

## BCcampus FLO EdTech Sandbox Series



# BCcampus FLO EdTech Sandbox Series

*A Collaborative Process of Innovation*

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BCCAMPUS  
VICTORIA, B.C.



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# The FLO EdTech Sandbox Series Pressbook: Structure

Across four chapters, the book offers a comprehensive journey into the world of emerging technologies in teaching and learning.

## **Chapter 1: Introduction to the FLO EdTech Sandbox Series**

The opening chapter sets the stage for the entire series, introducing its core purpose, the structure of the content, and what readers will learn. It highlights the series' dedication to empowering educators, especially online facilitators and instructors, with the knowledge and confidence to leverage cutting-edge tools in a tech-infused teaching environment.

## **Chapter 2: Sandbox Approach to Empower Learners' Aspirations**

Chapter Two explores the sandbox approach's theoretical and practical implications, illustrating how it facilitates an environment where educators can try new tools and gather exciting ideas for their teaching activities. The chapter also discusses how the sandbox approach can empower learners' aspirations by encouraging them to step outside their comfort zone and cultivate a mindset of curiosity and exploration.

## **Chapter 3: Insights from the FLO EdTech Sandbox Sessions**

Central to this Pressbook, Chapter Three presents detailed insights from the five two-hour sessions facilitated by the sandbox leaders, innovative experts including instructors, educational developers, and librarians. Emphasizing the sandbox as a space for experimentation, play, and learning, each session focused on one open, free, or low-cost tool, enabling participants to freely explore, conceptualize, and gather exciting ideas for teaching activities. The sessions included hands-on activities that allowed ample experimentation, but also facilitated the integration of these tools into teaching practices. The tools covered in the series, presented through the subsequent sub-sessions, include Mattermost, podcasting, Padlet, digital sticky notes, and H5P:

3.1. Building Learning Communities with Mattermost

3.2. Listen and Learn: Podcasting for Content Delivery in Hybrid and Online Classes

3.3. Padlet Unleashed: A Comprehensive Review of Its Strengths and Opportunities

3.4. Digital Sticky Notes to Increase Student Engagement

3.5. Creating Active Learning Experiences Using H5P

## **Further Resources**

In Chapter Four, you will find further resources related to the FLO EdTech Sandbox, including the session slides, other teaching materials, and further support resources related to the EdTech Sandbox for teaching and learning transformation.

PART I  
INTRODUCTION



# I. The FLO EdTech Sandbox Series: A Collaborative Process of Innovation

GWEN NGUYEN AND BRITTANNY DZIOBA

*Gwen Nguyen and Brittany Dzioba are advisors on the Learning + Teaching team at BCcampus*

## The FLO EdTech Sandbox Series: A Collaborative Process of Innovation

The [FLO \(Facilitating Learning Online\) EdTech Sandbox](#) series began in the fall of 2023 as an initiative offering a safe online environment in which educators could explore, experiment with, and consider adopting new tools for innovative teaching and learning in post-secondary settings in British Columbia. It was inspired by the sandbox approach in education encouraging an experiential, hands-on, exploratory learning experience, providing educators with the freedom to try new things, play, and learn from mistakes in a nurturing environment.

The mission of the series was to foster digital teaching innovation, encouraging faculty and staff to embrace emerging technologies with curiosity and openness, ultimately enhancing the learning experience for all. Through five interactive sandbox sessions, participants were given the opportunity to engage with the tools, collaborate with fellow educators to review their features, and gain valuable insights from experts on integrating these tools into their teaching practices.

The EdTech Sandbox initiative was brought to life through a collaborative process, inviting [expressions of interest](#) from potential sandbox leaders with both leadership and facilitation skills. The process involved a rigorous review of proposals against a detailed rubric, focusing on the leaders' demonstrated experience with a tool in teaching and learning environments, a thorough understanding of the tool's features and uses, a solid evaluation of the tool's openness and accessibility, and the practicality and creativity of the proposed activities for the sandbox session.

EdTech Sandbox leaders then worked closely with the Teaching and Learning Team at BCcampus to make the sandbox sessions accessible and available to a broad audience — all educators, facilitators, faculty members, and learning designers in British Columbia. The leaders were encouraged to adopt the Guiding Rubric for EdTech Tool Sandbox Evaluation inspired by the [Rubric for eLearning Tool Evaluation](#) to review the tools based on criteria including functionality, accessibility, technical and mobile design, privacy, data protection rights, and teaching and learning presence. However, although they could use the rubric with participants for reviewing the tools or designing teaching activities, each sandbox leader also brought their unique perspective and teaching approaches, contributing to the distinct and effective nature of each sandbox session.

In addition, each Sandbox leader compiled an overview, tips, tool features, and feedback from participants into a concise blog post. This book is a compilation of those blog posts, along with recordings of each session, their

transcripts, and additional resources. It aims to provide readers interested in exploring, using, and adopting these emerging tools with a centralized and accessible platform to facilitate their exploration.

PART II  
SANDBOX APPROACH TO EMPOWERING  
LEARNERS' ASPIRATIONS



## 2. A Sandbox Approach to Empowering Learners' Aspirations

GWEN NGUYEN

*Gwen Nguyen is an advisor on the Learning + Teaching team at BCcampus*

My little one is in preschool, and just a few days ago she came home and excitedly told me, “Mami, Mami, it’s summer! It’s sandbox time outside.” I don’t know if it was the weather, the idea of playing outside, or the sandbox that made her enthusiastic that day, but her excitement made me think. When was the last time I felt that excited about going to school, coming home, and sharing with someone that I had learned or played with something?

### What Is a Sandbox?

Have you heard of the term *sandbox*? Although it seems self-explanatory, it carries multiple meanings depending on the context. [According to Merriam-Webster](#), a sandbox is a box filled with sand usually found in playgrounds where children can play. These spaces allow children to engage in various games and unleash their creativity.

The term has also been adopted in fields such as technology, software development, game design, and education. In technology and software development, it refers to a testing environment that enables developers to experiment with new code or applications without affecting the production environment. It provides an isolated space where developers can test and debug their software before deploying it to a live system.

