unless they have used substantial university resources in connection with the conception and development of the invention.*

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# BYU Technology Transfer

## CONFIDENTIAL INVENTION DISCLOSURE FORM

*For all of the items below, please attach additional information as needed.  
Inventor(s) should initial the bottom of each page.*

Disclosure Number (TTO Use Only)

LED

*Descriptive Title:*

Team-Based Learning Tool

**I. The Invention(s):** Provide a brief description of the Invention(s) -- include the purpose of the Invention(s), any problems solved by the Invention(s), and if the Invention(s) is incorporated into, or used in combination with, a computer program.

The tool allows instructors a way to create a course and group students (or facilitate student self-forming groups). The system also facilitates the creation of quizzes using multiple-choice questions. These quizzes can be delivered to individual and to groups in the class. The individual quiz is administered in a traditional style (students answer each question and submit) or instructors can choose to have students wager points on one or more responses (confidence-based testing) but students do not receive their results until after they have taken the quiz again as a group. When taking the quiz as a group, students must respond to each question until they get the correct answer. That serves as immediate feedback on each question for all members of the group. This process is evaluative portion of the Team-Based Learning pedagogical approach.

**II. Advantages:** Describe the advantages of the Invention(s) over previous work.

Lower cost and a simpler workflow.

**III. Detailed Description:** Provide a detailed description of the Invention(s) and how it functions -- include drawings, sketches, and flow charts if appropriate.

The tool allows instructors a way to create a course and group students (or facilitate student self-forming groups). The system also facilitates the creation of quizzes using multiple-choice questions. These quizzes can be delivered to individual and to groups in the class. The individual quiz is administered in a traditional style (students answer each question and submit) or instructors can choose to have students wager points on one or more responses (confidence-based testing) but students do not receive their results until after they have taken the quiz again as a group. When taking the quiz as a group, students must respond to each question until they get the correct answer. That serves as immediate feedback on each question for all members of the group. This process is evaluative portion of the Team-Based Learning pedagogical approach.

Instructor View Screenshots

## My Courses

Creating courses allows you to group your students into sections. For each individual section, you can assign teams, view quiz results, and open and close quizzes.

## Current Courses

[New Course](#) [View Archived Courses](#)

STDEV 109 (Effective Study & Learning [Section 003]) - Winter 2022 (Mike Johnson)  
STDEV 109 (Effective Study & Learning [Section 003]) - Winter 2022

[Course Overview](#) [Edit](#) [Duplicate](#) [Move to Archive](#)

ARCH 201 (Architectural Design) - Fall 2021 (Jedd Walker)  
ARCH 201 (Architectural Design) - Fall 2021

[Course Overview](#) [Edit](#) [Duplicate](#) [Move to Archive](#)

B101 (Bending 101) - Summer 2022 (Joe Instructor)  
B101 (Bending 101) - Summer 2022

[Course Overview](#) [Edit](#) [Duplicate](#) [Move to Archive](#)

Chase Giles (Chase Giles) - Fall 2021 (Matthew Scoresby)  
Chase Giles (Chase Giles) - Fall 2021

[Course Overview](#) [Edit](#) [Duplicate](#) [Move to Archive](#)

CONST 335 (Design of Construction Systems) - Fall 2021 (Layne Packer)  
CONST 335 (Design of Construction Systems) - Fall 2021

[Course Overview](#) [Edit](#) [Duplicate](#) [Move to Archive](#)

Const 345 (Steel) - Fall 2020 (Layne Packer)  
Const 345 (Steel) - Fall 2020

[Course Overview](#) [Edit](#) [Duplicate](#) [Move to Archive](#)

CS100 (Rapid Development) - Fall 2023 (Kainalu Barino)  
CS100 (Rapid Development) - Fall 2023

[Course Overview](#) [Edit](#) [Duplicate](#) [Move to Archive](#)

## STDEV 109 - Fall 2022

[Course Overview](#)

## PERMISSIONS

[View](#)

## SECTIONS

[New Section](#)

Section 3

[View](#) [Edit](#)

## Effective Study &amp; Learning

STDEV 109 - Fall 2022

You can use the same quiz for multiple sections. Students from any section can use the same link to access the same quiz.

