Technology for Teaching and Learning 2 (TTL 2)

EdTech Design Challenge

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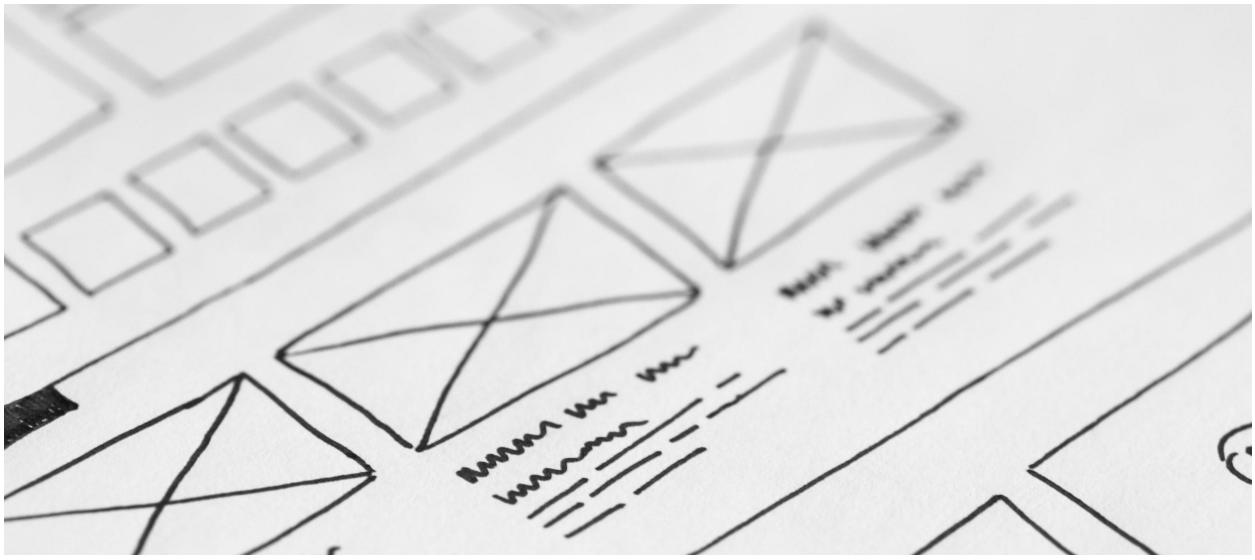
Digital Tayo

EdTech Design Challenge

Technology for Teaching and Learning 2
Duration: 12 weeks | LO Code: TTL 2-1, TTL 2-2, TTL 2-3, TTL 2-4, TTL 2-5, TTL 2-6



Note to the Teacher

Hello, teacher! Welcome to the EdTech Design Challenge! In this project, students will experience the whole design process, from conceptualization to user research and prototyping. To do this, learners will form teams and choose a learning problem based on their specialization. They will also talk to real users and develop user stories through desk and field research. As a final output, teams will design and build their prototypes in preparation for a public showcase. Here are some guide questions for your students:

- *What real-world learning problem do I want to solve and why?*
- *How can I use technology to solve this problem?*
- *How can I come up with creative, novel, and innovative solutions?*
- *What are the needs of my target users?*
- *How do I address my target users' needs?*
- *How do I continue to improve on my prototype?*

The culminating event will be an opportunity for the teams to test their prototypes and work with professionals. Throughout the whole project, learners can work with mentors or coaches to help them refine and validate their ideas.

Learning Outcomes

By the end of this project, learners will:

TTL 2-1	Use ICT to develop 21st Century Skills: Information, Media and Technology Skills, Learning and Innovation Skills, Life and Career Skills, and Effective Communication Skills;
TTL 2-2	Develop project- and problem-based, collaborative plans and activities in various subject areas using technology tools;
TTL 2-3	Use open-ended tools (such as word processing, spreadsheets, presentation software, and authoring tools) to support the development of problem-based or project-based, or collaborative activities in a subject-specific application;
TTL 2-4	Produce learning resources using technology tools in various subject areas;
TTL 2-5	Evaluate the relevance and appropriateness of ICT resources based on the learning context;
TTL 2-6	Use technology tools to collaborate and share resources among communities of practice.