Expanding on the concept of a safe haven for young children to explore the real world through play, *sandbox* is also used in the context of teaching and learning. In this context, a sandbox approach is an educational approach where learners are placed in environments or situations that closely resemble real-life scenarios but without any risk. In other words, the sandbox emphasizes hands-on, experiential learning in a safe and controlled environment. It provides learners with the freedom to explore and experiment with concepts or ideas. In such environments, learners can “learn effectively while still experiencing a sense of authenticity and accomplishment” (Gee, 2007, p. 39).

Whether it’s a play area for children, a testing environment for developers, or an experiential learning approach in education, the concept of a sandbox highlights the importance of providing a safe and creative space for exploration and growth.

### Sandboxes Everywhere

The sandbox approach has proven effective in providing an environment where teachers can collaboratively work together through successive iterations, collecting and analyzing data and developing a report framework without fear of failure or inadequacy (Mudrinic, De Leo, Nicks, Knobel, & Lankshear, 2023). It has also been applied as a valuable and sustainable method of professional development as well as a platform for content sharing during online teaching (Ervin-Kassab, 2020, 2022). Sandboxes play a crucial role in enhancing the effectiveness of educational technology interventions, reducing costs and generating evidence on the implementation of education technology at scale ([Simpson, 2020](#)).

At BCcampus the notion of a sandbox for teaching and learning with technology isn't new. As early as 2011 we invited scholars from across the province to [play in the sandbox](#). In 2014 we provided a [digital sandbox as a test kitchen for technology](#) where educators could play around with ingredients and a recipe (software application) before they made informed decisions about the technology they could use to enhance curricula. We also offer a [sandbox pilot process](#) for educators to connect and collaborate with different sectors across the province to test and evaluate new education technologies. These evaluations are both pedagogical and technical and are designed to help B.C. post-secondary institutions make informed decisions about education technology.

This fall BCcampus is launching a new [FLO EdTech Sandbox series](#) to offer a safe online environment for educators to explore and experiment with new tools for innovative teaching and learning. We eagerly invite you to collaborate with us.

## How Can the Sandbox Approach Empower Student Aspirations?

Friere (1972/1986), in [Pedagogy of the Oppressed](#), asserted that teaching is a process of empowering learners to drive their own learning and develop a profound understanding of their own position within a community through active participation and engagement. Aspirations, as described by Nguyen and Slavic (2017), refer to an individual's voice and choice and to their natural curiosity, which leads to action in the world. Regardless of whether aspirations are heard or seen, they are active and resilient throughout life. Teaching should be an invitation for learners to engage in an ongoing conversation that helps fulfill their aspirations.

In an education sandbox project, [teaching staff at the Center for Excellence in Teaching and Learning at the University of Arizona Global Campus](#) shared their approach of allowing students to explore software based on their own choices. Every week students were invited to participate in a technology forum where they could present the tool they wanted to test, use, or play with and discuss the challenges they encountered as well as rewarding experiences in academic or personal contexts. Through a playful, unique, creative learning environment, students were encouraged to embrace learning from mistakes, troubleshoot, reflect, and repeat this circle again.

The sandbox approach has the potential to greatly empower learners' aspirations. Advocating for experimentation and encouraging students to step outside their comfort zones, cultivates a mindset of curiosity and exploration. It also empowers students by granting them the autonomy to choose the content of learning that resonates with their interests and needs, fostering a sense of ownership and engagement in their learning journey. The sandbox approach challenges students to consider real-life situations, bridging the gap between theory and practice and preparing them for the complexities of the world beyond the classroom. Promoting a boundary-free environment for creativity where imagination knows no limits, nurtures innovative thinking and problem-solving skills. As it emphasizes there are no right or wrong answers, it encourages them to take risks and embrace their unique perspectives. This approach not only helps students gain new skills and knowledge but also brings them joy, pride, and a deep sense of fulfillment as they see themselves grow in their learning journey.

## Design a Sandbox

### Tip 1: Build a Sandbox

In the spirit of a sandbox for learners to freely play, think of ways to create an environment where they can practice,

experiment, and improvise without the need to take things too seriously. This sandbox will help your learners explore, get hands-on experience, make mistakes, and have fun while learning. In the age of technology-infused teaching, some key features of a sandbox, as suggested by [Nat Eliason](#), include:

- **Affordable:** It should be low-cost or free, so there are no barriers to starting and it encourages learners to make mistakes and build confidence.
- **Low risk:** The stakes should be low, so learners feel comfortable showcasing their work without worrying about it being perfect or facing criticism.
- **Public:** The sandbox should provide a platform for learners to share their work in some way, ensuring they can make it available to others.

For instance, in a project where I require an academic report from my student teachers about the school culture and their practicum journals, I could consider asking students to experiment with creating a blog on WordPress, Medium, or Squarespace.

## Tip 2: Try Everything

I messed up tonight, I lost another fight

Lost to myself, but I'll just start again

I keep falling down, I keep on hitting the ground

I won't give up, no, I won't give in

'Til I reach the end, and then I'll start again

No, I won't leave, I wanna try everything

I wanna try even though I could fail

— SHAKIRA, "[TRY EVERYTHING](#)"

In a sandbox, encourage learners to try everything and experiment with methods and approaches. For example, in a WordPress sandbox, if learners haven't tried communicating through infographics or exploring a topic aesthetically, motivate them to reflect on their learning from new perspectives. It is through this willingness and eagerness to try that all gaps can be bridged and the borders of the learning sandbox can be expanded.

Remind your learners that with the sandbox approach, the outcome or final product is not the primary focus. In the article "[Self-Education: Teach Yourself Anything with the Sandbox Method](#)," Nat Eliason emphasized that how we practice what we're learning is just as important as what we choose to practice. Eliason suggests purposeful practice within the sandbox, which involves:

- Continuously assessing learning and identifying areas that need improvement
- Setting a goal just beyond the current ability
- Practicing with intense focus
- Seeking feedback from others and incorporating it into the next cycle

## Tip 3: Enjoy Playing with Others and Value Feedback

When I joined my institution as a faculty member, I was provided with a sandbox on a platform called Playspace. It may sound like a personal space, but if you observe any outdoor sandbox, you often see children not only playing with tools but also engaging with others. It's important to encourage learners to invite others to join the sandbox to maximize active learning through continuous interaction, feedback, and growth through learning experiences.

