Technology Integration Matrix (TIM) Model:

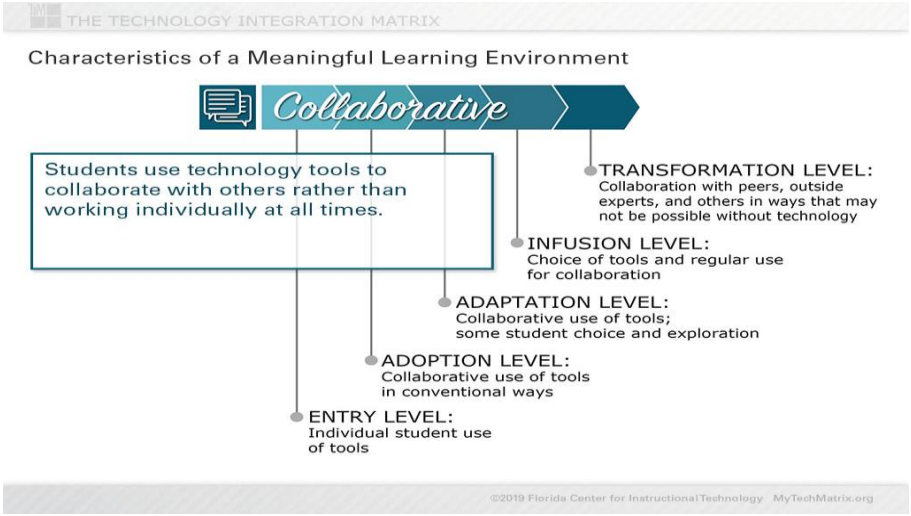
Our current series of ETIPs focuses on using the Technology Integration Matrix (TIM) Model as a framework for using technology to enhance learning. (Source: https://fcit.usf.edu/matrix/project/introduction-to-the-technology-integration-matrix/)

If you missed our previous ETIPs in the TIM series, check out our TIM ETIP – Vol. 1 where we took a look at using the TIM Instructional Planning Model to increase student engagement. Then, check out our TIM ETIP – Vol. 2 that introduces the Technology Integration Matrix (TIM) and takes a close look at the Active Learning Characteristic of the TIM model.

Continuing along with the TIM Matrix, in this ETIP we are going to delve into the Collaborative Learning characteristic.

COLLABORATIVE LEARNING: Building Knowledge in a Community

The Collaborative characteristic describes the degree to which technology is used to facilitate, enable, or enhance students' opportunities to work with peers, experts, and others who may be in different locations and may represent different experiences, cultures, and points of view. (Source: https://fcit.usf.edu/matrix/collaborative-learning-building-knowledge-in-community/)

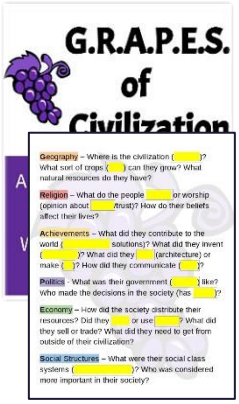


Collaborative - Entry Level:

First, let's look at an example of a lesson that started off at the Collaborative - Entry level and make it more collaborative. In this example, a sixth-grade teacher is preparing to teach the following standard:

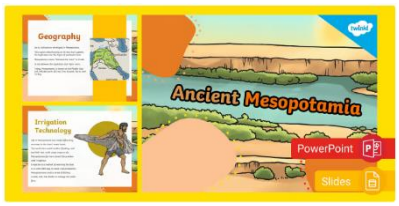
> **Social Studies – History Strand – 2. Early Civilizations:**
> Early civilizations (India, Egypt, China, and Mesopotamia) had unique governments,

economic systems, social structures, religions, technologies, and agricultural practices and products. The cultural practices and products of these early civilizations can be used to help understand the Eastern Hemisphere today.



At the Collaborative – Entry level, a teacher may introduce the idea of civilizations by showing a video such as this G.R.A.P.E.S. of Civilization - Introduction (song) video posted on YouTube by SigningCrystal. Then, the teacher might present an introductory lesson, leading students through a PowerPoint or Google Slides presentation on the aspects of a civilization, such as this G.R.A.P.E.S. of Civilization – Introduction video lesson, also posted by SigningCrystal on YouTube. While the teacher goes through the lesson, the students complete the corresponding G.R.A.P.E.S. Guided Notes using Google Slides. In this lesson, the teacher and students would be using the technology, but **the students are using technology independently**. The students are not collaborating while using the technology. So, this would be Collaborative-Entry.
(Source: https://fcit.usf.edu/matrix/project/collaborative-entry-slide/)

Collaborative - Adoption Level:



Let's take it up a notch! To take this lesson to the Adoption Level, we will need to have **students use technology, in a conventional way, to collaborate with others**. To do this a teacher could have the students find a partner to work with and have the pairs of students watch a couple YouTube videos about one of the civilizations, such as Ancient Mesopotamia. She would provide the links to the videos, like Mesopotamia Geography for Ancient World History by Instructomania: A History Channel for Students, and MESOPOTAMIA | Educational Videos for Kids by Happy Learning English. After the students watch the assigned videos, they would work together to make a PowerPoint or Google Slides presentation about Ancient Mesopotamia to share with their classmates. (Source: https://fcit.usf.edu/matrix/project/collaborative-adoption-slide/)