Product Description

Prototype

The end product of the EdTech Design Challenge is a prototype of an EdTech tool, system, or process that may be useful in their specialization. A prototype is a draft version of a product or a feature that allows designers to test their assumptions about a user's needs and experience before investing time and effort into the finished product.

A designer builds a prototype to answer specific design questions, which means that prototypes are built with intention. Since it is not the complete or finished product, a designer decides which product features are crucial to the user's core experience. In a way, a prototype is a tool for inquiry to help designers test their ideas with real users.

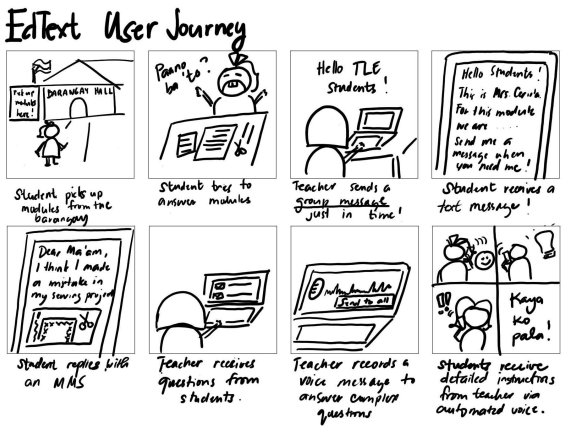
Student design teams may choose to address a challenge in the "Challenge Library" project or any real-world problem related to their topic of interest. The students will use existing tech tools for brainstorming, designing, and collaboration

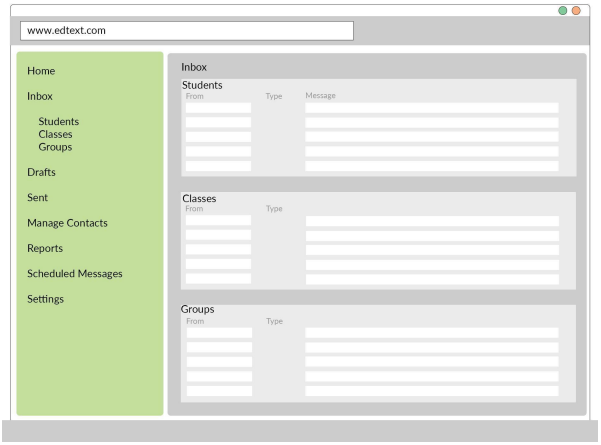
in building the prototype. In prototyping their tools, systems, and process, they should be able to maximize the use of media and technology to collaborate and share resources. As a culminating event, they may share their products with their fellow students or to the general public through an EdTech showcase or a hackathon, which will be an opportunity to gather user feedback.

Product Rubric

Aligned with the learning outcomes	The learning experience cover the same content and learning goals of the TTL 2 course
Creative, novel, and innovative	The prototype is a new approach to the chosen issue or problem.
Clear and specific	The problem being addressed is focused and framed clearly.
Strategic use of tech tools	The learning experience demonstrates the purposeful and productive use of technology vis-a-vis the learning pedagogy.
Digitally responsible	The tech tools and resources are used responsibly in social, ethical, and legal means.
Student Reflection	The writeups of the real-world challenge in the “EdTech Design Challenge” captures and articulates why they built their product and how they would like to improve it based on feedback.

Sample work





http://bit.ly/TTL2-BTVTEdChallenge

In this sample work, a group of learners from the Bachelor of Technical-Vocational Teacher (BTVTEd) program created a virtual collaboration workspace using Google Sheets. They used some templates from the IDEO Human-Centred Design Toolkit. The workspace has the following parts:

I. **Defining the Challenge**
It is a space where the student team conducted their brainstorming activities. They brought ideas from their initial desk research and personal experiences.