As stated in the [B.C. Post-Secondary Digital Literacy Framework](#), a digitally literate citizen is expected to approach new technologies with curiosity, confidence, and the ability to troubleshoot when technologies don't work. I invite you to envision how the sandbox approach can be integrated into your teaching practice, enabling both you and your learners to adapt and thrive in this digital age.

Stay tuned for our FLO EdTech Sandbox Series starting in fall 2023.

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PART III  
INSIGHTS FROM THE FLO EDTECH SANDBOX  
SESSIONS



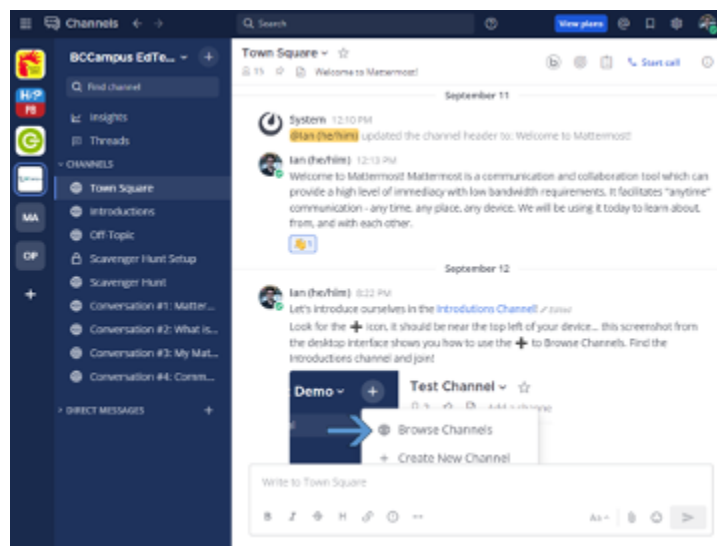
# 3.1 Building Learning Communities with Mattermost

IAN LINKLETTER

As part of the BCcampus FLO EdTech Sandbox Series, Ian Linkletter presented about Mattermost as a technology for building community in an online learning environment. In this post you will learn about the key features of Mattermost, recommendations for maximizing its pedagogical benefits, and some takeaways from the session.

*Ian Linkletter is an emerging technology and open education librarian at the British Columbia Institute of Technology*

Mattermost is an open-source team chat tool that facilitates communication and collaboration. It's similar to Slack and Microsoft Teams, but because it is open source, it has advantages over vendor-controlled options. Mattermost supports “anytime” communication – any time, any place, any device. With Mattermost, students can benefit from a low-bandwidth way to synchronously or asynchronously communicate in writing with their instructor and other members of their learning community.



Mattermost screenshot of FLO EdTech Sandbox session

Session participants were familiar with vendor-controlled team chat tools like Slack, Microsoft Teams, Zoom Chat, Discord, Rocket.Chat, Workplace by Meta, and Google Workplace. Popularized by the launch of [Slack](#) in 2013, and building from decades-old chat tools like [Internet Relay Chat](#), team-chat software is characterized by a shared feature set. Mattermost has all the following features:

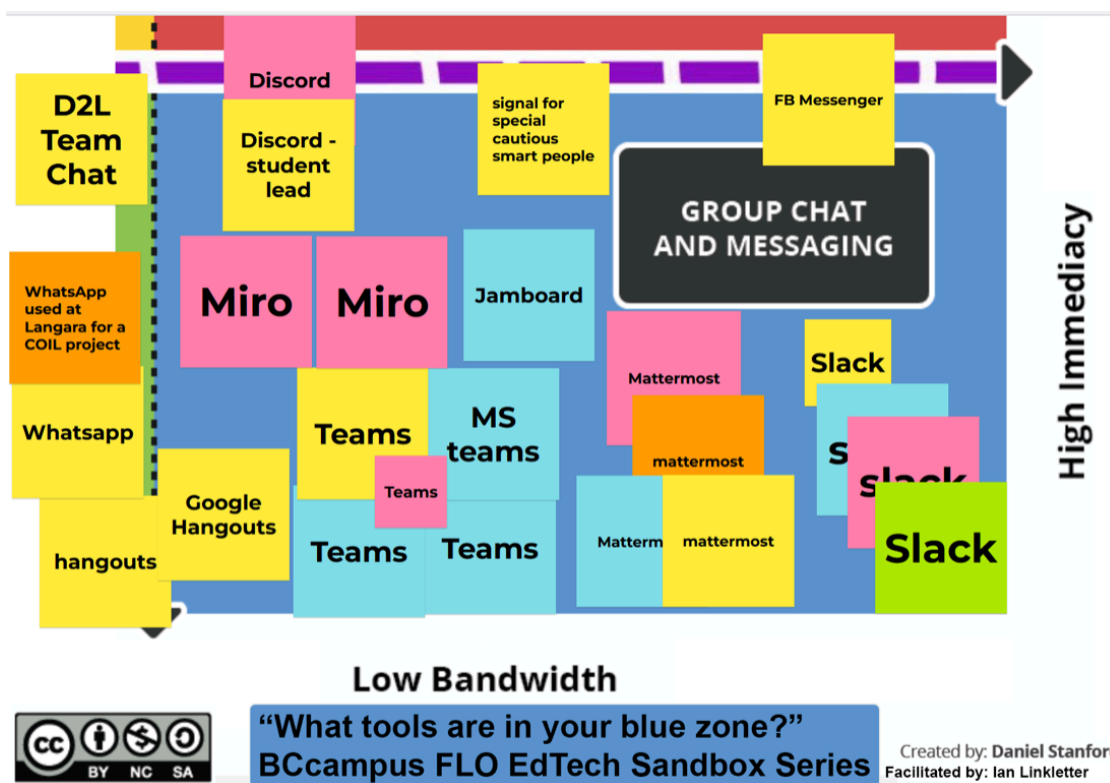
- **Teams** are standalone groups of people who form a learning community, such as a course section.
- **Channels** are public or private chat spaces in a team. In the sandbox session we used an Introductions channel to

share information about ourselves, such as our institutions and pronouns. Anyone can create a private channel and invite others for a group project.

