2024-06-17

Blended Teaching in Higher Education Textbook

Breanna Slaugh
breanna.aragon@byu.edu

Blended Teaching in Higher Education Textbook

Breanna Slaugh

Design Project Report
Masters
Instructional Psychology & Technology, Brigham Young University

Purpose

BYU's Instructional Psychology and Technology (IP&T) program offers a graduate-level course in blended and online teaching: IP&T 538. This course discusses various methods and frameworks for instructors and instructional designers to develop, facilitate, and evaluate teaching materials tailored for blended and online learning environments. Before this project, IP&T 538 lacked a dedicated textbook that aligned directly with the content of the course. Instead, online activities relied on excerpts from various textbook chapters and readings from academic articles. With this structure, some students felt the content was overwhelming and disjointed. To address this need, my client wanted to consolidate pertinent content into a single open textbook hosted on the EdTech Books platform, where other instructors in the IP&T program host open textbooks for their courses.

My client taught IP&T 538 for many years and was the primary subject matter expert for the textbook's content. Due to a change in responsibilities within the college, my client did not teach the course as the textbook piloted. Instead, two doctoral students who had previously been TAs for the course took on the responsibility and served as two essential stakeholders in the project.

Though the project's primary audience was BYU IP&T students, faculty at international universities in Mongolia, China, and Colombia also expressed interest in using this textbook to support their instructors' professional development opportunities. These faculty would like to translate the book and localize the examples to fit their unique educational contexts. Because of their interest, these international programs served as a secondary audience for the project, influencing some of our design decisions.

The primary objective of this project was to design and develop the second half of the IP&T 538 open textbook. By the start of this project, the first half of the textbook, which explores the design of blended courses, had already been created. The second half was planned to focus on facilitating blended courses, including developing skills to facilitate in both synchronous and asynchronous environments. Another major goal of the project's content was to suggest methods by which readers can evaluate their design and facilitation skills.

Our main learning outcomes for this project were as follows:

1. Learners can explain how instructor facilitation influences student learning.
2. Learners can plan and apply facilitation strategies to asynchronous learning activities.
3. Learners can plan and apply facilitation strategies to synchronous learning activities.
4. Learners can evaluate the quality of online facilitation.

Due to the nature of open textbooks, another goal for the project was that the content should be openly licensed so that others could copy, reuse, modify, remix, and redistribute the materials. Open licensing was particularly important for other programs in the United States and internationally that want to use and adapt the content.

Project Needs and Constraints

Learner Personas

For this project, we focused on two main learner groups: BYU students taking IP&T 538 and instructors using the textbook for professional development, such as those from Mongolia. Since the book is housed in EdTech Books, other groups of students, teachers, or instructional designers can access the material. However, for this project's scope, we mainly focused on the BYU students and the faculty at international universities who would be working with the content with a facilitator.

I created the following personas using the information I collected from informal interviews with IP&T master's students who had previously taken IP&T 538 and from talking with stakeholders from BYU and the Mongolian University of Science and Technology.

Learner Persona #1: BYU - The TESOL Instructor

- Female, 39 years old, from Orem, Utah
- Bachelor's degree in Spanish teaching, TESOL Master's degree, working on the second year of IP&T Master's degree
- Chose IP&T 538 as an elective
- Experience teaching in face-to-face classrooms. Some experience teaching online due to emergency remote teaching, though she struggled with it. Despite this, she is interested in incorporating more technology into her practice.
- She is confident in her ability to facilitate her classes face-to-face but is not as confident with facilitating using technology. She especially has difficulty transitioning between face-to-face and online instruction.
- Currently teaches at BYU's English Language Center (ELC), though taught Spanish in middle schools and high schools for ten years
- Her main goal for taking IP&T 538 is to find new ways to integrate technology into her lessons and assessments.

Learner Persona #2: BYU - The Upcoming Instructional Designer

- Male, 24 years old, from Idaho Falls, Idaho
- Bachelor's degree in Psychology, working on the first year of IP&T Master's degree
- Chose IP&T 538 as an elective
- Was a TA for two courses during his undergraduate degree, but hasn't taught in an instructor position. He mainly graded and worked with students one-on-one, so he doesn't have much group facilitation experience.
- Would like to be an instructional designer for a local university after he graduates with a Master's degree.
- Some experience with writing learning outcomes
- His main goal for taking IP&T 538 is to answer the question: "How do we get students to interact in discussion boards?"
- Not as interested in learning facilitation skills since he won't be the one directly facilitating the course. However, he thinks it may be useful if he ever has to train online instructors.

Learner Persona #3: Mongolian University of Science and Technology - The Professor

- Male, 47 years old, from Ulaanbaatar, Mongolia

- PhD in Mechanical Engineering
- Prefers teaching face-to-face, but was asked to take on some blended classes for the next semester.
- Will access the textbook for a training led by MUST's Open Education Center
- He knows what he wants his students to learn by the end of his courses, but doesn't have unit-specific learning outcomes.
- Doesn't have access to an LMS; uses Teams to compile class materials and facilitate the course (including online synchronous class sessions)
- Speaks some English but can only read Mongolian

With these groups of learner audiences, it is important to note a few things and how they influenced the design of the textbook:

1. Learners may have differing levels of skill in facilitation and technology integration. Because of this, it is probably most beneficial to write to those who are relatively new to both.
2. Current instructors will likely have access to a group of students with whom they can practice facilitation skills with and apply what they are learning directly. However, it is unlikely that instructional designers will have access to a group like this. Similarly, students in a graduate program such as IP&T will typically only have their classmates with whom to practice facilitation. This affected the level of learning outcomes we planned for students to achieve for some chapters. This also affected the supporting assignments and assessments we included in the textbook to help students achieve the learning outcomes.
3. IP&T students are familiar with the LearningSuite and Canvas learning management systems, while the instructors in Mongolia use Microsoft Teams. These different softwares have different affordances; thus, the examples we used needed to be generic or different for each version of the textbook. Similarly, information on facilitation using third-party tools will need to be more generalized to be inclusive for various platforms.

Environmental Analysis

The client for this project was a past instructor of IP&T 538 and a leading expert in blended learning. He served as our subject matter expert as we designed and developed content. The first half of the textbook initially began as a resource intended for the Mongolian University of Science and Technology. After sending them content for the first half on blended course design, our primary audience for this resource shifted to IP&T 538 students for the second half. This is partially due to instructors at the Mongolian University of Science and Technology expressing only a slight interest in the facilitation and course evaluation sections, especially when we did not yet have content analyses or learning outcomes to show for it during our interview. They did not reach out as much, so we turned most of our attention to those who had expressed immediate interest in the facilitation chapters: the IP&T 538 instructors. However, we still considered faculty from other universities as a secondary audience.

The winter 2024 semester instructors for IP&T 538 were important stakeholders in our project. They relied on our content to inform their learning activities and assessments. Because the success of our content influenced the success of their course, they gave us feedback and requested edits before students engaged with that material.

This textbook was and primarily will be used in a digital environment, EdTech Books. However, there are opportunities for users to print a PDF or Microsoft Word version of the textbook through the platform. Users can access the textbook online through EdTech Books or Canvas using an iframe. Using an iframe and reading directly in EdTech Books have similar functionality, so our design did not account for a difference between the two. Because Canvas is accessible by computer, tablet, or phone, students may attempt to access the textbook using any of these devices. The EdTech Books platform resizes the content of the textbook, so it should be viewable from all screen sizes.

EdTech Books allows us to integrate YouTube videos, Google Drive artifacts, images, links, etc., to support the text's content. However, except for images, these elements cannot be accessed using a printed version of the textbook. Students would also have difficulty accessing these materials if they use a digital copy but are not connected to the internet. We anticipated that most students would access the textbook digitally and have an internet connection.

The textbook is a resource available through the EdTech Books website or as a PDF, and this may provide opportunities for facilitators to integrate social annotation tools such as Perusall or Hypothesis to encourage learners to share ideas and give each other feedback.

The textbook has a CC-BY license, so anyone may redistribute, remix, adapt, or build upon the materials with their own copy, though attribution must be given to the authors. Since we used a CC-BY license, all materials included in the textbook needed to have a CC-BY or other Creative Commons license.

It is important to note that for the IP&T 538 students, this will only be a resource and will be a part of a larger piece of instruction. The IP&T instructor will have in-class activities and homework that we don't outline in the textbook. Other universities using the textbook as part of a professional development course may use it similarly.

Content/Task Analysis

Because the primary audience for this project is students in IP&T 538, the textbook's content was aimed at achieving the course outcomes. The course description states that "students will explore foundational concepts related to online/blended learning and will learn to plan, develop, facilitate, and evaluate teaching and learning in these environments." The first half of the textbook's outcomes were related to planning and developing materials, so we limited our scope for the second half to facilitation and evaluation in online/blended learning environments.

To define the textbook's content under the larger theme of facilitation, I performed a content/task analysis with my subject matter expert using ideas from the "Task and Content Analysis" chapter of *Design for Learning*. First, my client and I found multiple frameworks to support facilitation strategies, through which we can connect ideas–between facilitation strategies themselves as well as how facilitation directly impacts the content of a course. Some of these frameworks were introduced in the first half of the textbook, including the Academic Communities of Engagement (ACE) framework and the Community of Inquiry framework. Others, such as Berge's four categories of facilitation, were new.

After finding frameworks, we used these to ideate a list of major concepts or ideas we wanted to include in the textbook in a collaborative Google Doc. Some of these ideas were adapted from (and credited to) those we have read in the current literature on online/blended learning. Others are directly from my client's previous work. We used an outline structure to organize ideas into topics and subtopics. Once we defined these larger groups, we worked together and separately to determine more specific ideas and examples within each category. See Appendix A for our topic breakdowns.

After creating a list of topics, subtopics, and examples, my client wanted to reorganize and categorize the ideas into chapters. We eventually settled on the following overview:

Chapter 7: Facilitation vs. Design
In this chapter, we will describe how facilitation differs from design, how design affects facilitation, and why facilitation practices are important.

Chapter 8: Frameworks Related to Online Facilitation
In this chapter, we will describe facilitation frameworks such as Anderson's Educational Interactions, Berge's Four Categories of Facilitation, Garrison's Community of Inquiry, and Borup's Academic Communities of Engagement.

Chapter 9: Blended and Bichronous Facilitation Contexts
In this chapter, we will describe the four dimensions of blended learning facilitation: time, place, fidelity, and humanness, as well as the connection between synchronous and asynchronous or online and in-person activities.