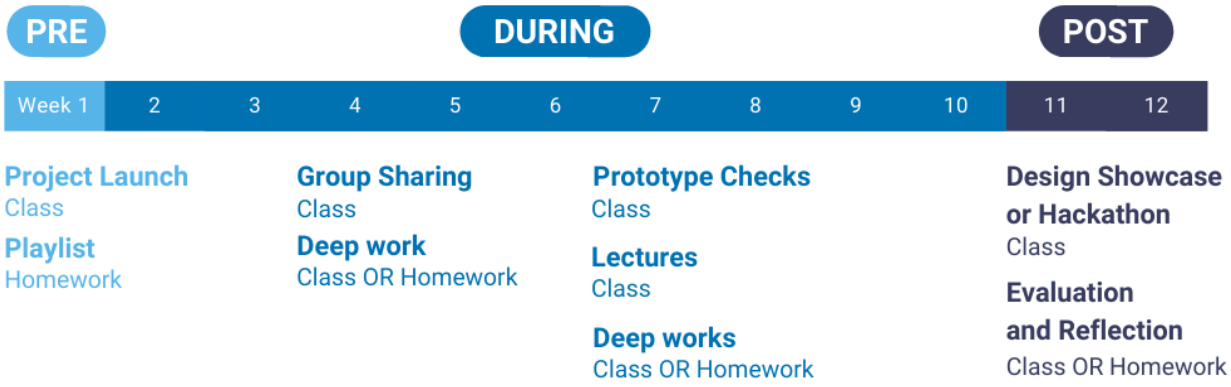
II. **Discovery: User Research**
Students conducted field research with their target users: TLE teachers and students. They created two personas: Alex, the student, and Mrs. Ceriola, the TLE teacher. The insights they gathered helped them refine, validate, and correct their initial idea from their brainstorming sessions.

III. **Concept Note: Defining the Solution**
This Concept Note provides a clear description of their chosen EdTech design project. It also guides them towards the goals they want to achieve for their prototype.

IV. **Prototyping: Building for Testing**
Using Adobe Photoshop, the students created a storyboard and wireframe for their prototype.

Your students may build on this sample work or create an entirely different workspace. They may also create their own process as they deem fit. After all, designing is fluid and flexible. It changes and evolves as the project progresses.

Overall Learning Journey



Detailed Learning Journey

Project Launch

The Project Launch is when the teacher introduces a real-world problem or situation that students can explore and solve. When done purposefully, the project launch motivates the students to investigate authentic, real-world problems and develop a product or solution. It is also the best time to introduce and discuss what the project or product might look like through the rubrics.

Project Launch (Acquire) | 20 to 30 minutes in class

- Students are given an orientation on the design project.
- Students form groups of common interests and goals through a connections exercise.
- Students are given a space to ask questions and express their commitment to the project.

Tech Upskilling (Practice)

- Students will be given time and space to explore tech tools for idea-making, designing, and brainstorming. As a group, they will decide on the tools they will use for the entire design project. The following tools can be used for collaborative design work:

Brainstorming	Collaboration	Designing
• Padlet • Mural • Google Slides	• Google Suite • Trello • Notion	• Draw.io • Figma • Sketch • Photoshop • Pen and paper

Lectures (Discuss)

- The teacher will facilitate a discussion about design thinking in education.

- The teacher will also discuss evaluation methods for edtech that the students can incorporate into their project and product design.

Playlist (Inquire)

- A Curated set of free online resources on the following topics are provided:
    - Design thinking
    - Design and collaboration tools
    - Evaluating learning design
- Students can contribute to the playlist by narrating how they use tech tools in their projects.
- Teachers add prompts of reflection to support students acquire with analysis.

During

The next set of recommended activities are done to develop the necessary knowledge and skills to address the project's real-world problem. These activities are a mix of lectures, individual work, group activities, reflection, and feedback sessions. Feel free to add or remove activities to suit your students' context and needs. Remember to include checkpoints and feedback sessions to monitor and support student progress.