- **Direct messages** are available for both one-to-one and group communication.
- **File sharing** allows you to upload and preview files in a chat.
- **Notifications** include push, web, email, or none.
- **Search** for keywords and hashtags by date.
- **Threaded conversations** allow you to selectively follow conversations that you are interested in.
- **Markdown** offers you with rich text formatting.
- Use **reactions and emojis** to, for example, indicate when participants have finished reading an article. In our sandbox session we read Clint Lalonde's "[Why I want to try Mattermost for classroom discussions.](#)"
- **User profiles** are visible only to teammates and include pictures, display names, and status.
- **Apps and mobile compatibility** are supported with Windows, macOS, Linux, iOS, and Android.

When it comes to learning technology, accessibility is a requirement, not a feature. I have personally tested Mattermost's keyboard navigability and found it to be thorough. Mattermost has a third-party "A" rating for Web Content Accessibility Guidelines 2.0 and an online [Voluntary Product Accessibility Template](#). Inexplicably, though, Mattermost does not support alternative text for uploaded images. As a workaround, alt text can be included in the file name or in an accompanying comment.

I introduced participants in the session to Daniel Stanford's [bandwidth immediacy matrix](#), a diagram that charts the bandwidth requirements of a technology on the horizontal axis and immediacy on the vertical axis. It served as a framework for our group to discuss the benefits of real-time communication tools that don't require students to have lots of bandwidth. Videoconferencing is an example of a high-bandwidth, high-immediacy technology. Email is a low-bandwidth, low-immediacy technology. Mattermost, primarily a text communication tool, falls in the "blue" zone as a low-bandwidth, high-immediacy technology. As a group we made a Jamboard to map the other blue zone chat tools used at our institutions. Microsoft Teams, Slack, and Mattermost stood out as the most commonly used. Note: Google just announced [Jamboard will be discontinued](#) on October 1, 2024.



FLO EdTech Sandbox activity prompt: “What tools are in your blue zone?”

One key difference between Mattermost and similar tools is it is an open technology that can be self-hosted. In a world where vendors are increasingly forcing users to give up their privacy, copyright, and data use rights, tools like Mattermost stand apart. Unlike vendor-controlled cloud services, you don’t need to worry about information being stored beyond Canadian sovereignty (see: [CLOUD Act](#)) or used to train artificial intelligence. No data is being sold. Even if Mattermost sells the company, the open source code is always yours to use. If you don’t like the direction the product goes, you don’t have to upgrade. Or you could [fork](#) the project and follow your own development path. With open source technology comes freedom, privacy, and choice.

Although Mattermost is officially supported by the [University of British Columbia](#) (UBC) and [Thompson Rivers University](#), educators from other B.C. post-secondary institutions can use the [OpenETC](#) Mattermost server. The OpenETC is B.C.’s Open EdTech Collaborative, and its server is funded by BCcampus, hosted by BCNET, and administered by Thompson Rivers University. All [data is stored in B.C.](#) on Educloud. You can request Mattermost teams using the [team request form](#). You are responsible for following your institution’s technology use policies. Be assured the server is secure in the Canadian cloud, and the only information required from students to use it is their institutional email address.

While at UBC, I worked on a Mattermost technology evaluation with talented colleagues from the [Centre for Teaching, Learning, and Technology](#) and the [Learning Technology Hub](#). We surveyed 202 students from eight cross-disciplinary courses, and 88 per cent rated the Mattermost user experience as neutral (43 per cent), somewhat positive (23 per cent), or very positive (21 per cent). Additionally informed by interviews with eight instructors and teaching assistants, we made [seven key recommendations](#) to improve the student experience:

- Set up some channels for smaller groups of 10–30 students.
- Organize content into clear channels, and guide communication.

- Set explicit expectations about instructional team availability.
- Integrate with or regularly prompt use from other course sites.
- Set loose guidelines for student participation.
- Emphasize private communication options for getting help.
- Explain why to use Mattermost over other more established chat tools.

UBC's [Technology Evaluation Report: Mattermost](#) is highly recommended reading if you wish to learn more about how Mattermost can be used to support teaching and learning.

Over the course of the interactive session, the group participated in a scavenger hunt activity and learned their way around the user interface. We spent time together engaging in synchronous discussions. A pedagogical conversation about the [Community of Inquiry framework](#) was left for asynchronous discussion after the session. We used Mattermost throughout, giving participants valuable hands-on experience with the possibilities afforded by this powerful open technology.

## Session Recording:



One or more interactive elements has been excluded from this version of the text. You can view them online here:

<https://opentextbc.ca/floedtechsandbox/?p=36#oembed-1>

- [Transcript: FLO EdTech Sandbox Series – Mattermost \(PDF\)](#)
- [Transcript: FLO EdTech Sandbox Series – Mattermost \(Word\)](#)
- [Slides: FLO EdTech Sandbox Series – Mattermost \(PDF\)](#)

## 3.2 Listen and Learn: Podcasting for Content Delivery in Hybrid and Online Classes

BRENNA CLARKE GRAY

As part of the BCcampus FLO EdTech Sandbox Series, Brenna Clarke Gray presented on podcasting and podcast distribution using WordPress. In the session, participants had time to play with recording and very basic audio editing, discuss why podcasting is a useful tool for content delivery in hybrid/online classes, and how to distribute podcasts out into the world.

*Brenna Clarke Gray is an educational technologies coordinator at Thompson Rivers University*

### What Is Podcasting?

In simple terms, a podcast is an audio file (often with supplements like transcripts, show notes, etc.) that is distributed (the *cast* part of *podcast*) over the internet using an RSS feed so listeners can subscribe on their mobile devices or computers. A podcast can be fixed length or ongoing. The small file sizes of podcasts make them ideal for reaching learners who perhaps have less-robust internet options, especially in contrast with using video for lectures.