Chapter 10: Asynchronous Facilitation Strategies
In this chapter, we will describe various asynchronous facilitation strategies, from creating effective course orientation strategies to providing feedback and facilitating asynchronous discussions and group work.

Chapter 11: Synchronous Facilitation Strategies
This chapter will be similar to the previous one but will utilize strategies for synchronous online contexts, such as over a conferencing tool or using interactive technologies such as Google Docs.

Chapter 12: Evaluate Your Online Facilitation
This chapter will focus on ways to formatively and summatively evaluate course design and facilitation, including student reflections/surveys or course evaluation rubrics.

Chapter 13: Summary
This chapter will summarize everything the students have learned in the textbook, connecting design, facilitation, and evaluation.

Each chapter has corresponding learning outcomes at the chapter and section levels. To see these outcomes, see Appendix B. These section-level outcomes guided what we included for our challenges and what we included for the content itself.

Product Design

Design Details

The main product for this project is the second half of an open textbook focusing on blended teaching in higher education. Chapters include text and images, as well as challenges for readers to apply their knowledge. Three chapters have been completed in EdTech Books (Chapters 7-9), and four are in active development in Google Drive (Chapters 10-13). Five chapters are focused on facilitation, one on summative evaluation, and the last on summarizing the resource as a whole.

Instructional Strategy

An open educational resource (OER) textbook was appropriate for the observed learning needs in the following ways: 1) a textbook can compile a majority of the information that IP&T 538 students need to know all in one place; 2) the online textbook format can have textual information as well as images, videos, authentic examples, and embedded learner activities; 3) students can come back and reference or share the material later while they work as instructors or instructional designers; 4) the online textbook connects all parts of the blended design process to create cohesion.

The product may also be used as a just-in-time resource for instructors and instructional designers independently creating or facilitating a blended course. Nevertheless, the primary audience for the book is those taking a course (such as IP&T 538) or professional development training on blended teaching. This is important to note, as the teacher or facilitator for the course or training plays a significant role in modeling the content and providing feedback on challenge activities.

We utilized Bloom's taxonomy when creating our learning outcomes, as that is also what we recommend in the first half of the textbook for instructors or designers to use when they are creating outcomes for their own courses. Bloom's taxonomy helped us focus our objectives on higher-order thinking skills, which included applying, analyzing, evaluating, and creating. We also used a backward design model, so these learning outcomes strongly influenced how we structured our assessments and content. Again, we used a backward design model because it is the process the first half of the textbook recommends for readers as they design their materials.

We relied on constructivist principles to inform our design. Facilitation itself is primarily based on the instructors' or instructional designers' values and what they perceive their students' needs to be. We intended our learners to read the material and connect ideas to past experiences and their values. Then, they could set goals for the next time they facilitated a course. We also helped them make connections between ideas by incorporating examples and graphic organizers to compare and contrast different ideas.

The textbook's design helps learners achieve the learning goals by highlighting the intended outcomes in multiple areas to focus readers (and possible professional development facilitators) and aligning content and activities directly with the learning outcomes, as many sections correspond to a specific learning outcome. We also help learners achieve the learning goals by connecting them to prior knowledge and experience, incorporating definitions and explanations,

and highlighting various examples. The open design also fulfills the goal of being an openly licensed resource for others to adopt and adapt.

Constraints

The most significant constraint for this project was that the second half of the textbook needed to connect with and remain visually consistent with the first half in EdTech Books. Without connection and consistency, there would be less cohesion. Cohesion was vital as it was one of our objectives with the product. This value of cohesion impacted how much overlap we tolerated in chapters. If a reader works through the entire book, repetitive material could be distracting or confusing and may make the content seem disconnected. Similarly, organizational structures such as headings, tables, and callout boxes needed consistency. This constraint gave us less room to implement new ideas. When we did implement new ideas or organizational features, we had to go back to the first half of the book and make edits.

Another constraint we considered was that readers could access this content in different ways. They may access the content independently and read all the chapters, or they could just read those relevant to their specific interests, such as the chapters on asynchronous and synchronous facilitation strategies. The content could also be accessed by those in a professional development program or a graduate-level course, whose facilitators may use it as is or adapt it by making a copy of the book. We considered this as we designed our chapters by limiting mentions to examples or ideas from past chapters unless including the chapter or section. We hoped that this would cut down on maintenance issues for the future of the textbook for the IP&T program and those that may adapt it in the future. Also, considering future maintenance, we wanted to reduce links to other content in case the content was moved or deleted. This meant we did not send readers to many other materials except when citing sources.

Precedent Products

The primary open educational resource we referenced for inspiration was the K-12 Blended Teaching textbook on EdTech Books. We did this for the following reasons:

1. My client was an author of this textbook, so it helped provide a basis for elements he liked in its design and those he wanted to avoid incorporating into this book.
2. Many of the topics in this textbook overlap with those we wanted to include in our textbook, with the main adaptations being for higher education rather than the K-12 context.
3. This textbook is currently used in an undergraduate IP&T class, and excerpts were previously used for IP&T 538.

The main design elements we wanted to pursue after referencing this resource:

- Creating an image of a model at the top of the chapter to represent where the reader is at in their process of learning about blended teaching
- Learning outcomes listed at the beginning of the chapter
- Heading organization and labels
- Using ordered and unordered lists to highlight content
- Bolding important terms or principles, especially when defining
- Challenges highlighted in callout boxes
- Using tables to compare and contrast, categorize, or describe ideas

Other open educational resources we referenced include the University of Waterloo's content on Fostering Engagement: Facilitating Online Courses in Higher Education and Teaching in Blended Learning Environments by Vaughn et al. We mainly referenced these resources for content ideas rather than organization or formatting.

Design of Product

When learners access our Blended Teaching in Higher Education textbook on EdTech Books, they see an introduction chapter and a design unit for chapters 1-6, the first half of the textbook. The second half is organized into a Facilitation Unit (chapters 7-11), an Evaluation Unit (chapter 12), and a conclusion chapter (chapter 13). See Figure 1 to see the table of contents. Currently, only chapters 7-9 show content in EdTech Books. Content for chapters 10-13 is still in development in Google Drive, though the structures are the same as those for chapters 7-9. Learners can access the chapters in any order. As mentioned earlier, we took into account that some may choose not to utilize the resource as a whole and only read chapters or portions of chapters that appeal to them.

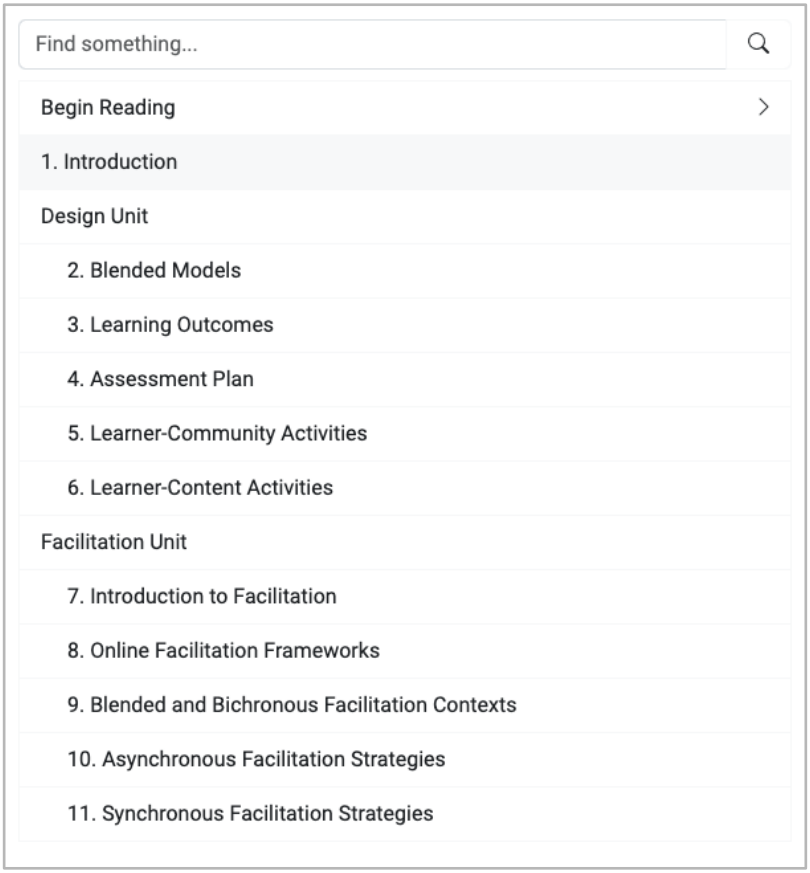

Figure 1 Textbook Table of Contents

Every chapter has our textbook's framework image (see Figure 2), a short introduction, the chapter's outcome and sub-outcomes (see Figure 3), content sections with their corresponding outcomes (see Figure 4), figures with attributions, tables, challenges, a conclusion, and a references section.

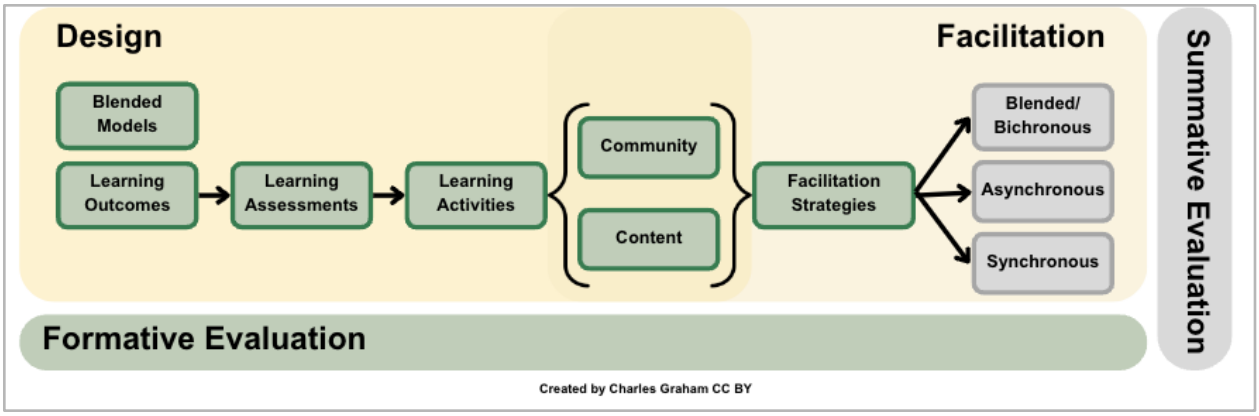

Figure 2 Textbook Framework Image

Chapter Learning Outcome: I can explain how instructor facilitation influences student learning.

