K-12 Blended Teaching: FCS

Natalie Hancock, Christina Lewis, & Michelle Jensen

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Endorse

Preface and About This Book

Charles R. Graham, Jered Borup, Michelle Jensen, Karen T. Arnesen, & Cecil R. Short

Thank you for accessing one of the books in the *K-12 Blended Teaching (Vol. 2): A Guide to Practice Within the Disciplines* series!

The purpose of this preface is to orient you to the focus of this book, the original contributions that this book makes to blended learning, and the resources available to you within this book.

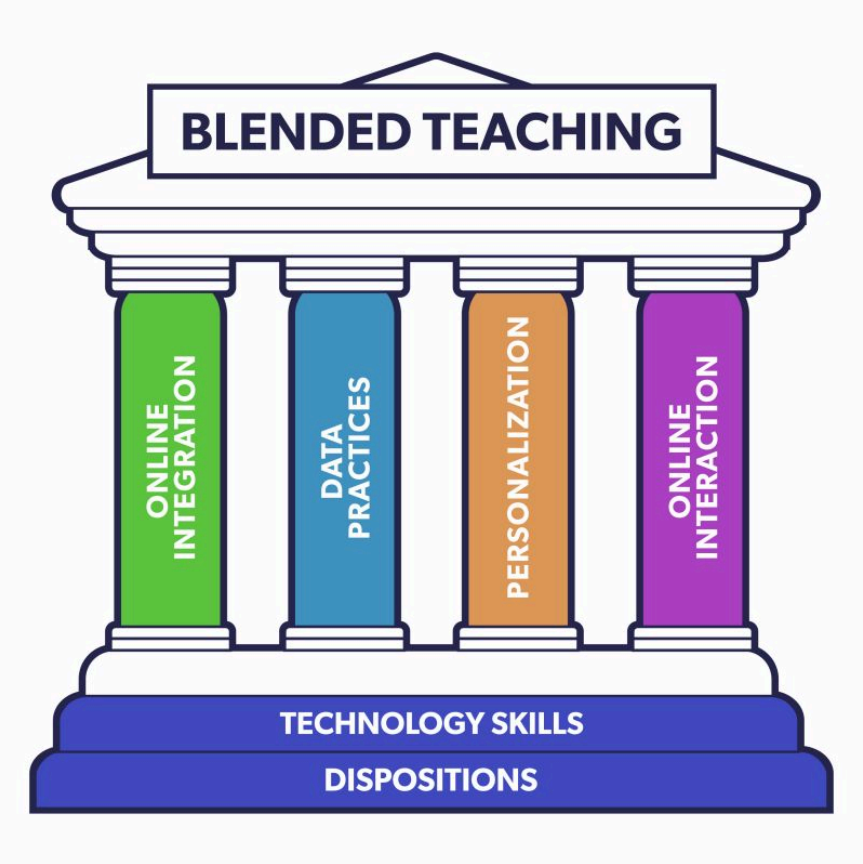
The Purpose of This Book

The purpose of this book is to provide rich examples of the four blended teaching competencies from a disciplinary perspective. The first three chapters of the book provide definitions and an overview of the blended teaching framework. Subsequent chapters are organized into sections that focus on blended teaching in a specific discipline. Each section has the following chapters:

- **Introductions**–Video introductions to the model teachers who will share written and video examples throughout the section.
- **Why Blend?**–Descriptions from the model teachers about why they chose to try blended learning in their classrooms.
- **Online Integration and Management**–Examples of how to effectively combine online instruction with in-person instruction.
- **Online Interaction**–Examples of how to facilitate online interactions with and between students.
- **Data Practices**–Examples of how to use digital tools to monitor student activity and performance in order to guide student growth.
- **Personalizing Instruction**–Examples of how to implement a learning environment that allows for student customization of goals, pace, and/or learning path.

What is This Book?

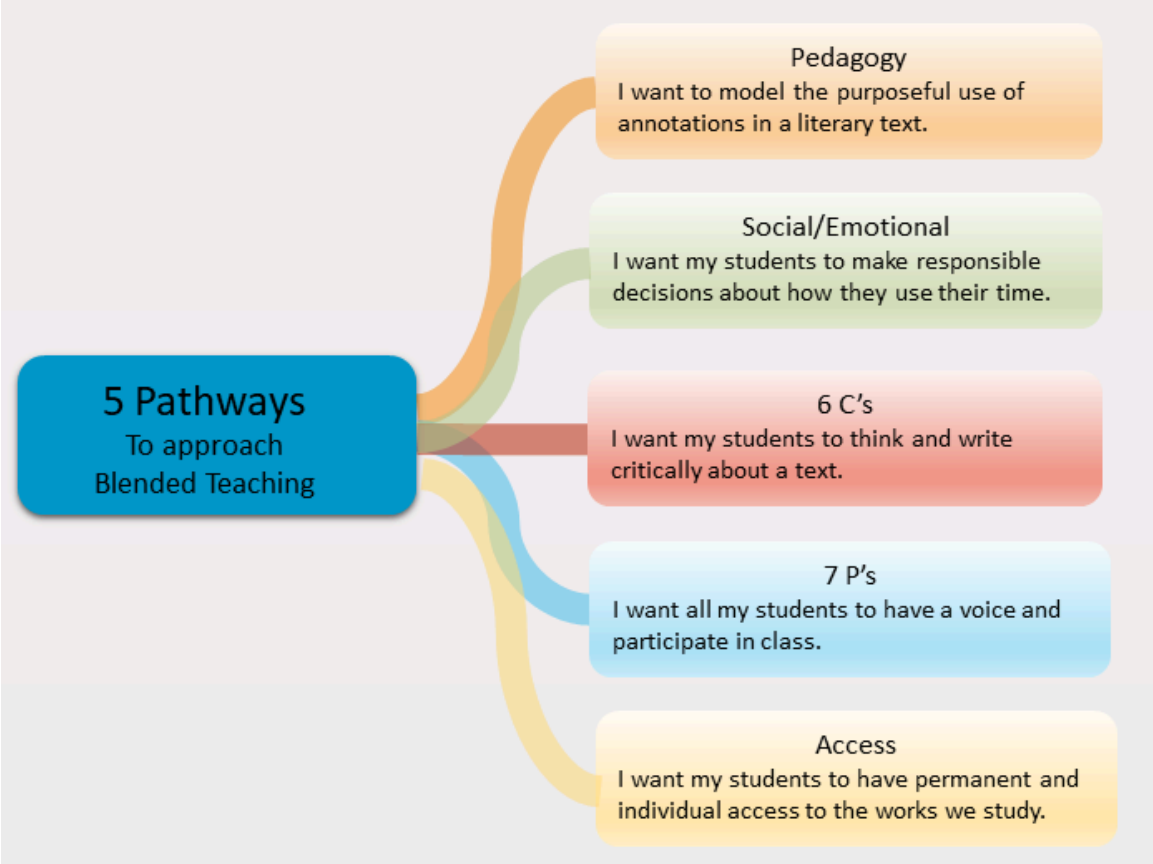
This book is a follow-up to K-12 Blended Teaching: A Guide to Personalized Learning and Online Integration (Volume 1). Volume 1 took a competency-based approach to planning and implementing blended learning. The competencies in Volume 1 were organized into the following areas: Online Integration, Data Practices, Personalization, and Online Interaction, with a final chapter that discussed how all of these areas come together to design blended learning. These competencies are built upon a solid foundation of blended learning dispositions and technology skills.