### Strengths of Podcasting for Teachers

We explored a series of key benefits to podcasting, especially over other media educators might select for teaching and learning at a distance. In the session we focused on podcasts being:

- An open knowledge mobilization opportunity you control
- A way to connect with people beyond your discipline or institution
- An intimate, involved mode of storytelling
- Portable, accessible, and engaging
- A medium with a low barrier to entry, although like anything, podcasting is easy to do but hard to do well

I shared a story from my own teaching history that reflects many of these strengths. The first time I taught a fully online course in 2013, I decided to podcast my lectures. This was a literature class, and I wanted to talk my way through the texts like I typically did in class, but I didn't want to create and edit a lot of videos. I kept my lectures to 30-45 minutes and recorded using only my laptop and a Yeti Blue microphone. At that time I did all my editing in GarageBand, which came with my laptop. I felt like I could connect with learners directly in the same way I felt connected to my favourite podcasters, especially when talking about difficult topics like race, sexuality, and identity. While most students reported favourable opinions about the podcasts, for one group of learners — a group I had never

considered! – my course became very popular: students who were also truck drivers who liked to listen to their lectures on the road.

This really spoke to me about how trying new things in the classroom can help educators reach different learners in new ways. So why not give podcasting a whirl?

## Considerations Before You Jump In

Accessibility matters! Although podcasting is in many ways a highly accessible medium for learners in rural environments or those who need different kinds of access to learning materials, you need to consider all learners when you develop audio content. Transcribed audio offers added accessibility for Deaf and hard of hearing learners, those with audio processing difficulties, learners for whom English is an acquired language, and students who simply prefer text. Many learners prefer to use captions or transcripts as an aide in courses with difficult or new jargon. You should plan to develop transcripts of your audio in your workflow.

If your institution uses Kaltura, you can [use its auto-captioning function to generate transcripts that are ready to edit](#).

## How to Get Started with Podcasting

1. Listen to podcasts. Just like you likely encourage learners to read an issue of a journal before submitting to it, understanding the medium of podcasting will help you make aesthetic decisions about what you do and don't like. In our session we discussed the participants' favourite podcasts. I disclosed that I listen to at least 40 podcast episodes a week, and the last five podcasts I listened to were *The Red Flags Podcast* (Formula 1 racing news), *Commotion with Elamin Abdelmahmoud* (pop culture news), *Scamfluencers* (white-collar true crime deep dives), *Citations Needed* (media criticism), and *CANADALAND* (media criticism).
2. You need a few supplies. In addition to the items below, you'll need a quiet place to work.
  - Microphone: It doesn't need to be expensive but something you can keep positioned about a hand-span from your audio source.
  - Plug-in headphones to isolate sound: Bluetooth can have a delay that makes editing frustrating.
  - Recording/editing platform: This can be a computer or a tablet.
  - Editing software: There are lots of free options: Audacity and GarageBand, for example.
3. Spend some time collecting audio. In the session we played with different collection options (like using a mobile phone voice app or a laptop mic) and explored reusing openly licensed audio files from [freesound.org](https://freesound.org) or [freemusicarchive.org](https://freemusicarchive.org) (accounts are required) or [Wikimedia Commons](https://commons.wikimedia.org). You might decide to record your own voice or some sounds in your environment. Anything will work.
4. Learn to edit. This can be daunting, but in the session we approached it playfully. You can use any software you like; in the session we explored a free-to-use browser-based version of Audacity called [Wavacity](#).
5. When you're ready, you can think about distribution. The [OpenETC](#) supports the use of Seriously Simple Podcasting to distribute podcasts on its platform, and this is the tool we explored in the session.



## Reflections on the Sandbox Session

In the questions before the session, one participant asked about the idea of social presence in hybrid and online classes. This is a reference to the [Community of Inquiry framework of thinking about teaching and learning at a distance](#). We discussed how audio has the capacity to be human-scale and humanizing – that it can be meaningful to hear a human voice and not just text in learning. At the same time, the portability of podcasts and their ability to move with us as we go about our lives, whether we listen in the car, while walking the dog, or while doing household tasks, can create a sense of intimacy with our learning community. This also allows the learner to engage with course materials in very different spaces and places from the classroom or computer. It invites learners to connect learning materials to the experiences of their day-to-day lives. This can work for both instructor presence and, in the case of inviting students to share their assignments through audio, social presence.

For more information about podcasting, check out the [BC Studies Podcast about scholarly podcasting](#), the [Amplify Podcast Network's Guide to Academic Podcasting](#), or the open, self-directed [TRU Introductory Podcasting Masterclass](#).

## Session Recording:



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- [Transcript: FLO EdTech Sandbox Series – WordPress/Podcasting \(PDF\)](#)
- [Slides: FLO EdTech Sandbox Series – WordPress/Podcasting \(PDF\)](#)

# 3.3 Padlet Unleashed: A Comprehensive Review of Its Strengths and Opportunities

LISA GEDAK

As part of the BCcampus FLO EdTech Sandbox Series, Lisa Gedak presented about the value of using the digital tool Padlet for teaching and learning.

In this post Lisa shares some of Padlet's strengths and offer improvement opportunities for its features and settings, including some that could support accessibility. She also share uses for Padlet in the context of teaching and learning as well as some participant perspectives to inspire ideas.

*Lisa Gedak is associate faculty at Royal Roads University*

Many B.C. colleges and universities have a Padlet account, making it easy for educators to use this tool. If your institution does not have a supported version, you can create a Padlet account for free with a limited number of Padlet boards.

## Strengths

- Use free and low-cost options.
- Upload, organize, and share various file types, GIFs, images, and media.
- Take it with you, with iOS, Android, and Kindle apps available.
- Control aesthetic and functional settings.
- Use built-in wallpapers or upload your own.
- Use built-in templates.
- Collaborate in real time or asynchronously.
- Set permissions by level – viewer, commenter, or moderator.
- Enable, restrict, or moderate comments on student posts.
- Allow reactions such as likes, ratings, and votes.
- Use anonymously to encourage participation.
- Students do not need to an account to contribute.
- Share using links or QR codes, or directly embed or play in a slideshow.
- Configure boards for re-use.
- The need for IT support is minimal; use the help portal with or without a paid account.
- Navigate the dashboard entirely by keyboard.
- Use improved dark mode to ensure better contrast.
- Increase usability for screen readers.

