Technology for Teaching and Learning 2 (TTL 2)
Tool Inventory

FACEBOOK

Digital Tayo

Tool Inventory

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

Note to the Teacher

Hello Teacher! In this 6-week activity, we will challenge our students to create a tool inventory that showcases their recommended tech tools that may be used for teaching and learning particularly for their area/field of specialization. The project aims to enhance their skills in evaluating the relevance and appropriateness of ICT resources based on learning contexts by answering the following questions:

- *What are the types and purposes of ICT resources? (education technology tools and digital learning resources)*
- *What are the different considerations in choosing ICT resources for teaching and learning?*
- *How might we use ICT resources to enhance teaching and learning particularly in your area/field of specialization?*
- *What are possible alternative ICT resources for low bandwidth situations?*

At the end of the project, our students will select an ICT resource from their tool inventory which they will integrate into an actual lesson plan. This can be done through an in-class presentation or a demonstration teaching exercise.

This project can also be used as a precursor to the EdTech Design Challenge, which is also included in the TTL 2 course pack.

Learning Outcomes

By the end of this project, learners will:

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 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.

Product Description

Tool Inventory

A tool inventory is a repository of ICT resources which educators may use to enhance the teaching and learning process in their area/field of specialization.

Each entry in the tool inventory contains necessary details such as the tool description, characteristics, features, advantages, and disadvantages which help a reader understand (1) the purpose and function of each tool, (2) when best to use them, and (3) possible alternatives for low bandwidth situations.

The tool inventory must include at least ten (10) open-ended tools such as word processing, spreadsheets, presentation software, and authoring tools.

Product Rubric

Diverse	The tool inventory consists of both open source and closed source software.
Aligned with the learning outcomes	The tool inventory contains tech tools that are aligned to the focus of the TTL 2 course (i.e. open-ended tools).
Complete	The tool inventory contains all the necessary details such as description, characteristics, features, advantages, disadvantages, and possible alternatives to the open-ended tools.

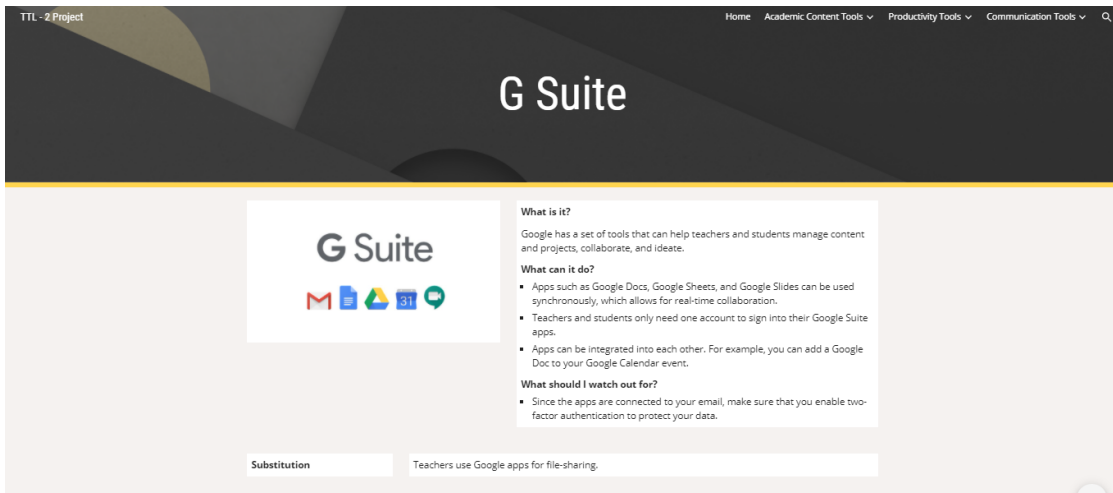| Substantial Amount	The tool inventory has at least 10 open-ended tools.
Demonstrates good multimedia learning and EdTech fundamentals	The tool inventory reflects concepts such as Cognitive Multimedia Learning, SAMR, computer-supported collaborative learning (CSCL), and User Experience Design.

Sample work

http://bit.ly/TTL2-ToolInventory

Here is a tool inventory by a Bachelor of Secondary Education Major in English Student major. The student used Google Sites to construct the "Tool Inventory." The inventory is organized by purpose: (1) academic content tools, (2) productivity tools,

and (3) communication tools. Each tool has an entry with the tool descriptions along with use cases following the SAMR framework.

Overall Learning Journey
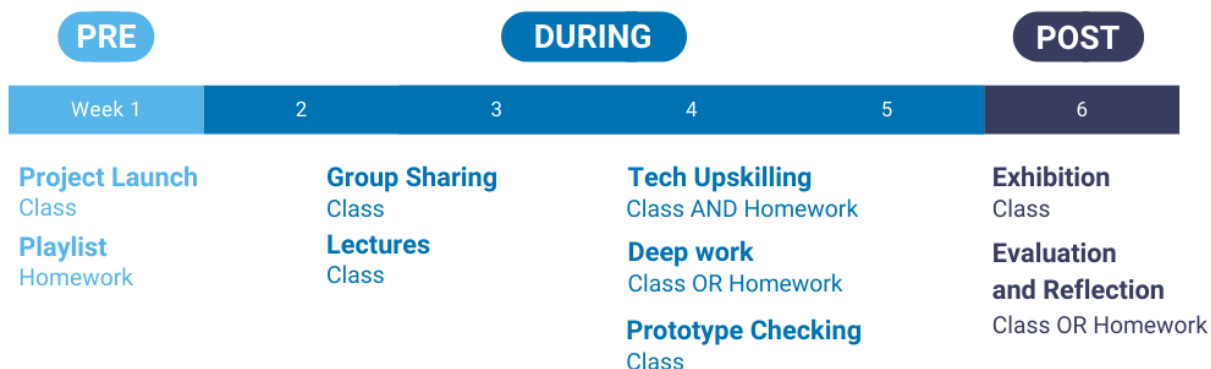
Detailed Learning Journey