You can read more about these ideas by following these links to Volume 1:

- Cover - *K-12 Blended Teaching (Vol. 1): A Guide to Online Integration and Personalized Learning*
- Chapter 1 - Blended Teaching Foundations
- Chapter 2 - Online Integration
- Chapter 3 - Data Practices
- Chapter 4 - Personalizing Instruction
- Chapter 5 - Online Interaction
- Chapter 6 - Blended Design in Practice

Instead of using the competency-based approach from Volume 1, Volume 2 explores blended learning within various K-12 contexts through a problems of practice approach. These problems of practice are organized into the areas of Pedagogy, Social/Emotional Learning, the 6 C's of 21st-century learning, the 7 P's of transformational blended learning, and Access. Examples of these problems of practice are illustrated in this volume's Chapter 1: Introduction to K-12 Blended Teaching. Below is an image from the English Language Arts chapter that demonstrates some possible problems of practice.

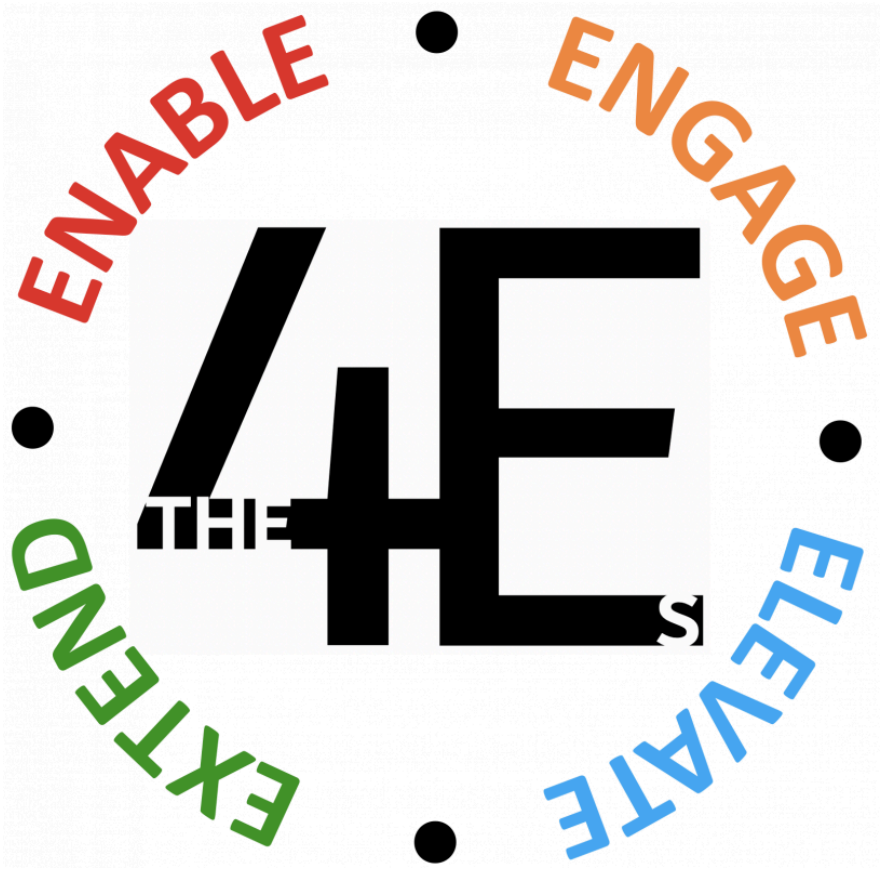


New Content in Volume 2

While Volume 2 understandably builds on the content of Volume 1 and offers new examples of blended teaching across K-12 contexts, it also offers some new insights that are generally applicable to blended teaching.

First, Chapter 2: K-12 Blended Teaching Competencies offers an overview of the competencies from Volume 1, but also provides new understandings of what some of these competencies look like in practice. Worth specific exploration are new understandings of what personalized learning looks like in K-12. Chapter 2 provides a framework for designing personalized learning that examines the relationships between the data used for personalization, who or what is controlling the personalization, what is being personalized, and the extent to which learners are practicing agency and ownership over their own learning. These new understandings of personalized learning come from working alongside the teachers who contributed their practices to this book.

Second, Chapter 3: Evaluating Teaching with the 4Es and PICRAT presents a new framework for evaluating blended teaching practices. Volume 1 used PICRAT to help explain some of the designing that goes into blended teaching. Volume 2 builds on Volume 1 by providing both PICRAT and a new 4E framework for evaluating blended teaching. This new framework focuses on evaluating the ways in which blended teaching Enables, Engages, Elevates, and/or Extends learning in meaningful ways.



