

The background features several overlapping, tilted rectangular shapes in purple, blue, orange, and green. These shapes are decorated with a repeating pattern of small, light-colored circular icons. The icons include a smartphone with a gear, a hand holding a pencil, a person at a desk, a lightbulb, a handshake, a person with a magnifying glass, a person with a speech bubble, a person with a gear, a person with a lightbulb, a person with a magnifying glass, a person with a speech bubble, a person with a gear, and a person with a lightbulb.

# BCNET<sup>→</sup>2019

## **Chatting for Pedagogical Engagement:** Mattermost as a Tool for Learning

The University of British Columbia



## Who we are:

**Ian Linkletter** / Learning Technology Specialist

**Letitia Englund** / UX/UI Analyst

**Mari Pighini** / Lecturer/Cohort Advisor

**Pan Luo** / Senior Programmer Analyst

**Tim Kato** / Team Lead,  
Learning Technology Hub

## What we'll cover:

- An introduction to Mattermost
- The process of selecting a team chat tool
- Example use cases for team chat at UBC
- Recommendations from the UBC pilot
- Considerations & approaches in operationalizing Mattermost

# Mattermost introduction

BCNET<sup>→</sup>2019

# What is Mattermost?

## A new tool for team chat

- Mattermost is an **open-source** communication tool that facilitates collaboration in a chat-type environment.
- Think **Slack** or **Microsoft Teams**
- **Rocket.Chat** is another open-source option
- Also: G Suite Hangouts Chat, or Workplace by Facebook



UBC Mattermost is **FIPPA-compliant** & hosted on **EduCloud**

PROD

VERF

BC Open Ed Chat

EC  
ECED4...@ian.linkletter  
LTUGEC  
ECED4...

FAVORITES



ernesto

EC  
ECED4...

CHANNELS

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LLED 481 Presentation

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PRIVATE CHANNELS



Top Secret

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Joe Zerdin (Tech Sup...

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Team...

justin

justinstudent

kedrick

Leah Macfadyen

liam

Natasha Boskic

sharonhu

More...



☆ LLED 481 Presentation ▾

3



Search



## Beginning of LLED 481 Presentation

This is the start of the LLED 481 Presentation channel, created by Ian Linkletter (Tech Support) on July 10, 2017. Any member can join and read this channel. This channel's purpose is: This channel is a space for Ian to demonstrate some different kinds of posts..

Invite others to this channel

Set a Header

Mon, Jul 10, 2017



System 12:12 PM

ernesto added to the channel by [ian.linkletter](#)

System 12:12 PM

liam added to the channel by [ian.linkletter](#)

Ian Linkletter (Tech Support) 12:13 PM

@ernesto @liam Are you here? Let's post some different types of media, formatted posts, and emoji so the LLED 481 class can see in my presentation ~~tomorrow~~ next week.

(edited)



1



ernesto 12:27 PM

Deal, lemme see what I can find



liam 2:15 PM

<https://www.google.ca/>

liam 4:20 PM

Attached image

sample.jpg  
JPG 99KB

Write a message...



Preview Help

# SECTIONS model

## The SECTIONS Model (continued)

SECTIONS was developed by Dr. Tony Bates and Dr. Gary Poole and is detailed in Dr. Bates' open textbook called "Teaching in a Digital Age":

<https://opentextbc.ca/teachinginadigitalage>

## The SECTIONS Model (continued)

SECTIONS recognizes that “selecting media and technologies is a complex process, involving a very wide range of interacting variables.”