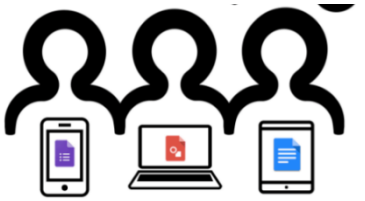
Collaborative - Adaptation Level:

Now, let's keep going! To reach the Adaptation Level, the students will be using technology in conventional ways, collaboratively. However, the **students are encouraged to explore the use of these tools**. This could be done by the teacher posting the link to a YouTube playlist of videos about one of the civilizations, such as Ancient Egypt. This could be the Ancient Egypt playlist compiled on YouTube by SigningCrystal. Then, the pairs (or small groups) of students could choose a different video than the other groups to analyze. After analyzing their video the pair (or small group) would work together to find supporting evidence for the claims made in their video by finding another resource such as a credible website found using a student-friendly search engine or website (i.e. Ancient History for Kids, History for Kids, Maps ETC, Kiddle.co, Ducksters.com, etc.), non-fiction book/ebook (i.e. Discovering Ancient Egypt by Erin Staley, Discovering Ancient Egypt for Kids: The English Reading Tree by Keith Goodman, etc.), etc. With their YouTube video and supporting evidence, the students would work together to make a video of their corresponding findings using a video camera embedded in their device (iPad, Chromebook, laptop, etc) and the Canva for Education app. Within Canva, the students can explore the templates, tools, and features provided (such as a video trimmer, background remover, background templates, adding text and photos, inserting graphics, transitions, etc.) while they are making their Canva videos with their partner (or small group) to share with the class via a view-only link found within Canva. (Source: https://fcit.usf.edu/matrix/project/collaborative-adaptation-slide/)

Collaborative - Infusion Level:

Moving up another level, we reach the Infusion Level. At this level, technology is being used regularly. The teacher fosters a collaborative learning environment and supports **students' meaningful choices in their selection of technology tools for collaboration**. In our ancient civilization example, this could mean that when it is time to explore the civilization of Ancient China, the students lead their inquiry by choosing the resources and technology they will use for their research (websites, ebooks, videos, etc.), as well as choosing the resources and technology they will use for their demonstration of their knowledge. A teacher could give the guideline that each group must produce something that another group of classmates could engage with to further develop thier own knowledge of Ancient China, or demonstrate their understanding of the Ancient Chinese civilization, but the specifics are left to the students to decide. So, with this creative freedom, students may choose to work together to create a Choose-Your-Own-Adventure activity using Google Slides, a news episode using a green screen and the DoInk app, a commercial using pictures and the Chatterpix app, a mobile phone app using the MIT App Inventor tool, a digital board game using StoryboardThat, or something completely new! At this level, students could be paired/grouped based on their module/hall/ enrichment period, etc. They don't have to be limited to the students in their class. One of the great powers of technology is breaking down walls! Give your students variety, choice, and ownership in their learning and they will do amazing things! (Source: https://fcit.usf.edu/matrix/project/collaborative-infusion-slide/)

Collaborative - Transformation Level:



The final step is the Transformation Level. The teacher seeks partnerships outside of the setting to allow students to access experts and peers in other locations and encourages students to extend the use of collaborative technology tools in higher-order learning activities that may not be possible without the use of technology tools. This allows students to connect with people outside of their school via text, voice, and/or video. For example, during the Ancient Civilization unit, groups of students could be assigned to different early civilizations (India, Egypt, China, or Mesopotamia) and conduct an interview with an adult knowledgeable about the ancient civilization of their assigned area, perhaps a high school teacher, local librarian, author, or historian via Google Meet, Zoom, or Microsoft Teams. Another possibility is for students to collaborate with same-aged peers at another school while studying the same standard. This could be via Google Docs (that allows live collaboration and real-time editing), a digital platform such as Wakelet or Parlay, or through a program such as ePals, GoPangea, or the Digital Exchange Program. They might even be able to connect with students from the areas they are studying and be able to compare/contrast ancient civilization to modern day life in that country. The possibilities for student collaboration are endless! (Source: https://fcit.usf.edu/matrix/project/collaborative-transformation-slide/)

Additional Collaborative Learning Resources:

- Best Student-Collaboration Tools by Common Sense Education
- 30 collaborative Google Apps activities for schools by Matt Miller of Ditch That Textbook
- 20 Collaborative Tools for Your Classroom That Are NOT Google by Kasey Bell of Shake Up Learning
- 8 EdTech Hacks: A Cheat Sheet for Interactive Classroom Collaboration by Kelly Walsh of EmergingEdTech

Stay Tuned…

Stay tuned for future S3 EdTech E-tips when we'll take a closer look at each of the characteristics at the various levels of the Technology Integration Matrix, along with examples, and lesson ideas, that you can use in your classroom.