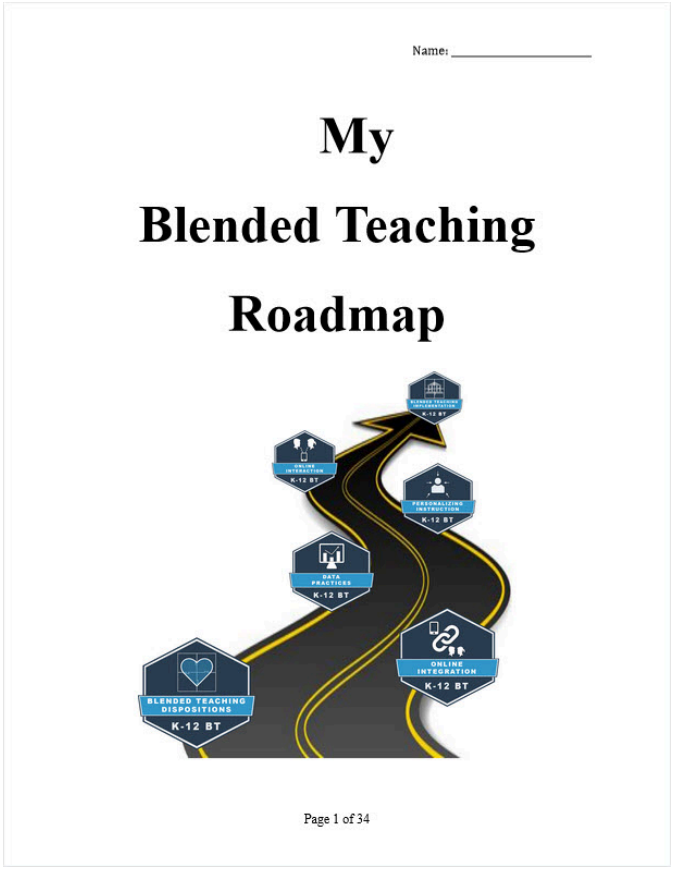
New Resources in Volume 2

Much like Volume 1 offers resources such as blended teaching videos, artifacts, and reflection questions, the books in Volume 2 have their own resources worth referencing.

Each chapter of this book is filled with **teacher quotes and videos** about teachers' experiences with K-12 blended teaching. Chapter 4 of this book introduces the teachers who contributed practices to the book. Our hope in creating this book is that it can largely be seen as a book created through collaboration with teachers for teachers. The videos and quotes throughout this book should not be seen as optional content, but rather as the core content used to explore examples of blended teaching across content areas and grades.

The other key resources to be aware of in using this book for training, professional learning, or blended teaching implementation are the **Blended Teaching Readiness Survey**, the **Blended Teaching Roadmap**, and the **Blended Teaching Workbook**.

Each chapter of Volume I begins with a link to the **Blended Teaching Readiness Survey**, a brief readiness self-assessment survey. This survey can be helpful as your prepare for blended teaching regardless of whether you are taking a competency-based approach or a problems of practice approach. The survey takes 2-3 minutes per section of the survey. These sections include questions about your dispositions and abilities to use online integration, data practice, personalized learning, and/or online interactions. It provides users with a sense of their current aptitude for blended teaching specific to each competency. You can learn more about the Blended Teaching Readiness instrument and use it yourself here: **http://bit.ly/K12-BTR**.



The Blended Teaching Roadmap is a resource introduced in Volume 1 for guiding teachers in designing, developing, and implementing blended teaching. Like Volume 1 itself, this resource takes a competency-based approach to help educators implement blended teaching. Appendix C of Volume 1 provides links to examples and Google Docs to reference and use in creating a plan for blended teaching. To use the Google Doc, you should make a copy of the Blended Teaching Roadmap that you can edit and own.

Blended Teaching Workbook

This is an example of what the callout boxes for the Blended Teaching Workbook look like. You will find these scattered throughout the book. You can access the Blended Teaching Workbook here.

The Blended Teaching Workbook is a new resource introduced in Volume 2. Like Volume 2 itself, this resource takes a problems of practice approach to designing, developing, and implementing blended teaching. References to the Blended Teaching Workbook are scattered throughout this book with links to the Google Doc used to create the workbook. To use the Google Doc, you should make a copy of the Blended Teaching Workbook that you can edit and own.

We hope that you enjoy the book we have put together, and encourage you to share it with others! Thank you again for exploring our work!

Previous Citation(s)

Graham, C. R., Borup, J., Jensen, M. A., Arnesen, K. T., & Short, C. R. (2022). Preface and About This Book: . In K. T. Arnesen (Ed.), *K-12 Blended Teaching: English Language Arts: A Guide to Practice within the Disciplines*. EdTech Books. https://edtechbooks.org/-QweN

Graham, C. R., Borup, J., Jensen, M. A., Arnesen, K. T., & Short, C. R. (in progress). *K-12 Blended Teaching (Vol 2): A Guide to Practice Within the Disciplines, 2*. EdTech Books. https://edtechbooks.org/-QNCX

General Introduction to Blended Teaching

Karen T. Arnesen

Previous Citation(s)

Arnesen, K. T. (2022). *K-12 Blended Teaching: English Language Arts: A Guide to Practice within the Disciplines*. EdTech Books. https://edtechbooks.org/-nEB

1

Introduction to K-12 Blended Teaching

Charles R. Graham, Karen T. Arnesen, Jered Borup, & Michelle Jensen

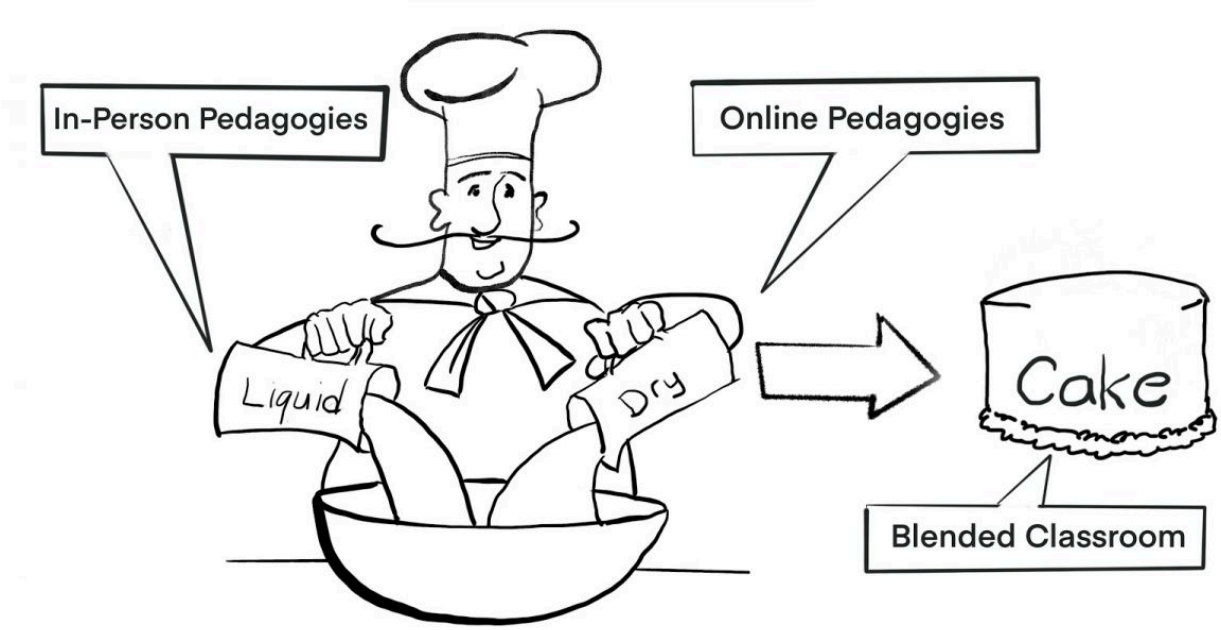
1.1 Blended Teaching

In its simplest form, blended teaching is the *strategic* combination of in-person teaching and online teaching.