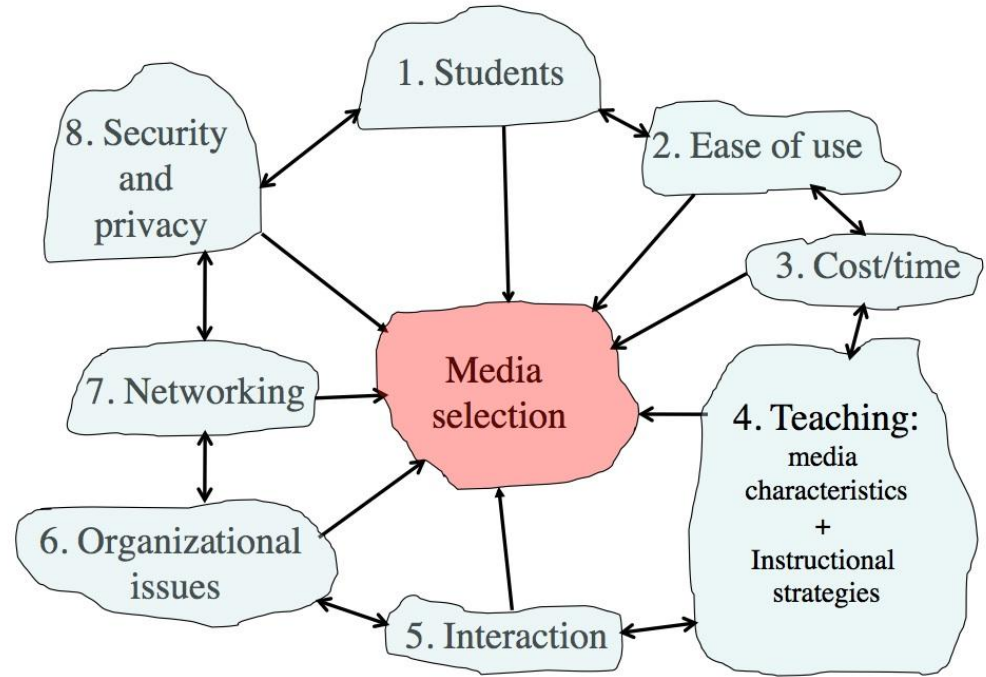
SECTIONS is a framework of practical considerations you can use to support decision-making.

It helped us bridge pedagogical, technological, usability, and accessibility considerations.



# The SECTIONS Model

- Students
- Ease of use
- Costs
- Teaching functions
- Interaction
- Organisational issues
- Networking
- Security and privacy



# Selection with SECTIONS

- UBC Faculty of Education collaborated with instructors on chat case studies
- Worked with UBC Learning Technology Hub to generate primary and secondary requirements
- Adapted Bates and Poole's SECTIONS framework into an evaluation rubric
- Environmental scan, test installation of two finalist candidates, user testing
- Final choice: Mattermost
- Pilot launched in April 2016

## The background of the slide is a dark teal color. It features a repeating grid of circular icons in a lighter teal shade. The icons include: a smartphone with a gear icon, a person at a podium, a person with a magnifying glass, a smartphone with a gear icon, a handshake, a location pin with an 'H', a share symbol, a handshake, a smartphone with a gear icon, a person at a podium, a person with a magnifying glass, a location pin with an 'H', a share symbol, and a handshake. A large white diagonal line runs from the top right corner towards the bottom left, separating the teal background from a white area on the right. In the bottom left corner, the text 'BCNET' is written in a large, bold, white sans-serif font, followed by '2019' in a smaller font. A small white arrow points to the right, positioned between 'BCNET' and '2019'.



# Graduate Cohort Students and Mattermost Chat

## Context: MED Cohorts in Early Childhood Education

- Early Childhood Educators working with children and families in preschool, daycare, out-of-school, and Primary Programs; social workers, health professionals, child and family counsellors in NGO and team leaders in Government offices across urban, rural and remote communities in Canada, North America and internationally
  - Unique in their diverse training, work experience and access to and experience with online resources
- Mattermost presents an alternative way to check-in, discuss, share samples, ideas and resources outside of their closed Canvas platform, and still within a safe environment that meets privacy and security criteria from agencies where they work
- Flexibility of Mattermost, accessible also through their mobile devices (web or app), is an advantage for those who are restricted from use while at desktop computers