Sub-section outcomes:

- I can distinguish between online facilitation and design. (Section 7.1)
- I can articulate how online course design affects an instructor's ability to facilitate learning. (Section 7.2)
- I can explain why developing online facilitation skills is important. (Section 7.3)

Figure 3 Chapter Learning Outcomes and Sub-section Outcomes

7.1 Facilitation vs. Design

Learning Outcome: I can distinguish between online facilitation and design.

In Chapter 1, we related the design of a course to the design of a building. The blueprint of a course, like the blueprint of a building, shows how each of the elements will work together, with each element designed for a particular purpose. After a course has been designed, facilitation is like a building being used for the purposes it was designed for. Now that the course (or "building") has been developed, how are you going to help your learners use what has been created to maximize their learning?

Consider an asynchronous discussion. The course designer was careful when designing the prompt: choosing words that would enable evaluative and divergent thinking and setting guidelines on the structure, content, flow and timing of responses (see Chapter 5).

Now envision two instructors simultaneously teaching this course as described in Table 7-1.

Table 7-1. Two contrasting examples of facilitating online discussion

Facilitator 1	Facilitator 2
This instructor logs into the course once a week, looks at whether learners had an original post and a reply, gives them a grade, and doesn't talk about the discussion in their synchronous class session.	This instructor logs into the course frequently, actively participates in the discussion with learners, and summarizes key insights from the discussion during their synchronous class session.

While the design of the activity is consistent across each, the methods the instructors use to facilitate diverge significantly. Are these instructors facilitating this activity in a way that fulfills the purpose it was designed for? Maybe! It depends on the purpose of the assignment.

Figure 4 Chapter Section with Learning Outcome and Table

Challenges are highlighted in blue callout boxes (see Figure 5). There is a link that, when clicked on, readers are brought to a prompt asking them if they want to make a copy of the challenge in Google Docs (see Figure 6).

✏️ Chapter 9 Facilitation Challenge

You will use the skills presented in this chapter to facilitate a blended/bichronous activity.

Open the Blended/Bichronous Lesson Plan Template and save a copy. Label the copy Your Name Blended Lesson Plan (Example: Hyun Joo Blended Lesson Plan.) You can work on this as you read the chapter or wait until you have finished the reading.

You will plan, facilitate, and evaluate your blended teaching at the end of this chapter.

Figure 5 Facilitation Challenge Callout Box

Figure 6 Facilitation Challenge Copy Message

Actual Product

Here is the link to the Blended Teaching in Higher Education textbook.

Video Walkthrough

Here is a video walkthrough of some of the design features of the textbook.

Design Process and Evolution

Before I came to the project, my client/subject matter expert already had a general idea of topics he wanted for the second half of the textbook based on how he had taught IP&T 538 in previous semesters and his knowledge of the current research on good course design, facilitation, and evaluation.

Having a general idea of what he wanted to include, we began the design process by exploring and identifying different topics within the umbrella topics of facilitation and evaluation. We did this by reviewing scholarly articles, universities' instructor resources, blogs, videos, open books, and previously used resources for IP&T 538 to determine essential principles and ideas to include. We then grouped the ideas we found into subtopics in a Google Doc.

We initially tried finding a facilitation theory or model to organize topics and eventually turn them into chapter organization. Examples of these theories and models we had considered include Anderson's Educational Interactions, the Community of Inquiry model, and Berge's framework on facilitation functions. While we found that we could categorize some topics and facilitation strategies using these models, other topics did not fit well, but we did not want to remove them altogether. Instead, we included these frameworks as part of the resource in the chapter "Introduction to Frameworks."

To help set this resource apart from other resources readers could access on facilitation, we wanted to emphasize the blended context of the courses they plan to work with. This led us to organize the rest of the content by the modalities they would be facilitating (synchronous, asynchronous, bichronous/blended). For the evaluation unit, we decided to focus on summative evaluation of both course design and course facilitation.

Next, using Bloom's Taxonomy, we defined competencies of what we wanted readers to know and be able to do after reading the content and engaging with chapter activities. When creating these outcomes, we tried to be aware of the assumptions we were making about our readers and their context. In an ideal scenario, they would have access to an audience where they could practice their facilitation skills rather than just plan for what they would do. However, we acknowledged that there may be readers who do not have direct access to such an audience, so it was preferable that they would just be assessed on their facilitation and evaluation plans.

Using the topic groupings and competencies, the subject matter expert and I created an outline for the entire second half of the textbook. This outline included chapter organization, sections, and competency checklists.

After creating the overall chapter outline, we began working on individual chapters to ensure a good flow of ideas and reduce the potential for redundancy. My subject matter expert created outlines for each chapter in Google Docs, describing important points, linking relevant articles and images to reference, and suggesting examples to support the content. Here, we had to be careful with copyright and ensure that if we were using resources directly in the content, they were openly licensed so we could integrate and adapt the ideas. If publishers or other authors held the copyright, we needed to cite them and adjust the ideas to avoid plagiarism. We especially had to consider this with the subject matter expert's work.

Using the outlines from the subject matter expert, I developed the content by writing text, organizing content, and finding examples. Another team member contributed by creating images, making edit suggestions, and eventually adding the chapters' content to the EdTech Books platform. We brainstormed assessment ideas for challenges before and during each chapter's development. While we used a Backward Design framework, we found ourselves adjusting learning outcomes and course assessments as we worked on chapter content. As we wrote, we were better able to see what we could and could not help readers do just based on our textual content, so we made adjustments as needed.

We iterated through these chapters as we created basic outlines, then more comprehensive outlines, the actual text, and then added supporting content such as tables or images with examples. Throughout this, we gave each other feedback through Google Doc comments and emails by asking clarifying questions, offering suggestions, explaining rationale, and so on. I met regularly with the subject matter expert to ensure that the chapter content that we were developing aligned with his vision.

Though our process was very similar for each chapter, we did encounter specific design decisions that we had to address within each section as we determined how deep we wanted to go for ideas and principles, how we wanted to organize content, and how we wanted to represent ideas.

There were several unforeseen design challenges we faced directly with the content.

1. **Chapter Challenges**: We originally intended that all chapters would have a challenge activity that learners would do to build part of their facilitation plan or evaluation plan and align it with what they had been learning in the provided chapter. However, for chapters 7 and 8, we found that the chapters did not lend themselves to building part of a plan because we did not necessarily highlight specific facilitation strategies. Instead, we included a facilitation reflection at the end of the chapter, where the reader reflected on questions related to the chapter content.
2. **Primarily Text-Based Content**: In our proposal and planning, we intended to include videos throughout the chapter content to help split up text and show principles in action. We found very few video resources aligned well with our definitions or frameworks. Additionally, we were constrained to using YouTube videos and trying to use videos with a CC-BY license that were relatively short (no more than 10 minutes). So, due to difficulty finding videos that fit our criteria and not having the time or resources to develop our own, we opted to use primarily text-based content for the time being.
3. **Chapter Organization**: One significant change that delayed the production of chapters 10 and 11 was a disagreement on how the chapters should be organized to best help learners understand the contexts of the facilitation strategies. Initially, we organized the content as “10.1 Getting Started Asynchronously, 10.2 Progressing Through a Course, then 10.3 Facilitating Learning Activities.” The instructors for IP&T 538, significant stakeholders for our project, suggested changing it to “10.1 Facilitating at the Course Level” and “10.2 Facilitating Asynchronous Learning Activities.” This was a good change, but it required us to rearrange content and reframe learning outcomes to fit with those categories of course-wide facilitation and individual activity facilitation. Subsequently, chapter 11 needed similar adjustments, though the adjustments to this chapter were easier since we were not as far into development when the change was suggested.
4. **Overlapping Content**: There were multiple ways in which content overlapped, creating unwanted redundancy. First, course design and facilitation as ideas overlap heavily, and it was challenging to create a substantial distinction between the two and categorize all course activities as either design or facilitation. Because of this, some content was included in the facilitation chapters that had already been discussed in the course design chapters. Another way redundancy occurred was that we wanted to cover similar topics in chapters 10 and 11, with the main difference being the modality they are working in (asynchronous and synchronous). We had difficulty defining what was necessary for context in both places without repeating the same content. Someone only accessing one of the chapters would need or want the context for when and how to include specific facilitation strategies. However, repeating the same context and rationale would be redundant for someone going through the entire book, such as with the IP&T students. Instead, we decided that in chapter 11, we would reference the similar sections in chapter 10 to provide a majority of the context and rationale for those who had not read it and allow those who already have to move forward with the content.

Product Implementation

Since the resource is based online, no physical spaces needed to be prepared. However, for the digital space, we needed to ensure that the instructors and students had access to the content by publishing the content in EdTech Books and ensuring sharing permissions were correct for any template files, such as the facilitation challenge for chapter 9. After these were published and shared, the instructors and students could access the content as long as they had access to a computer and an internet connection.

IP&T 538 has no prerequisites that learners need to fill before joining the class, so we did not design with knowledge from other courses in mind. Learners do not need to be already familiar with any course design, facilitation, or evaluation knowledge, as the open textbook is meant for beginners to the online or blended space and be a guide for practitioners. However, it would help to be familiar with what instructors do and understand student behavior. Considering our intended audience was instructors and instructional designers, we believed they would already know about this coming to the resource.

We piloted chapters 7-9 with the IP&T 538 course during BYU's Winter semester 2024. Students aligned fairly well with our personas regarding previous experiences with course design and facilitation and what they wanted to get out of the course. There were eight students, two instructors, and myself as the teaching assistant.

The IP&T 538 instructors had been TAs for the course previously, so they were already familiar with the material and did not need any training on the content. Also, EdTech Books was a platform they were already familiar with because of other courses in the IP&T program, so they did not need technical training on the platform.

The main consulting we did with the IP&T 538 instructors was providing chapter content through Google Docs before publishing on EdTech Books and asking if they had any questions or concerns. This process mostly gave us feedback on the content, but it allowed us to share our rationale for different sections. The one feature of the book we did have to help them understand was the course checklist introduced in the Introduction chapter and how that related to the chapter challenges. Beyond that, they found the content and textbook usability reasonably self-explanatory.

The instructors wanted to incorporate social annotation activities into the textbook to encourage students to engage with the material and interact with others. Since we were still making edits to the textbook, we wanted to ensure that the social annotation tool was dynamic enough to incorporate updates. I consulted with the instructors and suggested using the social annotation tool Hypothesis.