## Opportunities for Improvement

- Expanded templates are for paid users only.
- Padlet boards are not [WCAG AAA compliant](#), and the company is publicly aiming for only an AA rating.
- There is no hands-free compatibility for navigation settings and post editing.
- Screen readers are not compatible with posts.
- You must download web extensions to increase contrast for users with low vision.
- Back-and-forth arrows are sometimes confusing for users, and they can get lost in scrolling if the boards are too big.
- You must pay for more advanced features and upload capabilities.

## How to Use Padlet in the Classroom

Use Padlet to promote inclusion, build community, support language learning and group activities, and guide learners in reflective opportunities.

Here are some of the activity ideas I shared in the session:

### Language Learning

- Name that item: Provide images on a board for students to identify in the language they are learning.
- Five-minute journal: Write one or two sentences a day to identify daily goals in a language students are learning.

### Building Community

- Monday Meet-Up: Connect for the first 10 minutes of class to share pictures of pets, weekend events, or how learners feel using images, text, and GIFs.
- Introductions: At the beginning of a course, discuss preferred names, pronouns, hopes for the course, and ways to support learning.

### Group Activities

- Provide a Padlet board for teams or groups to develop a team agreement and support collaboration.
- Group brainstorm to share ideas for an assignment, outline a problem, or capture key learnings.

### Support Reflection

- Use reflective prompts to guide students in thinking deeply about course concepts or topics.

- Ask students to share and reflect on an image, GIF, or video that represents concepts or ideas learned in class that:
- Changed their attitude
- They are more aware of
- Surprised them
- They related to or empathized with

## Support Inclusive Learning Environments

- Use an “exit ticket” to assess learning, capture all student voices, and inform your approaches to be more inclusive.
- Help students identify and prioritize their values, appreciate diversity of values, and prompt discussion about the cultural contexts in which their values emerged.

## Participant Perspectives

Participants were encouraged to explore and experiment with 10 Padlets, connect and ideate use cases in context, and optionally create a free Padlet account to design their first Padlet.

Small and large group discussions in the session resulted in the following ideas for Padlet use:

- Class, team, and learning agreements
- Curriculum mapping and team brainstorming with faculty peers
- Extensive group discussions about course concepts
- Weekly virtual check-ins for student wellness
- Classroom and institutional supports and resources
- Peer feedback
- Professional or personal development

Many participants engaged in a territorial acknowledgement (i.e., Turtle Island map) activity and noted they would use the same activity in class.

This session was not only an opportunity to share a tool I use in practice and support other educators across a wide range of contexts but also allowed me to consider how I might use it for teaching and learning, professional development, team building, and other business uses.

Padlet is a versatile and easy-to-use tool that can invigorate your teaching and learning activities and approaches. I am grateful for this opportunity to share some of the ways it can be used.

## Session Recording:



— One or more interactive elements has been excluded from this version of the text. You can view them online here:  
<https://opentextbc.ca/floedtechsandbox/?p=41#oembed-1>

- [Transcript – FLO EdTech Sandbox Series – Padlet \(PDF\)](#)
- [Transcript – FLO EdTech Sandbox Series – Padlet \(Word\)](#)
- [Slides – FLO EdTech Sandbox Series – Padlet \(PDF\)](#)

## 3.4 Digital Sticky Notes to Increase Student Engagement

JOHN CHURCHLEY

As part of the BCcampus FLO EdTech Sandbox Series, John Churchley presented a session on the many uses of digital sticky notes in online teaching and learning environments. In this post, he shares the advantages of using sticky notes and offer dozens of online learning activities educators can use to encourage participation and increase engagement.

*John Churchley is a sessional lecturer at Thompson Rivers University, School of Education, and a retired teaching professor and educational developer*

### Strengths of the Tool

Sticky notes are a go-to tool for many teachers – whether paper, digital, or in a hybrid application. They're easy to use and help ensure all learners have a voice. They are especially effective for those who are less comfortable speaking in a group. Sticky notes can be used in many digital whiteboard environments, including Google Jamboard (soon to be retired), Miro, Zoom Whiteboard, and Padlet.

Whether paper or digital, sticky notes can fulfil several pedagogical functions: generating ideas, sorting and re-sorting ideas and information, and eliciting feedback and interaction between participants on specific ideas. Digital sticky notes can be an effective way for students to interact with content, the instructor, and each other in a digital environment. In a synchronous online class, sticky notes last longer than chat comments, and can engage everyone without having to take turns speaking or break out into small groups. Sticky notes give every student a voice and a chance to interact in a non-threatening way.

### Features and Issues

The feature sets and issues of sticky notes vary with the whiteboard platform, as does privacy and security, affordability, and access. Google Jamboard is popular, but it will be retired at the end of 2024. However, an alternative is Miro, which has free accounts for educators. Students have free and anonymous access through a desktop web browser or mobile app (which requires an account or a one-time sign up using an email address). Not every whiteboard platform has the same tools for sticky notes (such as emojis, hyperlinks, comments, and tags), but the concept of generating ideas and moving or sorting them is standard.

## Activities

There are dozens of learning activities using digital sticky notes. During the session, one participant said they weren't sure we could talk about sticky notes for a solid two hours, but we did! In fact, we looked at over 20 instructional applications for them. Instructors need to think creatively about the types of pen and paper tasks and "at the whiteboard" tasks students might do in a face-to-face classroom, and then adapt the activities to use digital sticky notes as the medium for students to use online.

## Generating Ideas Activities

### **My Job/Your Job/Our Job**

This brainstorming/sort activity is a way for a class to co-construct group norms. Participants (and the instructor) create sticky notes with values and behaviours they feel would build a safe, inclusive, and efficient learning environment. These sticky notes are placed in one of three columns to show who is responsible: instructor (my job), participants (your job), and everyone (our job). Participants can respond to the notes to indicate agreement, and the group refines the ideas into a final set of expectations. The use of the sticky note whiteboard environment enhances the experience by encouraging everyone to participate and giving everyone a voice.

### **Short-Answer Questions**

Sticky notes are a great way for students to share multiple answers to a question. You could ask students to use sticky notes to:

- Define...
  - List the following...
  - Give an example of...