# Examples of Pedagogical Interactions Using Mattermost Chat

- Small group
- Larger group
- One-on-One

# Examples of Pedagogical Interactions Using Mattermost Chat: Small Group-Private Channel

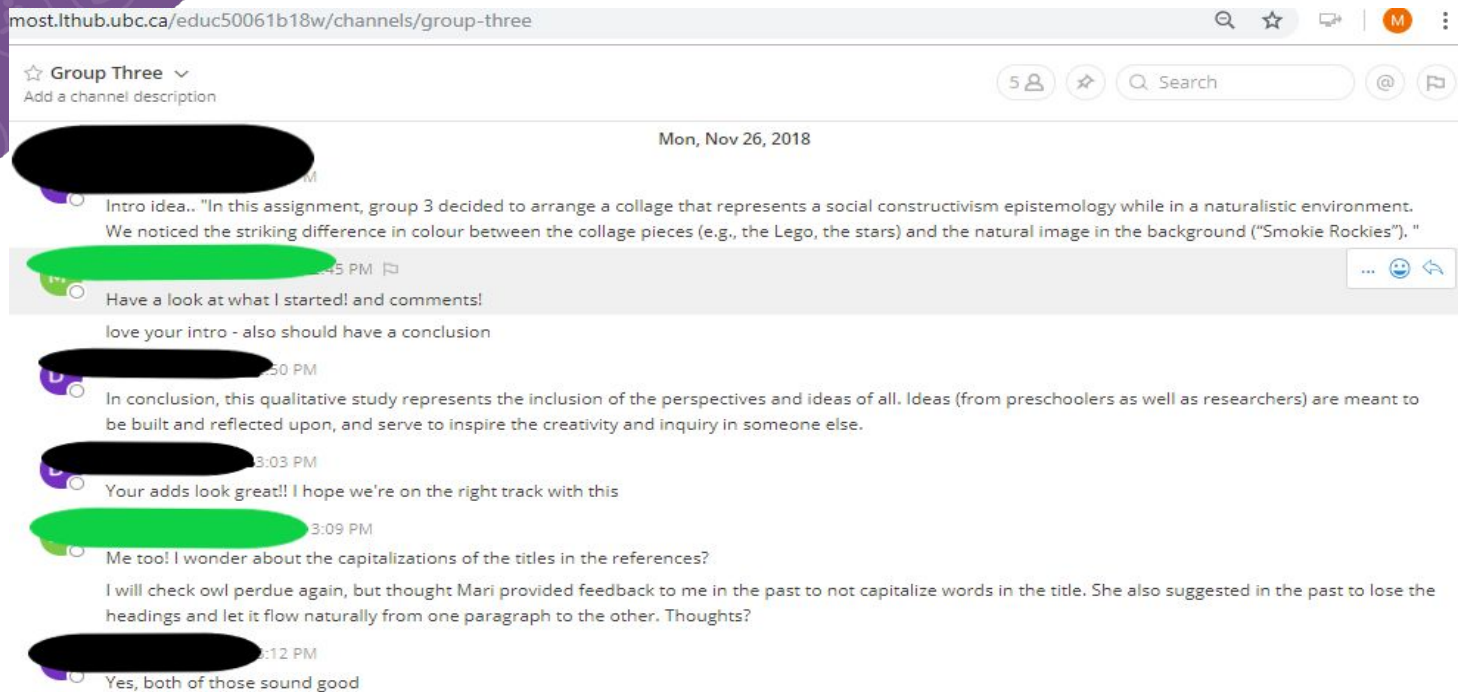


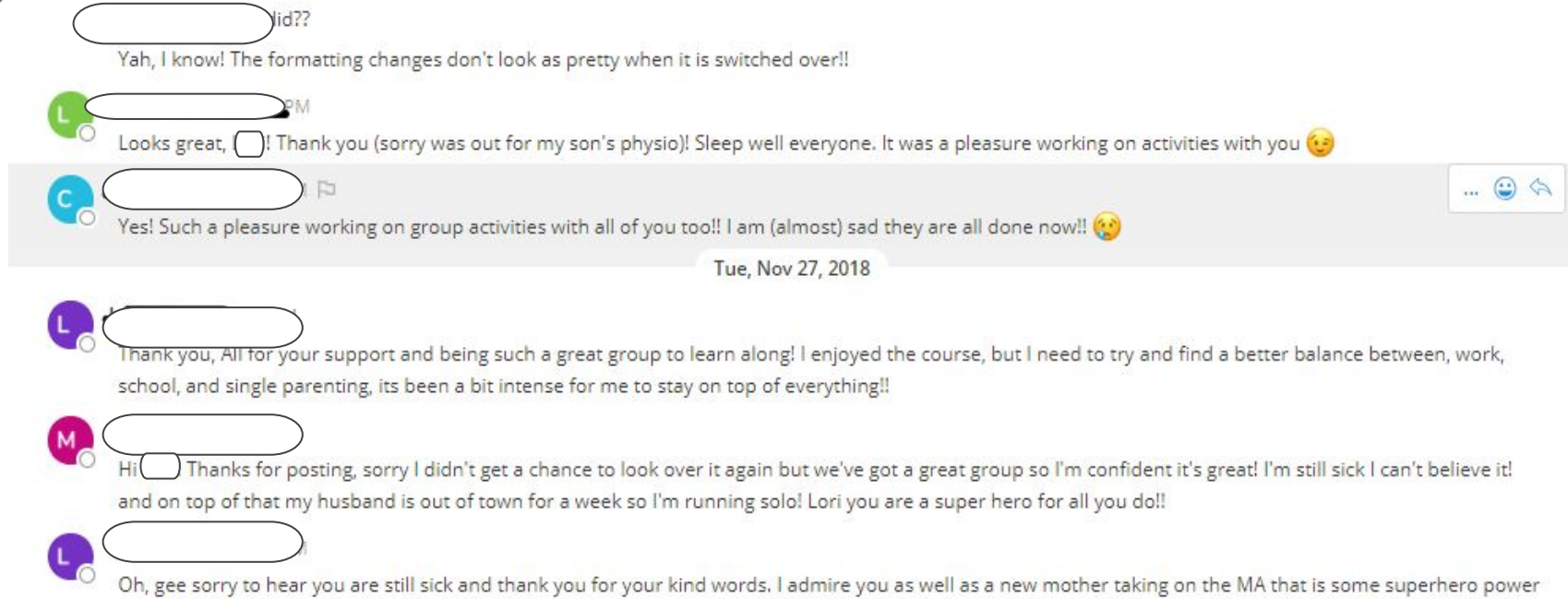
Figure1. "Smoky" Rockies Collage

Example of a brainstorming session: Students find ways to agree on an e-collage activity related to the topic of research design, before they submit to the whole class





# Examples of Pedagogical Interactions Using Mattermost Chat: Small Group



The screenshot displays a Mattermost chat interface with a purple patterned header on the left. The chat history shows several messages from users represented by colored circles (green, blue, purple, pink) and redacted names. A date separator indicates the conversation took place on Tuesday, November 27, 2018. The messages include a question about formatting, a thank-you note for a group activity, and personal updates from students.

[Redacted] id??

Yah, I know! The formatting changes don't look as pretty when it is switched over!!

L [Redacted] PM

Looks great, [Redacted]! Thank you (sorry was out for my son's physio)! Sleep well everyone. It was a pleasure working on activities with you 😊

C [Redacted] 📌

Yes! Such a pleasure working on group activities with all of you too!! I am (almost) sad they are all done now!! 😭

Tue, Nov 27, 2018

L [Redacted]

Thank you, All for your support and being such a great group to learn along! I enjoyed the course, but I need to try and find a better balance between, work, school, and single parenting, its been a bit intense for me to stay on top of everything!!

M [Redacted]

Hi [Redacted] Thanks for posting, sorry I didn't get a chance to look over it again but we've got a great group so I'm confident it's great! I'm still sick I can't believe it! and on top of that my husband is out of town for a week so I'm running solo! Lori you are a super hero for all you do!!

L [Redacted]

Oh, gee sorry to hear you are still sick and thank you for your kind words. I admire you as well as a new mother taking on the MA that is some superhero power