They used the textbook content as before-class readings and attached points to it by having students annotate in Hypothesis. Students responded well to this tool and commented multiple times in self-reports and in class that they enjoyed seeing each other's thoughts and feedback as they read the material.

For the reflections and challenges the textbook included, the instructors made their own copies and adapted them to fit the questions they wanted them to answer and the plans they wanted

them to make. Though the reflections and challenges were implemented differently than intended, the client preferred that the instructors used the materials how they saw fit, especially since they are part of the open resource.

The Canvas LMS was the primary communication instrument for learners to become aware of the product, use it successfully, and get support during their experience. This is where the instructors shared the link to the textbook, provided instructions for using Hypothesis with the resource, and answered questions related to the textbook. Students could contact me through Hypothesis or the Canvas Inbox for editing or reformatting requests.

For this product to be used successfully in contexts beyond IP&T 538, I think the resource can do well on its own, but it is even more effective when there is a social component. Whether that be another graduate course or a professional development training for instructors, an expert or a cohort working together to understand ideas, come up with their own examples, and give each other feedback can significantly improve learning outcomes, as we saw with IP&T 538.

Assessment of Student Learning

As mentioned earlier, only chapters 7-9 were available to IP&T 538 students, and chapters 10-12 are still undergoing development. Because of these differences in context, we used different assessment mechanisms for each group of chapters.

Chapters 7-9

For chapters 7-9, the learning outcome we wanted students to be able to achieve was “Learners can explain how instructor facilitation influences student learning,” which was the main chapter outcome for chapter 7.

While we included assessments in the textbook, the IP&T 538 instructors took these assessments and adapted them to their needs. Because of this, the assessment does not precisely align with the learning outcome above. However, the reflections and the challenge do support learners' achieving that outcome. See Appendix C for the checklist assessment IP&T 538 used for the facilitation unit.

Instructors assessed each step using the rubric criteria: “All the facilitation or reflection instructions are complete and show a thorough understanding of the principles, concepts, and learning objectives of this step. Each step is worth 10 points.”

For Step 1, which assessed their understanding and reflection on Chapter 7, the average score was 9.5/10. For this step, all students displayed a thoughtful reflection on how facilitation can be important for learner success and what activities they planned for their course that would most benefit from intentional facilitation. Some were more thorough and detailed than others, but they had good ideas connected to the textbook content.

For Step 2, which assessed their understanding and reflection on Chapter 8, the average score was 8.875/10. Again, students thoughtfully reflected on how they would be intentional with their

facilitation for a specific course activity. Most students were successful in connecting their ideas to chapter content, but some did not identify the frameworks from which they came.

For Step 3, which assessed their understanding and facilitation plan based on the content of Chapter 9, the average score was 8.625/10 (though one student did not submit this step). Those who submitted this step did well at analyzing their learning activity, defining its placement along the dimensions of interaction, and identifying specific facilitation strategies for the different dimensions.

Because all three of these scores are above 80% and the learners reflected thoughtfully on how facilitation would impact students in their course, students were able to achieve the learning goal.

Chapters 10-12

Due to chapters 10-12 not being available for the IP&T 538 students during the Winter 2024 semester and still being in development as of June 2024, we assessed whether learners could achieve the learning goals by having IP&T student evaluators read the content and take a short assessment. See Appendix D for the assessments used for chapters 10-12.

I gathered assessment data by creating a folder with copies of the content and copies of the assessment for all three student evaluators. I then reviewed their responses and found patterns.

Major findings

Chapter 10

All three learners included specific strategies they would use to increase student engagement or participation, provided descriptions for how they would show their presence in the activity, and identified good strategies to prevent and address issues. Most of these strategies came from the content and were tailored to fit their context. These students successfully planned facilitation strategies for specific asynchronous learning activities. However, due to the limitations of the assessment and evaluation, we were unable to determine if these students would be able to apply the facilitation strategies.

Chapter 11

Like Chapter 10, all three learners included specific strategies to increase student engagement or participation, provided descriptions for how they would show their presence (or, in some cases, an intentional lack thereof), and identified effective strategies to prevent and address issues. Again, most of these strategies came from the content itself and were tailored to fit their context. These students successfully planned facilitation strategies for specific synchronous learning activities. However, due to the limitations of the assessment and evaluation, we were unable to determine if these students would actually be able to apply the facilitation strategies.

Chapter 12

Unfortunately, the instructions for the assessment may not have been as clear as intended, so students did not submit exactly what we wanted. However, students identified facilitation evaluation criteria from the broad categories presented in the book, provided a solid rationale for their ratings, and cited specific evidence. They also gave good suggestions for the facilitator to implement, though not all were informed by chapter content. Based on the assessment results, students were somewhat successful in evaluating the quality of online facilitation.

Evaluation

The primary stakeholder to whom I presented my evaluation data is the original client and subject matter expert. While this data helps him understand the project's strengths and weaknesses as they are now, it will also be helpful for those who work on the textbook in the future and adjust the content for future iterations.

To determine the goals of our evaluation, we referenced Kirkpatrick's four levels of training evaluation. We originally intended to look at the reaction, learning, and behavior levels. However, due to our evaluation's time and budget constraints, we could only evaluate at the reaction and learning levels. The evaluation looks different for different groups of chapters since chapters 7-9 were available to the IP&T 538 class, while content from chapters 10-12 was evaluated by IP&T students who had not taken IP&T 538.

For this evaluation, our main goal was to determine whether the content was useful to learners, specifically regarding chapter organization, page and content formatting, and examples of principles or strategies. As a secondary goal, we were curious about any recommendations they had for improving the content.

Procedures

Chapters 7-9
We used both informal formative evaluations and formal summative evaluations to capture students' thoughts on chapters 7-9.

For informal formative evaluations, I had access to student self-reports within the course and the social annotations they left in Hypothesis. Self-reports gave me information on how confident students felt about chapter competencies and topics that they thought could be clearer or more thorough. Hypothesis comments helped me recognize sentences or examples students thought were particularly useful or confusing. Additionally, some students tagged me when they found spelling or grammatical errors.

For the formal summative evaluation, a month after the IP&T 538 course concluded, I emailed all students who had participated in the course asking if they would complete an evaluation survey in Google Forms for chapters 7-9.

In the Google Form, we asked the following questions:

1. How satisfied were you with chapters 7-9? (Likert scale from 1 to 5)
2. Please explain your rationale for the rating above. (Long answer text)
3. How useful was the content of chapters 7-9? (Likert scale from 1 to 5)

4. Please explain your rationale for the rating above. (Long answer text)
5. How would you rate the effectiveness of the organization of the chapters? (Likert scale from 1 to 5)
6. Please explain your rationale for the rating above. (Long answer text)
7. What could be improved for the next version of these chapters? (Long answer text)
8. Did you enjoy using the textbook? (Long answer text)

To analyze the data, I identified the ratings students gave, their rationales, and any patterns between their responses. I also identified areas in which responses aligned with comments made in the informal evaluations.

Chapters 10-12

Due to chapters 10-12 still being in development, we did a developmental/formative evaluation. We decided to ask three IP&T graduate students who had not yet taken IP&T 538 if they would be willing to read and evaluate chapter content and take a corresponding assessment for each, being compensated with a $30 Amazon gift card for their time. We chose these students rather than those who did take IP&T 538 or had already taken it because students who had not taken the course would not be influenced by other resources or the instructors' ideas as they filled out the assessments and evaluations. Additionally, we chose IP&T students as they are our primary audience.

Each evaluator was given a copy of the chapter content in Google Drive and told they could mark it up if desired. They were also given their own assessment document, in which they filled out a facilitation or evaluation plan based on what they learned from the textbook content. Then, at the bottom of the document, they used a link to go to the chapter evaluation in Google Forms.

In the Google Form, we asked the following questions for each chapter:

1. How satisfied were you with the content? (Likert scale from 1 to 5)
2. Please explain your rationale for the rating above. (Long answer text)
3. How useful was the content? (Likert scale from 1 to 5)
4. Please explain your rationale for the rating above. (Long answer text)
5. How long did it take you to go through the content (Not including the assessment)? (Short answer text)
6. What could be improved? (Long answer text)

To analyze the data, I identified the ratings students gave, their rationales, and any patterns between their responses.

Evidence and Outcomes

Chapters 7-9

Self-Report Data

Chapter 7 Competencies: 8/8 students marked themselves as feeling comfortable with their understanding of all three competencies.

Chapter 8 Competencies:

Competency	Number of Students Comfortable with Understanding
I can categorize interactions as learner-learner, learner-instructor, and learner-content interactions.	8/8 students
I can describe each of Berge's four categories of facilitation: pedagogical, social, managerial, and technical.	6/8 students
I can discuss how cognitive, social, and teaching presence interact to create a community of inquiry.	7/8 students
I can describe the affective, behavioral, and cognitive dimensions of engagement.	7/8 students
I can compare and contrast different frameworks for talking about online learning facilitation.	6/8 students

Chapter 9 Competencies: 7/7 students (one student did not respond to the self-report) felt comfortable with all three competencies.

Hypothesis Data

Chapter 7

Specific comments on ideas or examples that resonated with them include:
- "...to facilitate something is to make it easier."
- The list of responsibilities a facilitator may have
- Facilitation metaphor at the beginning of section 7.3
- Examples of what a course would look like without facilitation

There were no comments on ideas or examples that did not resonate with them.

Chapter 8

Specific comments on ideas or examples that resonated with them include:
- How the facilitation frameworks we chose include some form of social element
- The concept of an engagement gap, as depicted in the ACE framework

Specific comments on ideas or examples that did not resonate with them include:
- Providing timely and quality feedback to learners when classes have a lot of students
- "Ice breakers are fun, but they don't connect me with the content or help me see why I should care about it."

Chapter 9

Specific comments on ideas or examples that resonated with them include:

- The dimensions of interaction image
- Splitting students up into smaller groups to do asynchronous discussions
- Setting expectations for how long students may spend participating in a discussion
- Planning ahead for what level of feedback students will need
- Sharing a list of tools or resources that may be beneficial during a discussion
- Sometimes, it is more effective to give written, low-fidelity feedback.

Specific comments on ideas or examples that did not resonate with them (or they had questions about) include:

- They find it hard to have discussions range across days, though it sounds good in theory.
- A question they are asked to consider: “Do you want everyone to participate?” A student asked why we might not want everyone to participate.
- For fidelity, one student needed clarification about where synchronous Zoom classes would fit.