### **Formative Assessment Activities**

Below are some formative assessment activities (Yee, 2020) that work well with sticky notes:

- Ticket out the door. Students write down their main "take away" on a sticky note and share on a whiteboard.
- Stickiest point and muddiest point. Using sticky notes, students write what was most clear and memorable (their stickiest point) and what was not clear or confusing (their muddiest point) and then share on the whiteboard.
- One-minute paper. Students are given one minute to write the most important thing they learned from a session. Everyone then posts their sticky notes on the whiteboard
- One-word summary. Students use a sticky note to write one word that best summarizes a session.
- Stuff I know well/Stuff I sort of know/I have no clue. Create three columns on a whiteboard based on these categories, and students use sticky notes to add their ideas to the appropriate column.
- Group KWL. This works well for introducing a reading. On the whiteboard create a chart with three column headings: K stands for what I KNOW, W for what I WANT to know, and L for what I LEARNED. Before the reading, students use sticky notes to write and share what they know under the K and what they want to know under the W. Post-reading they share what they learned under the L.
- Haiku to summarize a lesson. Students write a haiku (a three-line poem that's five syllables, seven

syllables, five syllables) on sticky notes and then share on the whiteboard.

- Parking lot. Mid-lecture questions are written on a sticky note to be addressed later.

## Activities for Sorting Ideas

### Matching Sort

This activity demonstrates the use of pre-written sticky notes for sorting concepts into categories based on participant predictions. There are correct answers shared at the end generating discussion about the preconceptions for each idea. As the sorting is done anonymously, there is no stigma associated with an incorrectly sorted item.

Students can use sticky notes to sort:

- Different categories
  - Timeline
  - Dualism: true or false; pro or con
  - Defining feature: present/absent
  - Quadrants/graphs

## Activities for Sharing Ideas

### Compass Points and Chalk Talk

These brainstorming/feedback activities (Ritchart et al., 2011) work well with digital sticky notes.

Compass Points is a thinking routine where participants use sticky notes to express their feelings about an issue or project and share them on a whiteboard with the points of the compass: Needs (north), Excitement (east), Worries (west), and Steps to be taken (south). This type of activity could be used for addressing participant concerns about a project or challenging topic.

Chalk Talk is a text-based (non-verbal) conversation among participants ensuring everyone gets an (anonymous) voice and can comment on the ideas of others. It is well suited to a sticky note/whiteboard online environment.

### Other Resources for Sharing Ideas

Sticky notes can be adapted to many different instructional routines and can make these routines easy to use in a digital environment. Besides the Chalk Talk and Compass Points routines, there are many other learning routines to encourage deep student thinking in the K-12 sector in [Visible Thinking](#) at [Project Zero in the Harvard Graduate School of Education \(Ritchart et al., 2011\)](#). While the examples are for K-12, most of these routines can work well with adult students. Likewise, business innovation structures like those in [Liberating Structures](#) (Lipmanowicz & McCandless, 2014) can be adapted to sticky note learning activities at the post-secondary level. Finally, there are many other sources for instructional strategies that can use sticky notes. These include Yee's [Interactive Techniques](#) list (2020) as well as resources from your institution's teaching and learning centre and [BCCampus](#).

## Session Recording:



One or more interactive elements has been excluded from this version of the text. You can view them online here:  
<https://opentextbc.ca/floedtechsandbox/?p=43#oembed-1>

- [FLO EdTech Sandbox Series – Sticky Notes: Transcript \(PDF\)](#)
- [FLO EdTech Sandbox Series – Sticky Notes: Transcript \(Word\)](#)
- [FLO EdTech Sandbox Series – Sticky Notes: Slides \(PDF\)](#)

## References

Lipmanowicz, H., & McCandless, K. (2014). *The surprising power of liberating structures: Simple rules to unleash a culture of innovation*.

Ritchart, R., Church, M., & Morrison, K. (2011). *Making thinking visible: How to promote engagement, understanding, and independence for all learners*. John Wiley and Sons, Inc.

Yee, K (2020). Interactive Techniques. <https://fctl.ucf.edu/about-us/staff/kevin-yee/>

# 3.5 Creating Active Learning Experiences Using H5P

JOHN CHENG

As part of the BCcampus FLO EdTech Sandbox Series, John Cheng presented on H5P and how it can be used to create active and engaging online learning experiences. In this session, participants had an opportunity to explore some of the affordances of H5P in teaching and learning, review some considerations when building with the tool, browse through different H5P content types, and build content through a hands-on, online demonstration.

*John Cheng is an educational consultant at the University of British Columbia*

## What Is H5P?

H5P, which is short for HTML5 Package, is a flexible, open-source, online content-authoring tool. It can be used to create dynamic, interactive web content (also known as content types), including interactive media, content presentations, quizzes, and games. It's free to use, and the content can be shared and reused by others. H5P content is mobile friendly, can be delivered as an open education resource, and can be integrated into various learning management systems, Pressbooks, or websites.

## When Can You Use It?

H5P can be used for:

- Creating formative assessment such as quick knowledge checks or quizzes,
- Structuring text-heavy content into dynamic, interactive experiences,
- Reusing and updating content across various courses/sections, and
- Enhancing the engagement and interactivity of online course materials.

## Benefits and Challenges

The literature suggests that H5P fosters active learning experiences by offering immediate, formative, and personalized feedback, alongside low-stakes assessments and increased engagement. It is distinguished by its capability to boost student engagement through interactive and accessible content. H5P is open source, free, scalable, versatile, and portable across a wide array of teaching and learning scenarios. However, users of H5P should be ready to face certain challenges; it may require some technical expertise and creating high-quality content can demand significant time and resources. There are also restrictions on how much H5P content can be customized. When using the tool, you need to

consider how often you plan to maintain and update H5P content, and how you might be able to reach out to the [H5P community](#), or your network of learning designers and educational technology specialists, for support.