Blended teaching is a general term that covers a wide range of different pedagogies, strategies, models, and practices. One teacher's blended classroom might look mostly like a traditional classroom with the addition of an occasional online discussion with students, while another classroom might be mostly online with a few strategically planned in-person activities.

Consider this simple (yet imperfect) analogy. Blended teaching is like baking a cake.

- The baker mixes the dry and liquid ingredients together to create a cake for friends/family to eat. The skill of the baker and the nature of the ingredients can create something uniquely wonderful.
- Likewise, a teacher 'mixes' pedagogies in online and in-person modalities together to create learning experiences/outcomes for students.



Consider possible lessons to take from the blended-baking analogy:

- More dishes are possible with both dry and liquid ingredients.
- The specific ingredients matter. (You can't just have 2 cups of any dry ingredients and 1 cup of any liquid ingredients.)
- The amounts of specific ingredients also matter.
- When mixed well the outcome is different (often better) than if not mixed at all.
- When different ingredients are used, a different cake is made.
- Different cakes may have different purposes.
- There are thousands of ways to combine the dry and liquid ingredients.
- Good bakers do not follow a recipe. They make the cake to fit a specific purpose.

Like a good baker makes a cake, a skilled teacher can create a blend that promotes learning in a way that is most helpful for her own students.

1.2 Reasons for Blended Teaching

There are three primary reasons that teachers are motivated to try blended teaching: (1) Improved student learning, (2) Increased access and flexibility, and (3) Increased cost efficiency. Table 1 shares a few simple examples of each of these reasons for blending.

Table 1

Reasons for Blending

Reasons for Blending	
Improved Student Learning	A teacher:

Reasons for Blending	
	• uses the blend to give students small group instruction or one-on-one time with students in order to address specific learning needs. • uses data obtained from online tracking systems to constantly monitor learning and to make adjustments to instruction. • uses self-made videos to give instructions that students can slow down, speed up, pause, or repeat in order to understand the material or an assignment. • offers choice in assignments to increase student engagement and ownership in their learning.
Increased Access and Flexibility	A teacher: • uses the online space to incorporate into the classroom materials and information, targeted instruction, and activities that are not otherwise available. • A teacher uses technology to give students choices in learning activities. • A teacher consults with students to make learning goals.
Increased Efficiency	A teacher: • moves some science labs online, creating less need for expensive equipment in the classroom. • uses books that are online to lower the cost of books (and to have more than a classroom set for students). • uses the online space to publish assignments, teacher and student examples, writings, explanations, and questions, reducing the need for copies. • Creates videos to expand teacher presence in the class, thus multiplying her effectiveness and productivity.

In this book we will primarily focus on providing examples of blended instruction that are designed to improve student learning and/or increase access and flexibility for the learner. It is worth noting that while one of these purposes may be the primary reason that you implement a blended approach, you may also see added benefits in other areas as well, such as in ease of lesson planning or improved overall class engagement.

1.3 Identifying Your Reason for Blending

Each teacher needs to decide their own reason for blending. This is important because, like the chef with the cake, determing your purpose provides a vision for how to select appropriate blended models and strategies to achieve the purpose. Blending just because an “administrator told you to” or because “you like technology” are not good reasons for blending.

In working with teachers, we have found that one of the best ways to get started is to identify and focus on a problem of practice. A problem of practice is a current problem or challenge that you believe blended teaching could help you solve.

As you consider problems of practice that are meaningful to your teaching context, these five pathways may help you identify them (Table 2).

Table 2

Problem of Practice Pathways

Problems of Practice Pathways

Signature Pedagogies	Signature pedagogies are the teaching strategies that are commonly used in your discipline. They are often unique to your content discipline and shared within your professional organization. A problem of practice could be recognizing and trying to address limitations in your implementation of one or more signature pedagogies in your discipline. Examples: • **Language Arts:** I want to find more effective ways to engage my students in collaborative writing. • **Math:** I want to increase the quality of mathematical discourse in my classroom. • **Science:** I want to create opportunities for my students to use technology to analyze and interpret data and then create a scientific argument from this evidence.
Social Emotional Learning	Students may struggle in areas of social emotional learning, such as self-management, self-awareness, responsible decision making, social awareness, and relationship skills. A problem of practice could be recognizing and addressing areas of growth in students' social and emotional learning. Examples: • I want to create structures to help my students to make rational decisions. • I want my students to engage in activities that help them develop empathy for each other. • I want to introduce self-regulation challenges into my students' assignments.
6 C's of Deep Learning	The 6 Cs of Deep Learning are character, citizenship, collaboration, communication, creativity, and critical thinking. A problem of practice could entail trying to increase one or more of these C's in your instruction. Examples: • I want to increase my students' ability to communicate effectively about their learning. • I want to help my students develop better collaboration skills. • I want to students to think critically about current world events. • I want to allow my students to demonstrate their learning in creative ways. • I want to help my students practice appropriate digital citizenship. • I want my students to develp good character as they prepare to enter the real world.
7 P's of Quality Blended Teaching	The 7 Ps of Quality Blended Teaching are participation, pacing, personalization, place, personal interaction, preparation, and practice with feedback A problem of practice could be recognizing and addressing a challenge in one of these areas. Examples:

	• I want to enable 100% participation in class discussions. • I want my students to pace themselves to learn as quickly as they are able or as slowly as they need to. • I want my students to personalize their learning by selecting learning activities that will help them the most. • I want to open up learning experiences that take place outside of my classroom. • I want to create additional opportunities for students to personally interact with me and with one another. • I want to increase students' out-of-class preparation before classroom activities. • I want my students to receive timely, effective feedback to their practice.
Student Access	Students may have challenges with access to traditional learning opportunities because of disabilities, illness, and/or participation in extracurricular activities like sports or the arts. They may also have limited access to materials that are necessary for improving their understanding of the subject. Such materials may include books, primary resources, lab equipment and resources, art supplies, concert or theatrical performances, etc. A problem of practice could try to address challenges of access for students in your class. Examples: • **Student Absence from Class:** I want to make it easy for students who miss class for illness or extra curricular activities to stay caught up. • **Transient Students:** I want to make it possible for students who move between schools regularly to quickly assess what they know and do what is needed to participate with the class. • **Resources:** I want students to have access to the educational materials used as part of our learning in class.