Summative Google Form Data

See Appendix E for students’ ratings and rationales for each of the evaluation questions.

Some key takeaways from the summative Google Form include:

- Two of the three students rated the overall content as useful, and the third identified specific details that were useful.
- Learners found these chapters focused and organized well, including good amounts of examples, figures, and tables. They also found that the chapters flowed well and built off of each other.
- For some, the line between facilitation and design needed to be more well-defined.
- Learners were not sure how/when they would apply what they learned about facilitation frameworks.
- Overall, they enjoyed using the textbook and having the material all in one place.

Outcomes of Evaluation

From these three sources evaluating chapters 7-9, we successfully created content that was useful to learners, organized well, and easy to use.

Chapters 10-12

The results from the Google Form evaluations for each chapter can be found in Appendix F.

Chapter 10

Some key takeaways from the Google Form evaluation for Chapter 10 include:

- Learners felt like the content was simple and easy to understand.
- Learners found suggestions insightful and applicable.

- Some suggestions they have for improvement are small wording or heading adjustments and consistency with content formatting (such as with the pros and cons that appear in multiple sections).

Chapter 11

Some key takeaways from the Google Form evaluation for Chapter 11 include:

- Learners found that there was a good amount of information without being repetitive, and the content was easy to follow.
- They specifically liked the practical tips for facilitation and how they were organized so they could refer to them if needed.
- Some suggestions they have for improvement are bolding the first sentences of bullet points to clarify the main idea and being more specific about tools for collaboration or interaction instead of a general overview.

Chapter 12

Some key takeaways from the Google Form evaluation for Chapter 12 include:

- A few commented that the material was clear and understandable.
- One mentioned that they would not know how to evaluate a course just based on the material given.
- One highlighted that the links, standards, and criteria are all great resources. Another highlighted the section distinguishing between course design and course facilitation in regard to evaluation.
- Some suggestions they have for improvement include concrete examples of instructors evaluating their course or facilitation and being more explicit about the numbering used in the evaluation criteria tables and where it comes from.

Outcomes of Evaluation

Based on the responses from these three chapter evaluations, while there are improvements to be made, I believe that we have created content that is useful to learners, organized intuitively, and easy for students to navigate.

Recommendations

Based on the evaluations above, some recommendations I have for the continuous development of the book are as follows:

1. Be more explicit about the line between design and facilitation, if possible. This confused some students about the role of a designer vs. a facilitator. (Chapter 7)
2. Make more apparent connections between facilitation frameworks and how they relate to the learners' facilitation practices. Address the "why" of the chapter by addressing how and when they might consider these frameworks. (Chapter 8)
3. Adjust image sizes. (Chapters 7-9)
4. Add videos to break up text and show principles in action. (All chapters)

5. Maintain more consistency with how ideas are organized across sections. Sometimes, similar ideas are represented in very different visual ways. (Chapter 10)
6. When using bullet points, bold the first sentence to make the main idea stand out. This will also help to maintain consistency with other chapters and sections. (Chapter 11)
7. Share concrete examples of an instructor or instructional designer evaluating a course using the course evaluation rubrics. (Chapter 12)
8. Express the "why" for learning about evaluation rubrics. Clarify what we expect them to be able to do with the rubrics. (Chapter 12)

Budget and Timeline

The table below compares the proposed budget against the actual spending. It is important to note that this product is still in development, so these numbers do not yet represent the final total of hours dedicated to the project. These numbers also do not take into account the time our subject matter expert spent in development, as he did not log hours on the project.

Table 1 Proposed vs. Actual Budget Comparison

Budget		
Student	**Proposed**	**Actual**
Breanna	165 hours at $20/hr	223.25 hours at $20/hr
Grad Student 1	112.5 hours at $20/hr	30 hours at $20/hr
Grad Student 2	45 hours at $19/hr	53 hours at $20/hr
Grad Student 3	45 hours at $19/hr	N/A
IP&T Student Evaluators (3)	N/A	$30 gift card for each ($90 in total)
Totals	$7260	$6215

Due to scheduling and recruitment issues, the actual hour allocations for graduate students working on the project differed from those proposed. Graduate student 1 had fewer hours to dedicate to the project than originally intended, thus only working 30 of the allotted 112.5. We had planned to hire two first-year Master's students to help with production; however, we were unable to recruit anyone because we tried to hire mid-semester. We recruited a second-year Master's student to help develop during the break between the Fall and Winter semesters.

Additionally, we did not originally intend to have evaluators outside of the students in the IP&T 538 class. Due to delayed development, we needed to utilize students who had not taken IP&T 538 to evaluate the content. To compensate for their time, we purchased a $30 Amazon gift card each.

Table 2 Proposed vs. Actual Timeline Comparison

Timeline		
Steps	**Proposed**	**Actual**
Step 1: Creating an Outline	September 7th, 2023 to September 21st, 2023	September 7th, 2023 to October 5th, 2023
Step 2: Generating Content	September 21st, 2023 to November 4th, 2023	October 23rd, 2023 to Present (June, 2024)
Step 3: Structuring and Refining	November 6th, 2023 to December 21st, 2023	October 23rd, 2023 to Present (June, 2024)
Step 4: Adding Content to EdTech Books	November 6th, 2023 to December 21st, 2023	December 27th, 2023 to Present (June, 2024)
Step 5: Reviewing Publishing Checklists	November 6th, 2023 to December 21st, 2023	December 27th, 2023 to Present (June, 2024)
Step 6: Evaluating the Second Half of the Textbook	March 4th, 2024 to April 12th, 2024	Summative evaluation of chapters 7-9 and formative evaluation of chapters 10-12 May 23rd, 2024 to June 5th, 2024

Factors Affecting Timeline

While we were able to create an outline before project approval, we needed to wait to begin Step 2 until the project was approved for development. So, we began Step 2 just over a month past the intended schedule.

We also found that we did not follow the same step process as initially proposed. We typically generated content and structured it simultaneously. We then refined the content before adding it to EdTech Books.

The most significant factors negatively affecting the timeline were the subject matter experts' and the graduate student developers' schedules and vastly underestimating the time each section would take to design and develop. My proposal initially mentioned that the graduate student developers, including myself, would spend a certain number of hours on average per week dedicated to the project. These averages overestimated how much time each would actually have available. These also did not take into consideration times in which we were unable to move forward because of feedback needed from the subject matter expert. The subject matter

expert also had very limited time available to work on the project to meet, review content, or create outlines for new content. Also, I assumed in my initial proposal that all six chapters would only take three months to develop. Due to the complexity of the topics and the amount of time it took to write various sections of the chapters, I underestimated the amount of time needed for each.

Annotated Bibliography

Domain Knowledge

Before we started writing content, we wanted to ensure that our ideas of good facilitation matched with others' definitions and research. Additionally, we wanted to know what other institutions wanted their instructors to know about facilitation. Each resource below provided valuable insights into the topics and strategies we wanted to explore. It also gave us ideas of organizational strategies and connections between ideas to build off of. However, some of these resources were more general or narrow in scope than some instructors may have desired, so we hoped that our resource would fill that gap while also connecting them directly to their course design process.

Graham, C. R., Borup, J., Short, C. R., & Archambault, L. (2019). K-12 Blended Teaching: A Guide to Personalized Learning and Online Integration (1st ed.), 1. EdTech Books. https://dx.doi.org/10.59668/2

This open education textbook housed in EdTech Books was a critical precedent material for us to review, as it included similar topics to what we wanted to build on and had an organizational style that we wanted to reflect, primarily because our content expert worked on this open book. Topics such as Anderson's educational interactions, using data practices to adjust facilitation strategies, establishing group roles, understanding dimensions of interactions, utilizing synchronous and asynchronous communication tools, managing and facilitating online discussions, and providing feedback are all related to the goals of our textbook, so we may adopt and adapt some of these ideas to better fit the higher education context.

Martin, F., Kumar, S., Ritzhaupt, A. D., & Polly, D. (2023). Bichronous online learning: Award-winning online instructor practices of blending asynchronous and synchronous online modalities. The Internet and Higher Education, 56, 100879. 10.1016/j.iheduc.2022.100879 https://www-sciencedirect-com.byu.idm.oclc.org/science/article/pii/S1096751622000355

Martin et al. define bichronous learning as an intentional blending of both synchronous and asynchronous modalities for learning. They examined the design, facilitation methods, and assessments as a framework for effective online courses. They specifically mention Berge's facilitation model (facilitators addressing the course's technical, managerial, pedagogical, and social aspects). They also clarify that bichronous learning is a type of blended learning. Martin et al. look at award-winning faculty teaching bichronously to see what strategies made them successful. For asynchronous facilitation, they found that these instructors made periodic announcements, were in the course frequently, addressed students in discussions, provided timely and regular feedback, facilitated icebreaker activities, and provided detailed assignment instructions. They found that these instructors came early and prepared for synchronous

facilitation, hosted virtual office hours or Q&A sessions, and used breakout rooms and whiteboards during synchronous online meetings.

Martin, F., Ritzhaupt, A., Kumar, S., & Budhrani, K. (2019). Award-winning faculty online teaching practices: Course design, assessment and evaluation, and facilitation. The Internet and Higher Education, 42, 34-43.
https://socialscience.msu.edu/_assets/docs-online-teaching/52_IHE2019_AwardWinningOnlineTeachingPractices.pdf

Martin et al. conducted this study with award-winning online faculty to determine aspects of their course design, assessments, evaluation, and facilitation that make them successful. Looking only at facilitation, they have three main categories of recommendations: timely response and feedback, availability and presence, and periodic communication. These ideas may be helpful as we introduce specific examples of best facilitation practices. These ideas may also be relevant to tie course design, assessment, evaluation, and facilitation together in the textbook, maybe in a summary chapter.

Martin, F., Wang, C., & Sadaf, A. (2020). Facilitation matters: Instructor perception of helpfulness of facilitation strategies in online courses. Online Learning, 24(1), 28-49. https://doi.org/10.24059/olj.v24i1.1980
https://files.eric.ed.gov/fulltext/EJ1249262.pdf

In this article, Martin et al. studied what a group of instructors perceived as the “most helpful” and “least helpful” instructor facilitation strategies. They use Zan Berge’s theoretical framework for online course facilitation (1995), which has four parts or “roles”: pedagogical, managerial, social, and technical. Table 1 describes facilitation strategies that instructors may use to fulfill a specific role. For example, an instructor may create a video-based course orientation as a part of their managerial role. My client would like to have a framework to guide the direction of the second half of the textbook so we could potentially build off of this framework. For the “most helpful” and “least helpful” instructor facilitation strategies, it is interesting to see how each of the facilitation strategies was rated. These strategies may be helpful when considering examples. However, it is important to note that these are instructor and not student perceptions.