Group Sharing (Discussion) | 15 to 20 minutes in class

- Students share their motivations and reasons for choosing their design problem.
- Students can start thinking about potential solutions to the problem.

Deep Work (Collaborate) | in class or homework

- Students go through a discovery phase through desk and user research and develop a concept note or an initial outline of their proposed edtech tool/system/process.
- They can use a user journey map as a tool to empathize with their target users.

Prototype Check (Discuss) | 30 minutes to 1 hour in class

- Students share their progress
- Their peers and teacher will provide feedback on their initial outline.

Lectures (Acquire) - 30 minutes to 1 hour in class

- Students can invite guest speakers on topics that are related to their chosen problem or issue. These guest speakers can be topic experts or tech experts. For example, they can invite a health expert or an environmentalist, depending on their area of interest. They can also invite a product manager, UX designer, or a software engineer to ask how they design and build tech products (may or may not be edtech products).
- Students can choose their mentors and ask for their advice on their design projects.

Deep Work (Make and Collaborate) | in class or homework

- Students create wireframes and user experience maps for their edtech project.

Prototype Check (Discuss) | 30 to 45 minutes in class

- Students share their progress.
- Their peers and teacher will provide feedback on their initial outline.
- This prototype check can be done in more than one cycle with a week or two in between.

Deep Work (Make and Collaborate) | in class or homework

- Students build a testable prototype of their edtech design project.

Post

The last set of activities serve as the project's culmination. These activities allow students to share their processes and product. It is also an opportunity to facilitate a summative assessment of the intended learning outcomes and encourage student reflection as they look back on their experience in solving real-world problems.

Design Showcase or Hackathon (Collaborate)

- Students can organize a design showcase to test their prototypes with each other or the general public.
- They may also organize a Hackathon by working with others (e.g., engineers, marketers, and other designers) to build an actual edtech product. The event can be a competition with awards and prizes.

Evaluation and Reflection (Discuss)

- Students process the data they get from their showcase/hackathon and turn them into insights they can use to iterate and improve their current product.
- Students will write a reflection paper on their design journey, from forming a team to building their product and evaluating them.

Digital Tayo Modules

The Digital Tayo modules are a great supplement to this project. Here are some lessons that we recommend, but feel free to look through the Digital Tayo website to select particular lessons that you want to use.

Digital Empowerment Module

Topic	Lesson	Description
Defining the Advocacy	**Lesson 1: Advocacy and Making Change**	Students will learn about the concept of advocacy by identifying an issue that affects their community and brainstorming two changes that they want to see in the future concerning that problem.
Online Community-building	**Lesson 2: Building your Advocacy Network**	Students will learn how social networks can be leveraged to promote advocacy efforts. Students will also learn how to develop online content to spread information about a cause of interest.
Media and Tech Integration	**Lesson 3: Raising Awareness Through Media**	Students will learn about and identify ways in which various types of media can be used to promote awareness around an issue.

Suggested Resources

The following are suggested resources we curated that can be used as support material for the different topics and units in the curriculum.

Topic	Resources
Designing for education • Learning Experience Design Online Course • Design thinking for educators • Creating prototypes • Integrated Learning Design Environment (ILDE)	Habi Plus - Learning Experience Design Course IDEO Design Thinking for Education IDEO Shopping Cart Challenge Frontiers - Integrative Learning Design Environment

Design tools • Creating a user journey map • Creating wireframes • Figma templates • Canva for education templates • Human-centered design templates and methods	IDEO How to create a journey map How to Create Your First Wireframe Figma Design Templates IDEO Human Centred Design Toolkit
Collaboration tools • Mural Facilitation Toolkit • Trello Team Toolkit	Mural - Free Online Facilitation Toolkit Trello - Free Team Management Toolkit
Evaluating learning design • Evaluation cookbook	Evaluating_Learning_Design_for_Edtech Cookbook