At the end of the course, students share personal and course-related comments about their experiences with group activities



# Examples of Pedagogical Interactions Using Mattermost Chat: Larger Group Discussion

☆ Town Square ▾  
Add a channel description

26 👤 ⭐ 🔍 Search @ 📌

2019 Summer Session registration periods  
May 2019 - August 2019  
The deadline for the registration period is open to all UBC students to register for the summer session registration period.

Registration Period	Registration Dates
May 2019	May 1 - May 31
June 2019	June 1 - June 30
July 2019	July 1 - July 31
August 2019	August 1 - August 31

Image Pasted at 2019-2-3 06:56.png  
PNG 58KB

👍 1

<https://students.ubc.ca/enrolment/registration/registration-dates#2019-summer-session-registration-periods>

Student Services

**Registration dates**

Find information on when your registration dates are.

Fri, Feb 08, 2019

5:47 AM

For anyone interested, this new article talks about the visit to my school by the Minister of Education (Alberta) to experience MicroSociety:<https://rdnewsnow.com/article/614377/eggen-says-aspen-heights-microsociety-shining-example-other-schools>

👍 2

Sun, Mar 03, 2019

1:12 PM

Hello, does anyone know how to access our former blog posts from Marlene's class that Mari mentioned? Thanks 😊

Write a message... 📎 😊

Preview Help

# Examples of Pedagogical Interactions Using Mattermost Chat: One-on-One

here is my abstract

7:22 PM Outdoor education is growing area of interest in early childhood education, especially with the new Early Years Learning Framework. Traditionally, children spend 30-45 minutes per day outdoors while in childcare which is based on British Columbia childcare licensing standards. This article considers how children benefit socially when they are given the opportunity to experience outdoor education in early childhood settings for more than 4 hours per day over a 6-month period of time. The Mosaic method will be used to examine the social benefits the children are experiencing. This is completed utilizing photographs the children take; and conversations that occur from them. Avenues for future research have been discovered with a call for researchers to examine childcare in Northern British Columbia.