Vaughan, N. D., Cleveland-Innes, M., & Garrison, D. R. (2014). *Teaching in blended learning environments: Creating and sustaining communities of inquiry*. AU Press. https://read.aupress.ca/projects/teaching-in-blended-learning-environments

This open educational textbook served as another precedent product for us to look at the content and how they organize the concepts for readers. The book explores blended teaching through the Community of Inquiry framework. While our textbook looks at facilitation through multiple frameworks, this can be helpful as we look at the Community of Inquiry framework. Additionally, it has an interesting idea for representing facilitation strategies and what that might look like in the face-to-face and the online setting in table format so the reader can compare them side-by-side.

Wilson, K., & Opperwall, D. (n.d.). *Fostering engagement: Facilitating online courses in higher education*. Fostering Engagement: Facilitating Online Courses in Higher Education.
https://contensis.uwaterloo.ca/sites/open/courses/FEFOCHE/toc/home/home.aspx

This open educational resource from the University of Waterloo serves as another precedent product for us to look at the organizational features, content, and level of depth that they go. This resource is beneficial in helping identify what instructors find themselves doing as lead facilitators, what others suggest as helpful facilitation strategies, and how other resources frame the importance of facilitation. And because this is openly licensed, it is possible to adopt some of the content, given that it is properly attributed.

Learning Theories and Instructional Strategies

The primary learning theory we utilized was constructivism, as facilitation is primarily based on the facilitators' past experiences and conceptual understandings, beliefs, and values. This led us to focus on activating prior knowledge and organizing concepts through various strategies to show connections.

Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How learning works: Seven research-based principles for smart teaching*. Jossey-Bass.

Ambrose et al. created this resource to bridge the gap between learning theory and teaching practice, and they do so by providing concise chapter sections on different research and practical methods for application. I specifically looked at this resource for its information on scaffolding student learning and activating prior knowledge. Some of the key points they make in this resource are that students' prior knowledge can help them or hinder them when trying to learn, depending on if their models, perceptions, beliefs, and attitudes are activated, sufficient for the given tasks, and appropriate and accurate to the context in which they are learning. We have a broad audience for the textbook, so we cannot tailor it directly to one. Still, we can provide opportunities for beginners and allow those who are more advanced to select the things most appropriate to their situation. Suggestions they give that we may rely on to activate prior knowledge include linking new material to their previous experiences in courses, linking material to past textbook material, and using analogies or examples from their everyday life that they can relate to. Similarly, helping learners organize the information in their conceptual understandings will help them learn and be able to apply those things later on. Suggestions they give that we may rely on to organize or categorize ideas include sharing the organization of the material we are providing, using highly contrasting or boundary cases, making explicit connections between concepts, and using organizational structures.

Mayer, R. E. (1999). Designing Instruction for Constructivist Learning. In C. M. Reigeluth (Ed.), *Instructional Design Theories and Models: A New Paradigm of Instructional Theory* (Vol. ii, pp. 141–159). Taylor & Francis Group.

Using key ideas from constructivism, Mayer provides specific methods for direct instruction to help learners select relevant information, organize the content in their memory, and integrate the information with prior knowledge to store in long-term memory. For selecting relevant information: 1) highlighting key information using headings, italics, boldface, bullets, arrows, font size, repetition, white space, and captions; 2) sharing instructional objectives with students; 3) creating a summary of key information; 4) eliminating irrelevant information. Organizing content mostly has to do with structuring the text in such a way that shows connections between ideas or organizes the material into groups. Lastly, integration strategies include advanced organizers,

illustrations, worked-out examples, and elaborative questions. These strategies will be useful to consider as we organize, format, and create the content for the textbook.

Osborn, J. H., Jones, B. F., Stein, M. (1985). The Case for Improving Textbooks. Educational Leadership, 42(7), 9–16. https://lib.byu.edu/remoteauth/?url=https://search-ebscohost-com.byu.idm.oclc.org/login.aspx?direct=true&AuthType=ip&db=eric&AN=EJ319792&site=ehost-live&scope=site

In this article, Osborn, Jones, and Stein suggest best textbook practices based on schema theory and metacognitive theory. With schema theory, they explain that the closer the reader's schemas are to the content and structure of the text, the more likely they are to learn and remember the material. Specifically, they suggest that textbooks should be written using concepts and vocabulary familiar to the learner and scaffold the learner as they move to higher levels. Metacognitive theory refers to the theories surrounding students' understanding of and control over their own thinking and learning. Osborn et al. argue that text structure, coherence, unity, audience appropriateness, and graphics affect student comprehension. Within each category, they provide examples to improve the quality of each. These will be useful for this project as we start writing and designing page layouts.

Richey, R. C., Klein, J. D., & Tracey, M. W. (2011). Constructivist Design Theory. In *The Instructional Design Knowledge Base : Theory, Research, and Practice* (pp. 129–145). Taylor & Francis Group.

This chapter in this resource provides valuable information for understanding and applying constructivist theory as an instructor or instructional designer. They outline three key points of constructivism: learning results from students' interpretation of their experiences, students taking an active role in the learning process, and students exploring multiple perspectives. Specific applications they suggest that are relevant to the design of our product include facilitating students' connections of past and new experiences, incorporating relevant activities that challenge the learner and help them focus on higher-level thinking skills, and using problem-based learning to situate or anchor learners in a real-world context.

Instructional Design Approaches

We used a few instructional design approaches, especially over time. We began by defining learning objectives using Bloom's taxonomy and then using backward design to identify assessments and learning content. To evaluate, we used ideas from Kirkpatrick's four levels of training evaluation.

Anderson, L. W., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (Eds.). (2001). *A taxonomy for learning, teaching and assessing: A revision of bloom's taxonomy of educational objectives*. Longman.

Our learning outcomes are based on Bloom's taxonomy and the six major categories: remember, understand, apply, analyze, evaluate, and create. We tried to focus on the higher-level skills so instructors and instructional designers have what they need to apply, plan, and evaluate facilitation strategies. In this resource, Anderson et al. reference a continuum of specificity for

learning outcomes, which we utilized as we had more generic chapter outcomes, more specific section outcomes, and even more specific subsection outcomes. Additionally, we were careful not to include more than one desired outcome per learning objective.

Liu, J.C., Johnson, E.A., Mao, J. (2021). Interdisciplinary Development of Geoscience OER: Formative Evaluation and Project Management for Instructional Design. In: Hokanson, B., Exter, M., Grincewicz, A., Schmidt, M., Tawfik, A.A. (eds) Intersections Across Disciplines. Educational Communications and Technology: Issues and Innovations. Springer, Cham. https://doi.org/10.1007/978-3-030-53875-0_17

This case study describes how a team of instructional designers and geoscience subject matter experts designed, developed, and evaluated an OER textbook. They chose OER to help reduce costs for students and increase access. They emphasized the importance of the digital OER space, which allowed them to integrate interactive multimedia such as videos and H5P activities. Their team needed to find a central virtual space for project management to maintain schedules, documents, and communication. They specifically wanted to see version tracking, time stamps, and digital object identifiers (DOIs). After choosing a platform, they defined a protocol for project folder maintenance. These are important considerations for my project as we determine whether we will proceed with what we did for the first half of the textbook (Google Drive documents and folders and communicating over email/Zoom) or transition to another system. The article also described how they conducted usability tests and collected feedback through online questionnaires and peer reviews from faculty, researchers, and graduate and undergraduate students. For my project, we plan to evaluate the textbook similarly, with questionnaire feedback and qualitative feedback directly from students.

Kirkpatrick, J. D., & Kirkpatrick, W. K. (2016). *Kirkpatrick's four levels of training evaluation*. Association for Talent Development.

Our plan to evaluate students was based mainly on levels 1, 2, and 3 of Kirkpatrick's Four Levels of Training Evaluation model. Though our product is not a direct training, the structure of these evaluation levels can give us insights into whether the open textbook content was usable and enjoyable for learners (level 1), how well they obtained the intended learning objectives (level 2), and how they will behave differently as a result of the content (level 3). These insights can help us compile recommendations for our client to implement in potential future iterations of the book. This book provides examples of methods we may use to evaluate at these different levels, including surveys, interviews, and assessments.

Wiggins, G., & McTighe, J. (2005). *Understanding by design*. Association for Supervision & Curriculum Development.

While this book is aimed more at instructors who will directly interface with students, some of the principles still apply to how we want to integrate Backward Design into our design process. In this book, Wiggins and McTighe outline and explore the stages of the Backward Design model, provide questions to guide the design process, and share examples of the model put into practice. They argue that the vision of our desired results for our students, or readers in our case, shapes the methods and materials we include. They also argue that instructors and educators should be intentional about what students should get out of their experiences rather than just hoping that they will learn something. With this in mind, the three stages of Backward Design

include identifying the desired results, determining acceptable evidence, and planning for activities and instruction. We did not utilize the templates they provided in the chapters, but we did consider some of the guiding questions.

Zhadko, O., & Ko, S. (2019). Adopting, Adapting, and Authoring. In *Best Practices in Designing Courses with Open Educational Resources* (pp. 33–50). Routledge. https://doi-org.byu.idm.oclc.org/10.4324/9780429030017

This chapter of the resource explores different ideas one should consider as they adopt, adapt, or author OER. While it mainly explores it from the context of an instructor trying to do so for their specific class, some of the ideas are relevant to our context as the developer of an OER. One prominent idea is looking at the existing Creative Commons resources that may fit the learning needs. We will do this to understand precedent materials and incorporate those materials ourselves. So, to correctly attribute the content to the correct Creative Commons license, they suggest using attributions such as “Adapted from…”, “This work is a derivative of…”, or “Adapted from the following sources…” Another consideration for our project is determining what Creative Commons license to use for the material, especially if adapting from other OER materials. The license needs to match the source material. Similarly, the subject matter expert may want to use ideas from previously published materials, but it may be necessary to gain permission from publishers who hold the copyright.

Design Knowledge and Critique

The opportunity to work on a project as complex as this allowed me to gain valuable insights into the design process, reflect on my participation in that process, and learn how I can be more effective in the future.