## Quizzes

[New Quiz](#)

Search by Name

Quiz Name	Open for Section(s)	Closed for Section(s)	Student Instant Access Link		
My Awesome Quiz	Sec 3 (Team)	No closed sections	wmfqv3xxw	<a href="#">Open/Close</a>	<a href="#">More</a>
In Class Quiz	Sec 3 (Team)	No closed sections	ebakf8ijjh	<a href="#">Open/Close</a>	<a href="#">More</a>
End-of-Term Exam Preparation	Sec 3 (Team)	No closed sections	kcyvydkt9i	<a href="#">Open/Close</a>	<a href="#">More</a>
St. Patrick's Day (🍀) Team Quiz for STDEV 109	No open sections	Sec 3	rctcp3zpqg	<a href="#">Open/Close</a>	<a href="#">More</a>
My Bestest Quiz	No open sections	Sec 3	sszzbk2wos	<a href="#">Open/Close</a>	<a href="#">More</a>
End-of-Term Prep 2	Sec 3 (Team)	No closed sections	tjzeg4php	<a href="#">Open/Close</a>	<a href="#">More</a>

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Team-Based Learning

Mike Sign out

My Courses

Shared Courses

Admin

STDEV 109 - Fall 2022

Course Overview

PERMISSIONS

View

SECTIONS

New Section

Section 5

View

Edit

Section 11

View

Edit

In Class Quiz

STDEV 109 - Fall 2022

Quiz Settings

Open/Close Quiz

Quiz Name

In Class Quiz

Student Link

https://tbl.byu.edu/link/quiz/ebakf8ijjh

Individual Quiz

Team Quiz

Individual Quiz Type

Point Spreading

Enforce Team Size

Yes

☒ No

Show Individual Answers on Team Quiz

Yes

☒ No

Automatically Assign Points

☒ Yes

No

Save and Close

Quiz Questions and Answers

Changes to quiz questions and answers will save automatically

Question #1

What is the G.U.E.S.S. acronym associated with?

A

Squared Breathing

B

Cornell Note-Taking

Student View Screen Shots:

BYU

Team-Based Learning

Bob Sign out

My Courses

Shared Courses

My Quizzes

START NEW QUIZ

If you have a quiz code, you can automatically be enrolled in the correct course and join your team.

Submit Quiz Code

My Courses

Course	Teacher
Experience-centric Management (ExDM 415) - Winter 2022	Camilla Hodge
phcs 105 spring 2022 (Physics 105) - Spring 2022	Laralee Ireland



## Individual Quiz: Brand New Post v9

## Overall Progress

1

2

[Submit Quiz](#)

## Question #2

A

B

C (Selected)

D

[Previous Question](#)Quiz: End-of-Term Exam Preparation  
STDEV 109 - Section 3[Leave Team](#)

## Vote for Team Captain

## New Team

Team Name

My Awesome Team

[Create Team](#)[Cancel](#)[Start Quiz](#)Quiz: End-of-Term Exam Preparation  
Current Score: 0/48

## Quiz Progress

1

2

3

4

5

6

7

8

9

10

11

12

## Question #1

What is the process involved in moving information from sensory memory to short-term memory?

A Attention

B Encoding (Incorrect)

C Forgetting

D Rehearsal

[Check Answer](#)[Next](#)

Quiz: End-of-Term Exam Preparation  
Current Score: 3/48

Quiz Progress

1	2	3	4	5
6	7	8	9	10
11	12			

Question #1

What is the process involved in moving information from sensory memory to short-term memory?

A Attention (Correct)

B Encoding (Incorrect)

C Forgetting

D Rehearsal

Next

We are planning on adding a few additional features: 1) a way for students to appeal an answer marked wrong on the first attempt (by sending a message to the instructor with their appeal) and way for the instructor to change the score if the appeal is successful. 2) a way to automate the group creation process based on demographics or some other data inputted by the instructor or the students themselves. And 3) a way for teams to provide each other feedback and have each team member evaluate the other members of the team. These additional features further help facilitate the Team-Based Learning process. 4) LTI Integration so scores can be pushed directly to a Learning Management System (currently score can only be exported in .csv format for uploading in the LMS).

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**(PLEASE LEAVE THIS PAGE BLANK)**



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IV. **Previous Work:** List all patent applications and patents of the inventor(s) which are related in any way to the Invention(s).

There are a few known products that have similar features: a) InteDashboard (has all features described and a few others – it facilitates the Application process in TBL) see <https://www.intedashboard.com/>, b) open software called Open TBL (that facilitates the iRAT and tRAT processes). See <http://www.opentbl.com/>. And c) CATME (out of Purdue University) has some of the peer evaluation capabilities that we are thinking of building in (but haven't yet). See <https://info.catme.org/>. d) and another tool called Feedback fruits.

V. **Public Disclosure:** Identify all printed publications (U.S. and foreign) in which the Invention(s) is described in whole or in part -- include names of persons (other than the inventors) or entities to whom the Invention(s) has been disclosed (FOR EACH, PLEASE INDICATE IF A NON-DISCLOSURE AGREEMENT WAS SIGNED), and dates of the disclosure, including the date, if any, of the first public use or offering for sale. Provide details of any plan to submit a report, abstract, paper, or thesis of this Invention(s) for presentation at a conference or to a research sponsor.