7:43 PM

looking for a bit of clarification. Can I copy chunks of my other paper to complete the final paper. or does everything have to be reworted?

Thu, Dec 06, 2018

Mari Pighini 12:26 PM

Hello (1) this is a proposal for a research study, and not an article; indicate your proposed design and proposed participants; you use future tense and cannot report on findings ("avenues for future research have been discovered" but instead you end with proposed data analyses. 2) you need to use what you have worked so far in this course for the research proposal -copying and pasting verbatim not always works because you have to edit accordingly, but the whole course is designed as a laddering experience so that from 3.1 to 3.3 the sections are integrated. Extension granted until Friday at midnight. My best to you!

Mari Pighini 3:58 PM

Write a message...

In this example, a student shares a first abstract for her final assignment and I provide feedback

# Reflections and Considerations

As an instructor, I used Mattermost chat as a pedagogical tool to:

1. **Improve efficiency in communicating** with students in a course
2. **Enhance the student experience generally**, especially for distance courses

Take away points to share:

- Most frequent use for cohort and diploma/certificate students is one on one
- Richest, deepest conversations in the one-to-one when pondering upon a notion, reflecting on a critical thought: Very close, personal communication with students
- Incredibly useful, effective and timely for small group discussions in the cohort setting.
- A consideration on how to invite more “small groups” created in the MED cohort course to use this tool (not all students chose mattermost chat for this purpose)
- Looking forward to expanding the use of the large group discussion for students in the new e-portfolio setting as we brainstorm and build their blogs/websites.

# UBC pilot recommendations

# How did we evaluate the Mattermost pilot?

## UBC Pilot Process



- **Understand each user groups' experience at end of term/year**
  - Interview instructors & TAs (8 participated)
  - Survey students (202 responded)
- **Analyze this feedback for trends**
  - Not to *judge* technology, but to inform *best practices* of using it
    - Identify **potential pedagogical benefits** (& failings)
    - Recommend **pedagogical implementation strategies**

# What did we learn from Mattermost feedback?

## UBC Instructors/TAs:



- **+ Saw improving communication flow as primary benefit**
  - Many thought Mattermost **helped 1-on-1 communication**
  - Also **allowed crowdsourcing** basic questions in public channels
- **– Struggled most with setting real-time chat work-life boundaries**
  - Some were fine **monitoring & responding to Mattermost** constantly; others were not
  - Many struggled likewise with how much to encourage student use

# What did we learn from Mattermost feedback?

## UBC Students:

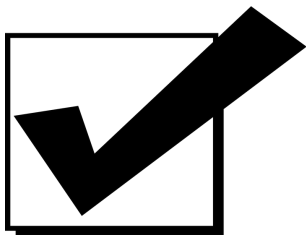
- **Reported few negative experiences, but divided b/t neutral & positive, with many weighing the pros & cons**



- **+ Mattermost Pros:**
  - 1) stronger sense of connection
  - 2) several usable & useful features
  - 3) immediacy to interactions
  - 4) way to engage informally around a course
- **— Mattermost Cons:**
  - 1) yet another tool to access & learn
  - 2) sense of communication overload
  - 3) few features with poor usability
  - 4) feeling left out of discussions sometimes

# What did we conclude from the evaluation?

## Key Recommendations for Mattermost



### 1. Set up some channels for smaller groups (10-30) of students

*Help students meaningfully contribute & interact without feeling drowned out or overwhelmed, especially in larger courses*

### 2. Organize content in clear channels & guide organization

*Model and explain to students how best to use areas & features to create shared understanding of effective communication*

### 3. Set explicit expectations around availability of instructional team

*Tell students how & when instructors/TAs will interact in real-time vs. with delay*

[Recommendations available in PDF format at: [bit.ly/mattermostrecs](https://bit.ly/mattermostrecs)]