As I worked with both the client/SME on the development side and the instructors and students from IP&T 538 on the implementation side, I was able to more clearly see some of the strengths and weaknesses of the project. The constant iterations of the content went through as I got feedback from the SME and the course instructors helped refine the content and address areas of ambiguity or inconsistency, leading to a more useful and usable product. Students particularly appreciated the examples we included and our practical applications for using specific facilitation strategies and in what contexts. They also appreciated the consistency of layouts and the different methods by which we called attention to content (color, lists, tables, etc.). Examples, applications, and consistency are three things that I cared deeply about as I designed and developed content.

While students had mostly great things to say about the content, I was also able to identify topics and organizational structures that were still unclear to them. For example, overlapping or repetitive content between the course design chapters and the course facilitation chapters made it even more confusing for readers to distinguish between course design and facilitation. Additionally, some students struggled with Chapter 8 because we were not clear why the facilitation frameworks should be useful to them. From a design perspective, because we had multiple audiences in mind, we were conflicted with some of our design choices, some of which did not benefit the IP&T students the most.

For the rest of this section, I would like to highlight some significant lessons I learned about design as I've worked on this project.

Takeaway 1: Clearly Define the Scope of the Project

In my initial proposal for this project, I thought I had defined my scope well by identifying the topics we wanted to cover and the learning outcomes we wanted students to achieve. However, defining the project's scope includes much more than just this.

Because I was seen as the project manager by the SME, the IP&T 538 instructors, and other developers from the end of 2023 to the beginning of 2024, I found that I had to resolve many issues with the first half of the textbook that were not within the scope of my project. This drained time that should have been spent working on the rest of the content for the second half of the textbook, ultimately leading to half the content not being ready for the course.

Questions that I wished I had considered in the beginning to help define my scope include:

- What are your criteria for success?
- What content is necessary? What is supplementary?
- What roles will you be performing?
- What will you need to have for the first iteration? What can wait for the next iteration?
- What is not in scope?

Takeaway 2: Design for One Audience When Possible

The design of a product relies heavily on who will be using it. For this project, we had multiple audiences in mind (those in the IP&T program, those at other universities adopting and adapting the content, and those accessing the content individually). Trying to keep all three of these audiences in mind pulled us in multiple directions as we made design decisions.

Instead, I suggest designing with one audience in mind. Of course, the audience can have a group of different personas, including why they are interacting with the content or their previous experiences. However, I think the primary audience should be interfacing with the material in the same context.

Because our product is an open educational resource, I think it might've been more beneficial to design specifically for the IP&T students and then create other copies of the text that fit better for the different audiences. This may cause more maintenance, but it could allow the students to interface better with the material.

Takeaway 3: Get Feedback Whenever Possible

Whether from the client or users, getting frequent formative feedback is extremely helpful for making adjustments to the product before it is too late. Both formal and informal feedback can be useful in this regard. Additionally, feedback helps provide multiple perspectives on the material.

Specifically for my project, feedback helped me hear from others what specific things did not make sense or needed more information to be useful.

Also, working with the client and regularly getting feedback from him helped ensure that the product met his vision.

Takeaway 4: Communicate Often with Your Team

All the team members working on this project were busy and had other projects for their courses or jobs that took priority. Trying to find times to meet together sometimes felt complicated or unnecessary. However, infrequent asynchronous communication with team members did not lend itself well to having a cohesive team where everybody knew what tasks they should be working on and what stages of the process were next. Using Google Docs comments effectively highlighted specific things we had questions about, but we were not very good at notifying each other that we needed something done. There were multiple weeks where nothing was done because I did not communicate well with my team on what I needed them to do.

In retrospect (and in an ideal scenario), I would create two short synchronous meetings a week over Zoom where we could update each other on our progress, identify any challenges we've encountered, and brainstorm solutions to problems.

Conclusion

Though this product is not yet finished, I hope the details here effectively showcase my passion for this project. Working on this project has given me a much deeper understanding of course design, facilitation, and evaluation. I hope to share this knowledge with others openly through the resource we are building and my future work as an instructional designer.

Appendix A

I. Design vs Facilitation
   A. Introduction that helps readers to see the difference between facilitation and design - maybe continue to use the building metaphor - a building is designed to enable certain types of interactions and activities, facilitating is actually using the building for what it was designed for. For example, you can create great prompts and deadlines for a discussion, but that discussion will look very different based on how it is facilitated.
   B. Also we might use an example of a face to face discussion. What if a teacher came into a class wrote the discussion prompts on the whiteboard and then left the class . . . that is design and not facilitation. What if the instructor came in and assigned groups and assigned a leader in each group to guide the discussion. The teacher is doing design and building "peer facilitation" into the design.

II. Introduction to Frameworks
   A. Community of Inquiry
      1. Creating social presence
      2. Creating teaching presence
   B. Educational Interactions -
      1. Opportunities for rich L-L and L-I interactions
   C. Berge
   D. Purpose: Be able to apply concepts from the frameworks to understand the quality of the facilitation.

III. Asynchronous Facilitation
   A. Ice Breakers
   B. Text-based Discussion Boards
      1. Group discussion size, summarizing points, connecting ideas between students' posts, asking probing questions, letting students guide the conversation
   C. Asynchronous Video
      1. Examples: GoReact, Discussion boards with video feature, Flipgrid
   D. Social Annotations
      1. Examples: Perusall, Hypothesis
   E. Group Work
   F. Peer Reviews
      1. Creating questions/rubric for peer reviews
   G. Course Communication (emails, announcements, Slack/Teamwork, etc.)
      1. Creating course policies (syllabus, netiquette or community expectations, communication preferences, etc.)

IV. Synchronous Facilitation
   A. Ice breaker activities
   B. In-person
      1. Large group discussion
      2. Small group discussions

3. Small group project work

C. Live video conferencing (zoom)
   1. Small group breakout room discussions
   2. Small group breakout room project work
   3. Large group discussion

D. Office hours, consultations

E. Review sessions, Q&A sessions

V. Bichronous/Blended Facilitation

A. Transitions between synchronous and asynchronous
   1. Connecting ideas between synchronous and asynchronous sessions

B. Communicating to students which elements of the course are synchronous vs. asynchronous
   1. Example: Weekly schedule of what students can expect to work on asynchronously vs. synchronously

Appendix B

Chapter 7

- I can explain how instructor facilitation influences student learning.
  - I can distinguish between online facilitation and design. (Section 7.1)
  - I can articulate how online course design affects an instructor's ability to facilitate learning. (Section 7.2)
  - I can explain why developing online facilitation skills is important. (Section 7.3)

Chapter 8

- I can use terminology from various frameworks to support my online facilitation strategies.
  - I can categorize interactions as learner-learner, learner-instructor, and learner-content interactions. (Section 8.1)
  - I can describe each of Berge's four categories of facilitation: pedagogical, social, managerial, and technical. (Section 8.2)
  - I can discuss how cognitive, social, and teaching presence interact to create a community of inquiry. (Section 8.3)
  - I can describe the affective, behavioral, and cognitive dimensions of engagement. (Section 8.4)
  - I can compare and contrast different frameworks for talking about online learning facilitation. (Section 8.5)

Chapter 9

- I can explore strategies for facilitating activities in different modalities using different dimensions of interaction.
  - I can articulate how time, place, fidelity, and humanness in interactions affect my facilitation. (Section 9.1)
  - I can help students see the connection between synchronous and asynchronous activities. (Section 9.2.)
  - I can help students see the connection between in-person and online activities. (Section 9.2.)

Chapter 10

- I can plan and integrate asynchronous facilitation strategies in my blended course to increase student engagement and support my learning outcomes.
    - I can support social interaction in my course using asynchronous icebreaker activities. (Section 10.1)
    - I can prepare students to be successful in my course through effective orientation activities. (Section 10.1)
    - I can encourage asynchronous communication with/between students in my course. (Section 10.1)
    - I can plan specific strategies to asynchronously build relationships with my students. (Section 10.1)
    - I can monitor asynchronous student performance and activity to help facilitate their progress in my course. (Section 10.1)
    - I can plan facilitation strategies for asynchronous discussions. (Section 10.2)
    - I can help students to be successful in small asynchronous group collaborations. (Section 10.2)
    - I can apply effective practices to provide feedback on student work. (Section 10.2)
    - I can structure expectations around students providing quality peer feedback. (Section 10.2)
    - I can use interactive technologies to support engaging asynchronous online activities. (Section 10.2)

Chapter 11

- I can plan and integrate synchronous facilitation strategies in my blended course to increase student engagement and support my learning outcomes.
    - I can support social interaction in my course using synchronous icebreaker activities. (Section 11.1)
    - I can prepare students to be successful in my course through effective synchronous orientation activities. (Section 11.1)
    - I can plan specific strategies to synchronously build relationships with my students. (Section 11.1)
    - I can monitor synchronous student performance and activity to help facilitate their progress in my course. (Section 11.1)
    - I can plan facilitation strategies for whole class discussions. (Section 11.2)
    - I can plan facilitation strategies for small group discussions. (Section 11.2)
    - I can help students to be successful in small synchronous group collaborations. (Section 11.2)
    - I can use interactive technologies to support engaging synchronous online activities. (Section 11.2)

Chapter 12

- I can evaluate my blended course design and facilitation practices.
    - I can distinguish between evaluations of course design and course facilitation practices. (Section 12.1)
    - I can evaluate my course design using course evaluation rubrics and student feedback. (Section 12.2)

- I can evaluate course facilitation using course evaluation rubrics and course data. (Section 12.3)

Appendix C

👷Course Checklist Part 2 - Facilitation

Learning Outcome: I can facilitate my blended course. *Bloom's Taxonomy - Create.*

Facilitation Challenge: I will plan and practice facilitation strategies for my blended course. *Bloom's Taxonomy - Create.*

Step 1 Self-Evaluation and Reflection 1	In chapter 7, you will evaluate your strengths and weaknesses as a facilitator. Maybe you have a lot of previous experience, or maybe you have none, but everyone can find ways to improve. 1. Complete the Facilitation Competency Survey and capture a screenshot of your scores. 2. Create a Google document with your pasted screenshot, and insert the link to that document here: [link]. Be sure you have allowed anyone with the link to comment or edit the document. 3. **Reflection**: Write a few sentences describing your strengths and weaknesses as well as your response to these questions for assignment Reflection 1. Consider a course you have designed and/or will be teaching. ● Why might online facilitation be important for learner success in this course? ● What are some of the activities in the course that would most benefit from intentional facilitation? ● What are some of the facilitation skills you would like to develop? [Insert response here]	**Check off the boxes as you complete each item.** **Completed Date:** **xx/xx/xxxx**

Step 2 Reflection 2	In chapter 8, you are introduced to the principles and influential frameworks that guide the facilitation of blended learning. Respond to the prompts in Reflection 2. **Reflection:** Choose an interactive online activity from your course's Design Blueprint. Either paste or briefly describe the activity below. Then reflect on the following: Where might learners need extra support and why? Use principles from the frameworks in the chapter to explain how you will be intentional with your facilitation. Identify which frameworks you are referencing. [Insert response here]	**Check off the boxes as you complete each item.** **Completed Date:**
Step 3 Blended/ Bichronous Facilitation Plan	In chapter 9, you plan and carry out a blended or bichronous facilitation activity. 1. Complete the chapter 9 facilitation challenge. 2. Insert the link to that document here: [link]. 3. Be sure you have allowed anyone with the link to comment/edit in the document.	**Check off the boxes as you complete each item.** **Completed Date:**

Appendix D

Chapter 10 Assessment

Choose an asynchronous group activity (discussion board, social annotation activity, small group work, peer reviews, etc.) to create a facilitation strategy plan for. Describe the activity and fill in the table below.