Project Launch

The Project Launch is done to introduce a real-world problem or situation that students can explore and try to solve. When done purposefully, the project launch motivates the students to investigate authentic real-world problems and come up with a product or solution. This is also the time to introduce and discuss what the project or product might look like through the rubrics.

Entry Event (Inquire) | 15 to 30 minutes
- Students list down all the digital learning resources that they like to use particularly for teaching and learning. Students are encouraged to share what they like about the digital learning resources they listed down.
- Alternative: Students may survey the top tech tools used by their classmates.

Lectures (Acquire) | 20 to 30 minutes in class
- Students listen to the overview of the project, its specifications, and rubrics.
- Students learn about the target learning outcomes, the driving question, and the authentic task.

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 area of specialization.
- Students start thinking about real-world challenges and problems that their area of specialization may contribute solutions to.

Lectures (Acquire) | 30 to 45 minutes in class
- Students listen to a lecture on computer-supported collaborative learning.
- Students learn about the different types of Digital Learning Resources and education technology tools.

Lecture (Acquire/Discuss) | 30 to 60 minutes in class or recorded
- Students listen to invited resource persons (professional teachers) and listen to how they can integrate technology in their respective classrooms.
- Students ask questions about how the resource persons make decisions in choosing which tool to use in their classroom.

Deep Work (Collaborate) | 30 to 60 minutes in class or homework
- Students search and curate different digital learning resources and education technology tools that they are interested to learn more about.
- Students share their initial tool inventory (inventories of interest) with their classmates for initial thoughts and feedback.

Tech Upskilling (Practice) |60 to 180 minutes, in-class and homework
- Students explore and practice using tech tools that their classmates included in their initial tool inventories (inventories of interest).
- Students may do demonstrations for each other, walking their classmates through different digital learning resources and technology tools.
- Suggested Tech Tools: Productivity Tools for Collaboration (Google Suite, Communication Tools, Project Management, and Collaboration Tools).

Deep Work (Collaborate) | 60 to 180 minutes in class, or homework
- Students enhance their tool inventories - from inventories of interest to inventories of recommendation by adding the tool description, characteristics, features, advantages, disadvantages, use cases, and alternatives.
- Students may choose any project container which suits their intention for the tool inventory as long as it follows the specified project description and rubric.

Prototype Check (Discuss) | 30 to 45 minutes in class
- Students share their initial projects with each other. Students give and receive feedback on their respective tool inventories.
- Students process and execute the feedback received.

Post

The last set of activities serve as the project's culmination. These activities allow students to share their processes and product. This is also the 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.

Exhibition/Lesson Demonstration | 60 to 180 minutes in class
- Students are given an actual classroom scenario for which they will prepare a lesson plan.
- Students use their tool inventories to inform their decision in choosing an appropriate ICT resource to integrate into their lesson plan.
- Students share their lesson plans with their classmates through a lesson plan walkthrough or an actual lesson demonstration.

Evaluation and Reflection | 30 to 45 minutes in class or homework
- Students reflect on their project journey and write their insights on how technology can be purposefully used in teaching and learning in their area/field of specialization.

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 Engagement Module

Topic	Lesson	Description
Evaluating News and Materials	Lesson 3: What is Verification?	Students will learn what information verification is, and learn about the responsibilities that news organizations, audience members, and social media companies have in promoting a safe, truthful, and ethical media landscape.
	Lesson 4: The Verification Steps	Students will learn about a five-step checklist they can use to verify the veracity of a news image or video. They will learn the limitations inherent in the verification process and consider different tools they can use to support their pursuit of the truth.

Digital Empowerment Module

Topic	Lesson	Description
ICT material production	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, or for the conduct of the project.

Topic	Resources
Education Technology Theories and Trends	Cognitive Theory of Multimedia Learning
	Cognitive Theory of Multimedia Learning

• Cognitive Theory of Multimedia Learning • Computer-Supported Collaborative Learning • SAMR Model • Trends in Education Technology	[Computer-Supported Collaborative Learning](#) [SAMR Model](#) [2020 Educause Horizon Report: Teaching and Learning Edition](#) [Cognitive Theory of Multimedia Learning](#)
Types of Digital Learning Resources • Digital Academic Content Tools • Digital Productivity Tools • Digital Communication Tools • Open Educational Resources (OERs)	[Digital Learning Resources Matrix](#) [Introduction to OERs](#) [OER Commons](#) [UNESCO Open Education Resources: Policy, Costs, and Transformation](#)
Productivity Tools • Google Education Suite • Microsoft for Education • Page, Keynote & Numbers of Apple • Open Office/Libre Office	[Using Google Docs](#) [Step by Step Guide in using Google Docs](#)