## Content Types and Design Considerations

During the session, we previewed a few of the most popular [content types](#) developed through H5P.org. We also spent some time building a [question set](#) and [content presentation](#). These demonstrations highlighted a few key aspects to consider when developing content with H5P:

- **Think about pedagogy and function** when selecting content types. [Kwantlen Polytechnic University](#), [University of British Columbia](#) and [University of New South Wales](#) in Australia offer some different perspectives.
- **Choose H5P content types based on the learning outcomes** aligning with your teaching and learning context.
- **Cut down on development time by drafting content and incorporating feedback in** Word, Google Docs, or PowerPoint before you start building in H5P.
- **Design with accessibility in mind.** Not all content types are completely accessible. Review [H5P.com's content types recommendations](#) and [LibreText Studio's H5P accessibility guide](#) for detailed guidelines.
- **Save your work regularly by clicking Create/Update** on the H5P development platform.
- **Consider the feedback functions** of H5P as a means of providing effective and personalized formative feedback for students.
  - Effective feedback should include information that goes beyond the simple verification of knowledge. For example, where appropriate, inform students of the possible mistake or misconception that has led to incorrect answers, provide concrete examples, or sample answers, and offer strategies or information on where in the lesson they can find information related to the question.
  - The table below summarizes various features to pre-program feedback in H5P.

	H5P type	Verification feedback (correct or incorrect)	Overall feedback (scores based)	Text-based (elaborated) feedback on correct/incorrect answer	Tips and hints
1	Multiple choice	Yes	Yes	Yes	Textual tip
2	Drag and drop	Yes	Yes	No	No
3	Fill in the blanks	Yes	Yes	No	Textual tip
4	Mark the words	Yes	Yes	No	No
5	Drag the words	Yes	Yes	Yes	Textual tip
6	True/false question	Yes	Yes	Yes	No
7	Essay	Yes (checking for key words)	Yes	Sample solution and its explanation; Custom feedback based on keyword included or missing	Help text (e.g., sentence starter)
8	Image choice	Yes	Yes	No	Hover text
9	Question set	Yes	Yes (additionally, video feedback possible)	Varied, based on question type used (see above)	Varied, based on question type used (see above)
10	Single choice set	Yes	Yes	No	No

## Going Further

As you continue your own journey with H5P, there are many ways to go further in your exploration:

- **Stay current** with [new content types on H5P.org](#).
- **Engage** with the [H5P community](#) to seek advice, report errors, or suggest new features.
- **Find, reuse, or remix** existing H5P content for brainstorming or adapting your ideas. Many H5P content types can be reused and adapted under Creative Commons licences. Check out these repositories for inspiration:
  - [Pressbooks Directory](#)
  - [eCampusOntario H5P Catalogue](#)

- [LibreTexts Studio](#)
- [The H5P OER Hub](#)
- **Review the licence and copyright** of your H5P creations by adding [metadata](#) for your work and any specific media (images, video, audio) used inside of your work.
- **Learn by doing!** Most importantly, experiment, practise, and test. Explore each of the H5P content types, evaluate how they might be used in your context, and continue building and testing H5P content to develop your practice.

## Using H5P Creatively in Practice

During the session, I had the opportunity to share a story from my own practice with H5P. Over the last year, I have been supporting a student–faculty partnership at the University of British Columbia to develop their capacity with H5P. Using a variety of content types and a case study as the context for the activity, this partnership created a unique and innovative escape room delivered in a hybrid synchronous workshop. During the activity, I observed strong student engagement and active participation. While many H5P content types could be used for stand-alone learning activities, several H5P content types can also be combined and used to create complex and elaborate interactions such as games, simulations, and multifaceted case studies.

There was also [an opportunity for participants to reflect on their own teaching and learning contexts](#) and imagine which H5P content types could work for different scenarios. Their reflections indicated a strong interest in using H5P to structure and organize content, build language learning activities, and create engaging opportunities for students to explore their own learning pathways by using H5P to construct choose-your-own-adventure learning activities and interactive, formative assessments. It was exciting to brainstorm the many ways participants could imagine using H5P. These examples showcase the breadth and depth of using the tool creatively in practice.

For more resources on H5P and to review the demonstrations used in this session, explore the [H5P FLO EdTech Sandbox Series Blog](#).

## Session Recording:



One or more interactive elements has been excluded from this version of the text. You can view them online here:

<https://opentextbc.ca/floedtechsandbox/?p=45#oembed-1>

- [Slides – FLO EdTech Sandbox Series – H5P \(PDF\)](#)
- [Transcript – FLO EdTech Sandbox Series – H5P \(Word\)](#)
- [Transcript – FLO EdTech Sandbox Series – H5P \(PDF\)](#)



PART IV  
FURTHER RESOURCES



# BCcampus Resources Related to EdTech Sandbox

## Slides

- [Slides: FLO EdTech Sandbox Series – Mattermost \(PDF\)](#)
- [Slides: FLO EdTech Sandbox Series – WordPress/Podcasting \(PDF\)](#)
- [Slides: FLO EdTech Sandbox Series – Padlet \(PDF\)](#)
- [Slides: FLO EdTech Sandbox Series – Sticky Notes \(PDF\)](#)
- [Slides: FLO EdTech Sandbox Series – H5P \(PDF\)](#)

## Other Resources

- [eCampusOntario EdTech Sandbox](#): Provides a safe and risk-free space for institutions to experiment with educational technology tools that support digital transformation. Educators can browse tools and curated resources, connect with peers and technology experts, and bring technological innovation to their institutions
- [Scarfe Sandbox EdTech Library](#): Aims to be a one-stop shop for finding relevant EdTech tools and resources. Hosted by the University of British Columbia, it features a concept map that organizes EdTech tools into categories like design, video tools, digital storytelling, presentation tools, open education tools, and more. The map is built on conversations with students, instructors, and research into recent trends, providing a comprehensive guide to finding useful tools for educational contexts.
- [TeachThought](#): Offers a comprehensive list of essential EdTech tools, including interactive presentation tools like Pear Deck, Desmos for math software tools, Floop for student feedback, and more. Covers a wide range of tools suitable for enhancing classroom engagement and learning outcomes.
- [ClassPoint.io](#): Highlights several tools for higher education, such as Canvas LMS for course creation and management, Blackboard for course management, and Zoom for virtual classrooms. Each tool is outlined with its key features, pros, and suitable applications in higher education contexts.
- [EdTech Hub](#): Offers curated lists of teacher professional development tools and a “6Ps” Audit Tool for assessing EdTech programs. They also offer resources for running an EdTech Hub sandbox approach, which helps validate and scale EdTech interventions.