# What did we conclude from the evaluation?

## Key Recommendations for Mattermost

### 4. **Integrate with or regularly prompt use from other course site(s)**

*Make chat feel like an integral & useful part of the course, even if it's external*

### 5. **Set loose guidelines for student participation**

*Decrease student stress & disengagement with norms other than 24/7 participation, possibly including:*

- Scheduling some specific times for real-time discussions
- Highlighting a single channel/hashtag/thread weekly
- Adding marks or badges to reward participating
- Assuring students they can meaningfully contribute later (not real-time)
- Helping students learn how to determine manageable use

[Recommendations available in PDF format at: [bit.ly/mattermostrecs](https://bit.ly/mattermostrecs)]

# What did we conclude from the evaluation?

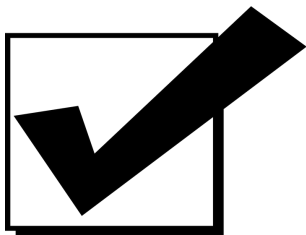
## Key Recommendations for Mattermost

### 6. **Emphasize private communication options for getting help**

*Highlight value of 1-on-1 student-instructor/TA engagement opportunities, especially for fully online courses*

### 7. **Explain why Mattermost over other more established chat tools**

*Justify learning another interface while explaining & educating students on the importance of privacy*



~ That's the magic 7! ~

[Recommendations available in PDF format at: [bit.ly/mattermostrecs](https://bit.ly/mattermostrecs)]

The background on the left side of the slide is a dark teal color with a repeating pattern of white circular icons. These icons include a smartphone with a gear, a person at a podium, a person with a pencil, a smartphone with a gear, a handshake, a location pin with an 'H', and a share symbol.

# Operationalizing Mattermost



# Mattermost Implementation Considerations

## 1. Privacy

- a. Student information such as names and emails are stored in Mattermost. It was important to optimize the settings:
  - i. Hiding email addresses from non-admin users
  - ii. Inability to view users outside your team(s)
  - iii. Good privacy settings without removing functionality

## 2. Permission & Administration

- a. Permission settings in Mattermost have limited granularity
- b. We decided that our central LT Hub team would handle administration

## 3. SIS Integration

- a. We needed the ability to have courses auto-imported into Mattermost
- b. Enabled LDAP-based integration for SSO (single sign on)
- c. Built Mattermost plugin for LTBot that syncs course rosters

# Mattermost Implementation - Technical

## 1. Using containers

- a. Extremely fast initial deployment - within a day or two
- b. No need to manage dependencies - on both OS and app level
- c. Consistent deployments for different environments - dev, stg, prod
- d. Fast upgrade cycle - change version number and deploy
- e. Stable upgrades and easy roll back

## 2. Operations with Chatbot - LTBot

- a. Mattermost provides rich REST APIs
- b. Third party python wrapper
- c. Easy implementation of basic operation tasks in LTBot

# Mattermost Operational Support

We have a bot called “ltbot” to minimize support time requirements.

- ltbot accepts commands to create new teams, remove teams, add users to teams, etc. in Mattermost.
- This automation **enables staff to complete onboarding requests expediently** with a couple simple commands.



**Adam Tuck** 5:32 PM

!mm sync ADHE\_327\_93S\_2019S



**ltbot** APP 5:32 PM

OK, syncing course(s) [['ADHE\_327\_93S\_2019S', 'UBC']] to team ADHE32793S19S.

Team ADHE32793S19S is created.

Now adding students to the team...

Added 25 students to the team ADHE32793S19S.

Finished to sync course ADHE\_327\_93S\_2019S.

# Mattermost Operational Support

In general, we receive minimal support requests for Mattermost. The tool is intuitive and robust.

The **two main support inquiries** at UBC Learning Technology Hub are:

1. **Setup requests** for new teams
2. **Authentication issues** specific to the LDAP login integration for individual user accounts

From the ongoing maintenance side, the **main operational task is deploying updates**:

1. Testing updates in a test environment
2. Pushing updates to production

# What are some emerging use cases?

## Non-credit learning communities

- Student-led communities for graduate students and cohorts
- MET Social Lab
- Teacher-Librarianship teaching team
- SOGI Alliance
- Summer Institutes
- Indigenous Storybooks Project
- Digital Literacy Centre





# Outstanding Questions

Team chat has become core infrastructure for teaching and learning: **are we addressing the need?**

How can we work together from here?



Thank you!

Any questions?