1.4 Examples of Problems of Practice

Here are some examples of teachers who used blended teaching to solve a problem of practice. As you read through them, see if some resonate with desires you have for your classroom.

Scenario 1

Problem of Practice: A teacher wants students to take more ownership for their educational practices and attitudes.

Blended Approach: Students set weekly and daily goals which are recorded online, where the teacher has immediate access to them. Goals can include completion goals (setting a certain number of assignments and assessments to complete), performance goals (setting a specific standard of how well the assignments are done), or a mindset goal (setting a goal for asking for help or focusing better), for example. Students share their goals with their team and teacher online. At the end of the week, they reflect online about their experience. The teacher can respond online or in-person to areas of concern as needed.

Setting: LPS (Leadership Public Schools) Richmond in Richmond, CA

Site: Daily and Weekly Goal Setting

Scenario 2

Problem of Practice: A chemistry teacher wants his students to "learn for themselves and by themselves."

Blended Approach: The teacher employs a flipped classroom. He creates videos of content the students need to know as well as tutorials on how to do certain chemistry operations. The students watch these videos at home. In class, the students apply what they learn at home in a variety of activities. The teacher walks around the class, answering questions, giving guidance, tutoring as needed, and "putting out fires."

Setting: Woodland Park High, Colorado

Site: Flipped Chemistry Course

Scenario 3

Problem of Practice: A writing teacher wants her students to receive immediate feedback and to value the writing and feedback processes.

Blended Approach: The teacher has students write a specific type of paragraph online in a shareable document. While the students write, the teacher opens the students' documents on her computer and gives feedback on them. Later the teacher and students discuss how to give good feedback. The students are then paired with another student to give each other online feedback. The teacher chooses five feedback comments and shares them in an in-person whole class discussion about the strengths and weaknesses of the feedback comments.

Site: Learning to Give Feedback

Scenario 4

Problem of Practice: A middle school teacher wants parents to be better informed and involved in their child's education.

Blended Approach: Students use an app called Seesaw to record their work. Anything recorded on Seesaw is immediately available to parents who are connected to their child's profile. Students can add video and audio components to explain their work.

Setting: Trailblazer Elementary School in Colorado Springs, CO

Site: Seesaw Record

Scenario 5

Problem of Practice: Students hurry through math assignments without really learning how to approach math problems and do them correctly.

Blended Approach: Students have individualized online learning agendas with standards, instructional videos, and text exercises. Students check off each objective within a standard as they complete them and pass an online mastery quiz. Teachers use the agendas to track student progress. When the students have finished each objective, the teacher reviews the progress and assigns them to create a mastery video, in which the students show how they work an easy, medium, and difficult problem within the standard. Teachers review the video to determine if the student is ready for the final mastery assessment.

Setting: ReNEW DTA, a charter school for pre-K through 8th grade in New Orleans, LA.

Site: Thinking Mathematically

Creatively addressing problems of practice with a blended approach can transform your classroom and help you create a strong, effective learning environment.

1.5 Pedagogy Centered, Technology Supported

The power of the blend is that it opens a whole new set of pedagogical possibilities for teachers. Although blends can improve outcomes for students, they can also make things worse for them. As with traditional teaching, the teacher's strategic planning and skill will make all the difference in the quality of the blend.

One way to begin thinking strategically about a blend is to consider the 3 M's—media, modality, and method.

Definitions: Media, Modality, Method

Media: The physical tools or technology used in the classroom. They can be digital media, such as tablets, computers, or cameras, or they can be non-digital, such as whiteboards, books, or science equipment.

Modality: The environment, where learning takes place. Modalities are generally the in-person classroom, the online classroom, and the blended classroom.

Method: The strategies and pedagogies of the teacher. They may be general methods (such as discussions) or discipline specific pedagogies such as experimental labs in chemistry.

See Media, Modality, and Methods video for a more full explanation.

Although all three M's impact learning, they are not equal in importance. No media or modality will be effective if it is not used as part of meaningful and strategic methods or pedagogies. Modality and media have an indirect effect on learning outcomes because they influence the *types* of strategies and methods that a teacher can use. But the teacher's methods directly influence student learning and outcomes. Table 3 shows good and bad examples of blended learning strategies and pedagogies. Evaluate each and see what made the difference: media, modality, or method.

Table 3

Good and Poor Examples of Blended Learning

Good Example of Blended Learning	Poor Example of Blended Learning
A math teacher uses adaptive software. She allows students to progress at their own pace and has one-on-one or small group sessions for students who struggle with a particular concept.	A math teacher has students who finish their math assignment early uses apps on a classroom set of tablets to play math games.
A history teacher sends students links to two different viewpoints of a historical event. Students read/watch the content at home. In class, the teacher puts students in groups of four and has them summarize each viewpoint and discuss why they are different. How does the creator's viewpoint affect the depiction of what happened? How can people really know what happened and why?	A history teacher records a lecture and has students view it before class at home. In class they do a worksheet with questions about the lecture.
A foreign language teacher utilizes station rotations in his classroom. At one station students choose from a list of writing assignments and write using google docs. Another student at that station reads the document online and gives suggestions or asks questions.	A foreign language teacher uses a video streaming service to show his students a weekly video in the target language. This enhances listening skills and allows

Good Example of Blended Learning	Poor Example of Blended Learning
At the next rotation students meet online with a native speaker and have a short conversation, which uses new vocabulary. Finally, at the last station students meet with the teacher to discuss and practice new grammar rules and language structure.	students to hear the language spoken by native speakers.

These examples illustrate that blended teaching is powerful only when the modality and the media are used to support, not replace, pedagogy or method. As in any teaching setting, good blended teaching does not depend on technology but on the teachers' understanding of her students, her knowledge of the content, and her ability to plan strategies that will use technology to meaningfully combine online and in-person spaces, increase the number and quality of student interactions, use data to effectively meet students' needs, and personalize instruction in order to increase student ownership of their education, their engagement, and their ability to develop and use 21st century skills.

The chapters in this book will help you get started.