First public use was September 1, 2020.

VI. **Funding:** Identify ALL funding source(s) for the project under which the invention(s) was made. If any proprietary material (e.g., cell line, antibody, plasmid, computer software, or chemical compound) obtained from outside your laboratory was used to develop this invention(s) under a restrictive written or oral transfer agreement (other than a normal purchasing agreement), please attach a copy or summary of that agreement. **Indicate if BYU is under any obligation through a research contract, etc. to license or assign the Invention(s).**

The program was created using only BYU internal funding (through the Center for Teaching & Learning).

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VII. **Marketing:** Describe where and how the Invention(s) is to be used -- include names and contact information for any individual or organization that might be interested in licensing a patent to the Invention(s) and list any foreign countries where patent protection is, or may be, desired.

We would hope that CES institutions would get continued use of the tool in perpetuity (currently, BYU and BYU-I have used the tool). The only people we have approached so far is one of my colleagues at the CTL has talked with her former colleagues at Utah Valley University where several faculty use TBL in their classes.

VIII. **Other:** Provide any other information that you feel is relevant to the Invention(s) or to the protection or commercialization of the Invention(s).

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## INVENTION ASSIGNMENT

WHEREAS, the Assignor(s) (listed below and each referred to as "Assignor") have made an invention(s) (the "Invention(s)"), entitled:

Team-Based Learning Tool

and described in the attached Invention Disclosure Form. If the Invention(s) described in the Invention Disclosure Form are included in a patent application, the identifying information of the patent application ("Filed Application") is provided below:

Application No. \_\_\_\_\_, Filed on \_\_\_\_\_, and Attorney Docket No. \_\_\_\_\_.

**WHEREAS**, Brigham Young University, a corporation duly organized under and pursuant to the laws of Utah, and having its principal place of business at 3760 Harold B. Lee Library, Provo, UT 84602 (the "Assignee"), is desirous of acquiring the entire right, title, and interest in: the Invention(s); the right to file applications for patent of the United States or other countries on the Invention(s); any application(s) for patent of the United States or other countries claiming priority to these application(s); any provisional or other right to recover damages, including royalties, for prior infringements of these applications; and any patent(s) of the United States or other countries that may be granted therefor or thereon.

**NOW, THEREFORE**, for good and sufficient consideration, the receipt of which is hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee then in confirmation of any obligation to do so in said prior agreement, the Assignor has sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in:

- (a) the Invention(s);
- (b) the Filed Application identified above;
- (c) the right to file applications for patent of the United States or other countries on the Invention(s), including all rights under the Paris Convention for the Protection of Industrial Property and under the Patent Cooperation Treaty;
- (d) any application(s) for patent of the United States or other countries claiming the Invention(s);
- (e) any application(s) for patent of the United States or other countries claiming priority to the Filed Application identified above or any application(s) for patent claiming the Invention(s), including any division(s), continuation(s), and continuation(s)-in-part; and
- (f) any provisional or other right to recover damages, including royalties, for prior infringements of any application for patent identified in the preceding paragraphs (b) – (e); and

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(g) any patent(s) of the United States or other countries that may be granted for or on any application for patent identified in the preceding paragraphs (b) – (e), including any reissue(s) and extension(s) of said patent(s).

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the Invention(s), said applications, and said patents, including interference proceedings, without charge to the Assignor, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby authorizes and requests that the Assignee, or a duly appointed representative, insert in the spaces provided above the filing date, the application number, and the attorney docket number of the Filed Application when known.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

**Signature of Brigham Young University Technology Transfer Representative:**

Signature: David M. Brown

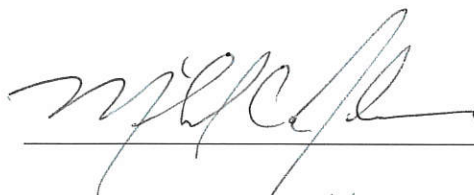
10/26/2022  
Date

Name: David M. Brown

(ASSIGNOR SIGNATURES ON NEXT PAGE)

**Assignor(s):**

1. Signature:



Name (Printed):

Michael C. Johnson

10/26/2022

Date

2. Signature:



Name (Printed):

10/26/2022

Date

3. Signature:

Name (Printed):

Date

4. Signature:

Name (Printed):

Date

5. Signature:

Name (Printed):

Date

6. Signature:

Name (Printed):

Date

7. Signature:

Name (Printed):

Date

8. Signature:

Name (Printed):

Date