Activity Description: What asynchronous group activity did you choose? What will students do during this activity? What tool/platform will they be using?

How would you facilitate your **students' engagement or participation** in the activity? This may be before or during the activity. (Please include 2-3 ideas.)
What would your presence in the activity look like? Why?

From the following four scenarios, select two that may apply to your group activity. Identify at least two strategies you might use to prevent each issue before it arises and/or address the issue when it happens. Include a brief explanation for why you would use each strategy in that scenario.

1. Students are off task or don't know what they should be doing.
2. One student is dominating the conversation.
3. Some students are not contributing or only contributing the bare minimum.
4. A group is not working well together.

Scenario __: Strategy 1 Strategy 2
Scenario __: Strategy 1 Strategy 2

Chapter 11 Assessment

Choose an online synchronous group activity (whole-class discussion, small breakout discussions, small group collaborations, etc.) to create a facilitation strategy plan for. Describe the activity and fill in the table.

Activity Description: What online synchronous group activity did you choose? What will students do during this activity? What tools/platforms will they be using?
How would you facilitate your **students' engagement or participation** in the activity? This may be before or during the activity. (Please include 2-3 ideas.)
What would your presence in the activity look like? Why?

From the following four scenarios, select two that may apply to your group activity and identify at least two strategies you might use to prevent the issue before it arises and/or address the issue when it happens. Include a brief explanation for why you would use each strategy in that scenario.

1. Students are off task or don't know what they should be doing.
2. One student is dominating the conversation.
3. Some students are not contributing.
4. A group is not working well together.

Scenario __: Strategy 1 Strategy 2
Scenario __: Strategy 1 Strategy 2

Chapter 12 Assessment

Reflect on a recent experience you've had with online facilitation in education, either as an instructor, TA, or student. In the box below, describe the context of your experience with online facilitation. Replace the red text with your own.

Experience Context:
What course or training did you participate in? What role did you play (instructor, TA, student)?

In the table below, replace the red text and identify your evaluation criteria. Add rows or columns as needed, but please include at least five criteria for your evaluation. Rank the effectiveness of the facilitator in that area (1-not effective at all, 2-not effective, 3-neutral, 4-effective, 5-very effective) and comment on your experience.

Evaluation of Experience		
Evaluation Criteria (Indicator/Competency)	**Rating**	**Comment**
Evaluation Criteria 1	Select to choose	The facilitator…
Evaluation Criteria 2	Select to choose	The facilitator…
Evaluation Criteria 3	Select to choose	The facilitator…
Evaluation Criteria 4	Select to choose	The facilitator…
Evaluation Criteria 5	Select to choose	The facilitator…

What are some recommendations you would give the facilitator to improve the course the next time it is taught? Please include 2-3 recommendations.

- Recommendation 1
- Recommendation 2
- Recommendation 3

Appendix E

Chapters 7-9 Google Form Responses

Question	Response
How satisfied were you with chapters 7-9?	5 (very satisfied), 5 (very satisfied), 5 (very satisfied)
Please explain your rationale for your rating above.	“The chapters were very well done. It felt like they delivered the content I needed in a targeted, organized way, with lots of examples, figures, and tables to help me understand.” “These chapters flowed well and clarified key points throughout. I was able to understand the content and was pleased with the visual appearance. I was very satisfied with chapters 7-9.” “They were short, simple, and to the point.”
How useful was the content of chapter 7-9?	2 (not useful), 4 (useful), 5 (very useful)
Please explain your rationale for your rating above.	“I still struggle with the line between facilitation and design. Much of facilitation seems like good communication, common sense and general good teaching. Also, though we used the theories in class, I'm not sure how much I'll be using facilitation theories in my work.” “Chapters 7-9 was very useful for teaching facilitation terms, as well as clearly explain the purpose of each. Some of the content in and of itself was about engagement and usefulness, so I think it completed its mission for that.” “It gave me a good foundation to then start practicing and implementing the knowledge. It was nice that it stuck to the basics and didn't overwhelm with too much info.”
How would you rate the effectiveness of the organization of the chapters?	5 (organized well), 5 (organized well), 5 (organized well)

Please explain your rationale for your rating above.	“I love the chunking in these chapters (the whole book, really). The sections seemed manageable, and the tables brought concepts to life through concrete applications. Inclusion of figures/illustrations where applicable helped me see the principles in a different way.” “The organization of these chapters created an opportunity for me to deeply think about the specific concepts in facilitated learning. Every chapter seemed to build on one another in a well designed way.” “Color was used well. The blue callout boxes were connected to the challenges while the tables were yellow. I also liked how the headings were labeled 3.3 and 3.3.1, etc.”
What could be improved for the next version of these chapters?	“These chapters don't have videos. I appreciated having a video included in the chapter to break up the text and learn in a different way. Also, the chapter on facilitation theories was a bit harder to read than some other chapters, because it's theoretical and more abstract. This might be a good place for a video or two, maybe brief examples of teaching scenarios with a discussion of how the theories apply.” “If there is any way to condense some information in these chapters, that might be useful for quick and slow readers?” “A few of the decorative images were a bit big. I might recommend making those smaller (if possible)”
Did you enjoy using the textbook?	“Yes! I was sad when we ran out of chapters to read. The other readings were more confusing than the textbook readings. And I know that the 538 instructors tailored the assignments from the text for our class, so the textbook assignments might not be the same, but I found those assignments so useful for building my skills.”

	“Yes, it was really nice to have most everything we needed to read for the class all in one place! Go Edtech books!” “Yup! I felt like it did a good job at synthesizing a lot of information and boiling it down to the essentials (i.e. it wasn't overwhelming). It was really great to have all the readings in one place as well.”

Appendix F

Chapter 10 Google Form Responses

Question	Response
How satisfied were you with the content?	5 (very satisfied), 5 (very satisfied), 5 (very satisfied)
Please explain your rationale for your rating above.	“The information was thorough and if I was an instructor/TA reading this, I would know how to concretely apply the concepts.” “I love how simple and easy it was to understand. It was simple enough as well to take notes and it’s a resource I could easily turn back to if I ever needed to review.” “I felt like the content was thorough without overburdening the reader with information.”
How useful was the content?	5 (very useful), 5 (very useful), 5 (very useful)
Please explain your rationale for your rating above.	“There were lots of examples given, and also collaboration/sharing tools. I can easily implement asynchronous facilitation.” “I personally found some of the ideas really insightful and applicable. I think many other instructors would as well.” “I like how it gives concrete suggestions of how to go about various activities and how to mitigate potential issues.”

How long did it take you to go through the content? (Not including the assessment)	20 minutes About 40 minutes, including taking simple notes 30ish minutes
What could be improved?	“I left a few comments just on wording some parts and table name/column headings. Other than that, the info was very clear!” “My only thought was that in two different sections it talks about pros and cons. In one section it’s in list form and in the other section its in a table form. It’s not a big deal, just thought it was interesting that they were presented differently and if that was a stylistic choice or if that’s just how it was written. Maybe some consistency could help with visualizing pros and cons across different content/topics.” “I know I wasn't supposed to take the evaluation activity into account, but I found it really useful thinking through how I would structure an activity and prepare for issues. Including the activity in the chapter as an option could be a good idea.”

Chapter 11 Google Form Responses

Question	Response
How satisfied were you with the content?	4 (satisfied), 5 (very satisfied), 5 (very satisfied)
Please explain your rationale for your rating above.	“The content and information was good, especially if I wasn't familiar with online tools like the ones mentioned. I feel like I have a good base from this chapter.” “Again, I think the perfect amount of information was provided without it feeling repetitive or redundant.” “Content was easy to follow and I feel like I

	had simple but profound takeaways.”
How useful was the content?	4 (useful), 5 (very useful), 5 (very useful)
Please explain your rationale for your rating above.	“Getting a little more specific about some tools for collaboration/interaction could have been more useful than an overview of things the tools do.” “I liked the practical tips for facilitation, such as specific features in zoom that you can use to facilitate engagement.” “Very useful. The ideas are readily applicable to me and the way they're organized is easy to refer back to if needed.”
How long did it take you to go through the content? (Not including the assessment)	20 minutes 25ish minutes 30 minutes
What could be improved?	“Nothing I can think of- it was pretty comprehensive overall!” “This is stylistic, but I might bold the first sentence of each bullet pointed suggestion for mitigating issues.” “This section was great! No suggestions.”

Chapter 12 Google Form Responses

Question	Response
How satisfied were you with the content?	3 (neither satisfied nor dissatisfied), 4 (satisfied), 5 (very satisfied)
Please explain your rationale for your rating above.	“The content was a little amorphous and I read through it but didn't understand how I would evaluate a course. I was only able to follow it because I've taken an evaluation class.” “I thought this content was great! I'd just be

	excited to see what's in the unfinished section :)" "Content was clear and understandable."
How useful was the content?	4 (useful), 4 (useful), 5 (very useful)
Please explain your rationale for your rating above.	"The links, standards, and criteria are all great resources!" "I particularly liked the section on distinguishing between course design and course facilitation. This will be useful in my evaluations of courses going forward." "Content is useful knowledge, but it depends if one side or the other is more readily applicable to one's job at the time of reading."
How long did it take you to go through the content? (Not including the assessment)	25 minutes 25ish minutes 30 minutes
What could be improved?	"Maybe include concrete examples of how professors/instructors have evaluated courses and facilitation, or give a case study? That might not be what the textbook direction is going for though." "I was a little confused by the numbers in some of the tables." "no comments!"