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Graham, C. R., Arnesen, K. T., Borup, J., & Jensen, M. A. (in progress). Introduction to K-12 Blended Teaching. In C. R. Graham, J. Borup, M. A. Jensen, K. T. Arnesen, & C. R. Short (Eds.), *K-12 Blended Teaching (Vol 2): A Guide to Practice Within the Disciplines , 2*. EdTech Books. https://edtechbooks.org/-Cipt

2

K-12 Blended Teaching Competencies

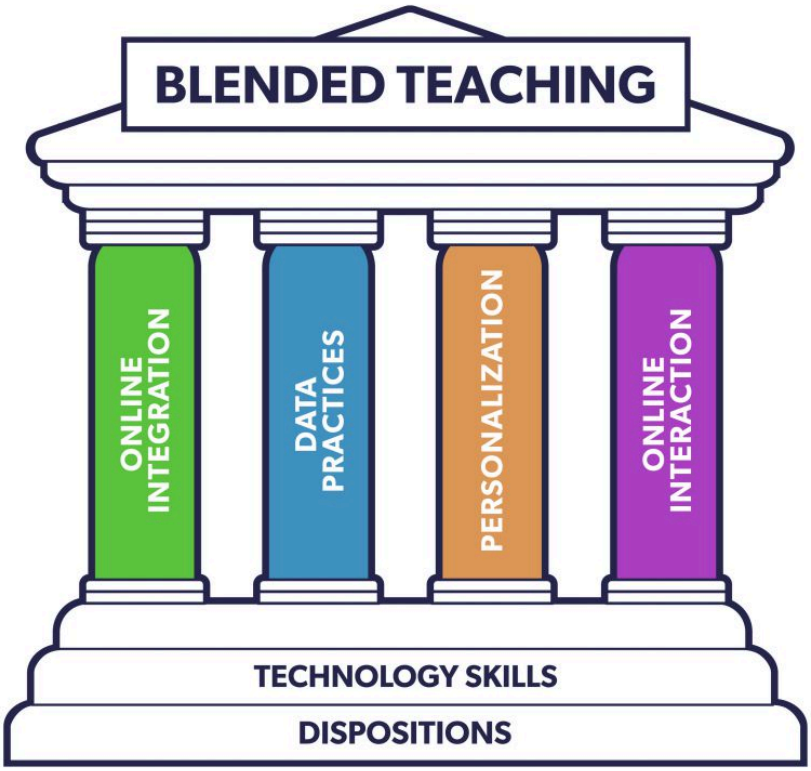
Charles R. Graham, Jered Borup, Michelle Jensen, Karen T. Arnesen, & Cecil R. Short

2.1 Blended Teaching Competencies

In Volume 1 of K-12 Blended Teaching we introduced four competencies shown in Figure 1, with each competency represented by a pillar built on a solid foundation of blended dispositions and technology skills. The four core blended teaching competencies—(1) Online integration, (2) Data practices, (3) Personalization, and (4) Online interaction—can be mastered by any teacher in any subject area. These competencies are built on a foundation of positive dispositions and basic technology skills.

Figure 1

Blended Teaching Foundations and Core Competencies



We will provide a brief introduction to these competencies in this chapter with more in-depth coverage in each of the subject-specific sections. Check out your readiness for blended teaching in each of these areas by taking this Blended Teaching Readiness Self-evaluation.

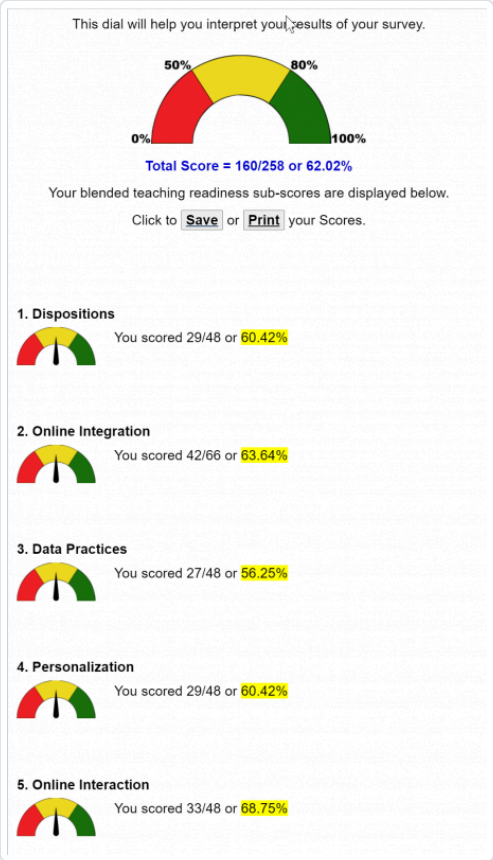
Test Your Blended Teaching Readiness: http://bit.ly/K12-BTR

Check out how ready you are for blended teaching?

As shown in Figure 2, the results of the blended teaching readiness instrument will give you a score in each of the competency areas. The scores will help you to understand which competency areas you might want to start with as you build your personal skillset with blended teaching.

Figure 2

Example results from the Blended Teaching Readiness Survey



This volume differs from Volume 1 of the K-12 Blended Teaching series in that it focuses on examples of blended teaching in a specific content area. The four competencies of online integration, data practices, personalization, and online interaction are still key skills for successful blended teaching. However, those skills may look distinct when practiced in different content areas. We have represented this idea on the cover of this book with the blended teaching tree as shown in Figure 3. The individual branches represent blended teaching in the many distinct educational disciplines all of which are nourished by the common core set of teacher competencies.

Figure 3

Core Competencies in the Content Areas

In the following sections we will briefly outline these four core blended teaching competencies, and in each of the following chapters we will provide specific examples of these competencies. Many of the sections below include questions for you to think about. Think carefully and honestly about your answers, perhaps writing them down. Then notice where you are already strong and where you have room for improvement. These thoughts can guide your process as you begin blending.

2.2 Positive Dispositions and Technology Skills

You will need to develop basic technology skills and positive dispositions in order to be successful in blended teaching.

Dispositions focus on the teacher's attitudes and beliefs towards blended learning and teaching. Positive attitudes, even excitement, in each of these areas will determine how willing you are to experiment with and grow in a blended learning context.

Learn more about dipositions and skills in K-12 Blended Teaching (Volume 1): What Competencies are Needed?

2.2.1 Student Ownership and Agency

Successful blended learning classrooms shift from teacher led pedagogy to student driven pedagogies. Students begin to take more control of and responsibility for their learning, often making decisions for what, how, and when they learn. Teachers become a facilitator in such decisions and in helping students succeed in their new roles.

- How do I feel about students making some of the decisions about their learning?
- Do I feel I could learn to help students become more independent learners and more able to create their own learning agendas?

2.2.2 Mastery Learning Orientation

Blended classrooms lend themselves to mastery-based learning instead of time-based learning. Students advance in their learning as they master skills and content, not as they spend a certain amount of time on them. This approach significantly reduces the amount of whole-class direct instruction. Technology is a helpful tool for managing mastery learning.

- How do I feel about students learning at different paces in my classroom?
- Do I value students having enough time to master a learning objective before they move to the next one?
- Do I think I could develop the flexibility to manage such a classroom?

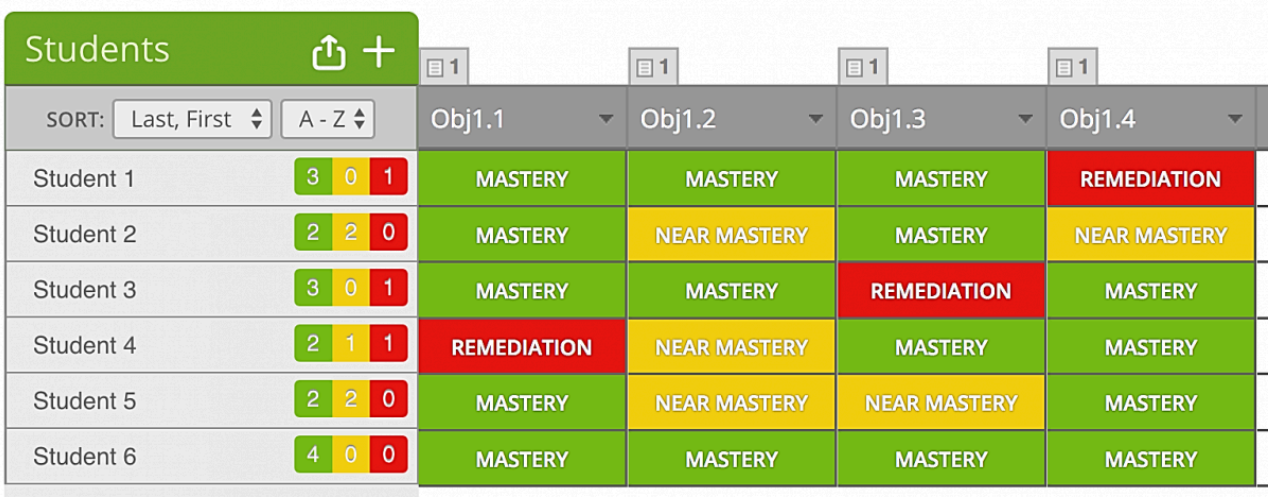
2.2.3 Value of Data-Driven Decisions

A reliance on data (Figure 4) to make decisions about instruction and individual pathways to learning is at the heart of a blended classroom. This data may include formative and summative assessment results, attendance, student goals, demographics, and measures of engagement. It can help teachers recognize strengths and weaknesses, progression, and reasons for students' lack of progress.

- How do you feel about using technology to keep track of various aspects of student learning?
- Do you feel data could help you not only understand your students better but also help them progress and become better learners?

Figure 4

Example of a Mastery Tracker Showing Student Progress



2.2.4. Growth Orientation

Becoming a successful blended teacher will require you to take risks. You may fail at times, but these failures can help you learn and improve.

- How eager are you to learn new things and try innovative ways to do things?
- Are you willing to take risks that may temporarily leave you feeling inadequate? (Are you willing for your cake to fail now and then?)
- Do you enjoy learning and trying new things?

2.2.5 Emphasis on 21st Century Skills

In a blended learning environment, technology can be used to develop 21st century skills such as communication, collaboration, creativity, and critical thinking.

- Do you currently use pedagogies that help your students develop 21st century skills? If not, how can you start?
- Do you believe these 21st century skills are part of your responsibility as a teacher?
- Are you willing to consider using technology to develop these skills?

2.2.6 Value of Online Learning

Because blended learning is "the strategic combination of in-person with online teaching," valuing online learning is as important as valuing in-person learning.

- Do you believe online activities can enhance the way children learn?
- Do you feel online activities can give students opportunities to learn they can not get in the traditional classroom?
- Can you see ways online learning can help you personalize or individualize curriculum?

It is natural to feel a little uneasy about some of these dispositions. Maybe you are suspicious of online learning, or perhaps giving students more control makes you feel uneasy or out of control. Perhaps you worry that if you emphasize life skills, you won't be able to teach the content you are mandated to teach. Any new venture may feel risky; however, the fact that you are reading this book shows that you are ready to learn! And learning can change dispositions.

You can begin to see yourself as a teacher in new ways and to grow and learn along with your students, adding an excitement to learning that will enhance any methods you learn and choose to use. The key is just to begin. Beginning is the basis for personal growth—you have to start somewhere!

 2.3 Basic Technology Skills

If you feel uncomfortable with all the technology tools out there, you are not alone. However, it is important to note that technology is not ultimately the focus of blended learning. *It is about helping students learn.* Once you start applying blended teaching, you will find that technology will become as invaluable and comfortable a tool to use in improving the learning experience of your students as a whiteboard, a book, or a worksheet is.

Here are some of the important knowledge and skills you can develop as a blended teacher.

2.3.1 Basic Literacy

You will need to become familiar with and use technologies on your own, troubleshoot issues that may arise, and find quality online content for use in your classroom.

- What technologies do you currently feel comfortable with? How did you learn to use them?
- Make a list of technologies you know of but that you don't use. Which one would you like to learn? How can you do so?

2.3.2 Digital Citizenship

Digital citizenship consists of modeling and teaching copyright laws and fair use, ensuring privacy and protection (passwords, no bullying, etc.), ensuring honesty, and ensuring access.

- What concerns do you have in any of these areas?

2.3.3 Learning management systems

Many blended teachers use learning management systems (LMS) to organize their classrooms. They keep grades, give announcements, and create content pages, quizzes, assignments, and discussion boards in the LMS.

- Does your school already use an LMS? Which one? How familiar are you with it? How can you learn more? Is there another teacher or a coach in your school who could help you?

2.3.4 Educational Software

Blended teachers have resources for finding content-specific educational software that helps them meet their learning objectives.

- What content specific educational software are you aware of? Does your school already subscribe to any?
- Are there any free sources you can use?

2.3.5 Media Creation Tools

These tools help teachers create or edit online materials to meet specific needs. They are also tools that students can use to create.

- What media creation tools are you familiar with?
- How could you use them to create materials for your classroom?
- How could you let your students use them to learn or to demonstrate learning?

2.3.6 Communication Tools

Blended teachers use a variety of tools for communicating with their students, parents, administrators, and other stakeholders. They also leverage these tools to help students communicate and collaborate with each other.

- How can greater communication with students, parents, administrators, and others help enhance your teaching ability and your students' learning experiences?
- What tools do you already use to interact with others? Could some be adapted to use with students and others?
- What new tools (such as Flipgrid) could you incorporate into your classroom?

2.4 Online Integration

Online Integration focuses on the teacher's ability to make and implement decisions related to selecting when and how to effectively combine online and in-person learning as part of core instruction.

Online integration is the one competency that is truly integral to blended teaching. Why is this so? If you don't have some kind of strategic combination of online and in-person instruction, you don't have blended teaching. However, don't let this overwhelm you. All of the other competencies we will discuss provide specific tools to use in integrating the online and in-person space.

- What part of your instruction could be moved online so that you have more time to spend one-on-one or in small groups with students?
- How could you make this content available to students in the online space?
- What parts of student learning are especially well suited to in-person learning?
- How can using the online space help make learning more interactive and personalized?

Read more about online integration practices in the in K-12 Blended Teaching (Volume 1).

2.5 Online Interaction

Online Interaction focuses on the teacher's ability to facilitate online interactions with and between students. Online interaction in a blended teaching classroom broadens the opportunity for students and teachers to communicate with one another about their learning. Online interaction might include digital instruction, discussions, and feedback.

In 1989, Michael Moore defined three different types of learning interactions: (1) Student–content, (2) Student–instructor, (3) Student–student. Moore explained that each type of interaction contributes to a quality learning experience. Though Moore defined these types of learning interactions in a discussion about distance learning, they also apply to online interactions that occur in blended teaching.

Online student–content interaction occurs when students engage with online learning materials by reading, listening, watching, and/or reflecting. Online student–instructor interaction occurs when students have opportunities to apply what they have learned from their content interactions, demonstrate new knowledge, and receive feedback in an online forum from the teacher as the "expert." Finally, online student–student interaction occurs when students communicate online with one another—sharing their understanding and building on what they have learned.

One of the key elements to being able to leverage the advantages of blended learning is the ability to create a positive, supportive, and safe space—not only in the physical classroom, but in the online space as well. Just as students must develop an understanding of the rules, routines, and procedures for communicating and participating in-person, they must also learn the guidelines for online interaction.

Read more about online interaction in K-12 Blended Teaching (Volume 1).

2.5.1 Online discussions

One of the major interactions that can happen in an online setting is the use of discussions. The advantage of online discussions is that they are one of the few online activities that can combine all three types of interactions. Students usually read or view materials to prepare for the discussion (student–content interaction), then share their thoughts with their peers (student–student interaction) in a forum that is moderated by the instructor (student–instructor interaction). As a result, online discussions can be critical in helping students achieve course outcomes because they provide students with a variety of interactions.

Discussion Variations

Online discussions can happen synchronously (in real time) or asynchronously (not in real time). The advantages of an asynchronous discussion is that it allows additional flexibility in time, place, and depth of reflection. Online discussions can also range from low fidelity (mostly text based with no communication cues) to higher fidelity (video communication with more communication cues). Higher fidelity discussions that utilize video or audio discussion platforms contain many of the communication cues that we are used to having in person.

Learning Objectives

It takes careful thought and preparation to create an effective online discussion. Once you have established guidelines, you must figure out how an online discussion can support and improve student learning. It is helpful to keep in mind what you want students to know and take away from the online discussion. You might want to communicate this rationale with students, highlighting what you hope they will gain from their participation.

Once you have determined your objective(s), consider how you are going to make sure that students meet them. You may want to think about the source material students will need to read or watch prior to participating, how the online discussion will inform in-person discussions, and whether the discussion will be started, continued, or finished in the online setting.

Effective Prompts

All good online discussions begin with well-planned discussion prompts. You may wish to consider a range of question types depending on the specific objectives and what you want students to take away from the discussion. These questions can take a variety of forms, similar to any in-class discussion. As Davis (2009) described, you might consider asking the following types of questions:

- Exploratory questions: probe facts and basic knowledge
- Challenge questions: interrogate assumptions, conclusions, or interpretations
- Relational questions: ask for comparisons of themes, ideas, or issues
- Diagnostic questions: probe motives or causes
- Action questions: call for a conclusion or action
- Cause-and-effect questions: ask for causal relationships between ideas, actions, or events
- Extension questions: expand the discussion
- Hypothetical questions: pose a change in the facts or issues
- Priority questions: seek to identify the most important issue(s)
- Summary questions: elicit synthesis

These question types can be mapped to Bloom's Taxonomy, ranging from those that focus on factual information such as exploratory questions, to others that require more in-depth synthesis and evaluation.

Online discussions are more productive when teachers give participants explicit instructions. You will want to model the nature of the posts you are expecting. Directions may also include a number of factors such as post length, style of writing, specific formatting conventions students are expected to follow, required references, expectations for number of replies, who will respond to whom, and when initial posts and response posts are due. You can group these aspects into categories of structure, content, flow, and timing. Each aspect of these categories is described in Table 1.

Table 1

Characteristics of Online Posts

Category	Factor	Description
Structure	Length	How long should posts be? Can you include a range of the number of words expected? Should the post be a certain number of sentences or paragraphs?
	Style	How formal do you expect the language to be? While it might be more conversational, the tone should still be academic in nature. Helping students strike this balance is important to model in online discussions.
	Formatting	Are there any guidelines you want students to follow when posting , such as a specific title for the subject line? Should students use a greeting and a closing in their responses? Is there specific content you want in each paragraph?
Content	Requirements	Are there sources/references the students need to connect to or cite in their responses? What ideas must students present in their posts?
Flow	Replies	How many posts/responses are required to adequately participate in the discussion? How will students know who to respond to?
Timing	Due Dates	When are initial posts due? Do students have enough time to understand the material or discussion before posting?

Managing Discussions

One of the mistakes that teachers who are new to blended learning often make is using their LMS to create whole class discussion activities. It can be okay to have a class discussion board for sharing general ideas about class or asking general questions, but these are not ideal for creating student-student interactions. If the discussion group consists of more than 10 members, it becomes very difficult for each member of the group to read all the posts and know what has been said and what has not been said. Additionally, large discussion groups make it more difficult to create a sense of community, whereas members of a small group have a better chance of getting to know one another.

For managing discussions, breaking your class into smaller groups can be helpful. You might consider creating groups with between 4 and 6 members (certainly fewer than 10). If you want all students to get a sense of the discussion happening throughout the entire class, groups can have their discussion and then report to the entire class with a synthesis activity. Another strategy is to assign specific roles within the small discussion group to focus students' contributions. Over a series of weeks, these roles can rotate so that each student has an opportunity to fulfill each role. Several possible discussion roles might be facilitator, devil's advocate, connector, explorer, and summarizer (North, 2017).

When facilitating online discussions, it is also important to strike the right balance in terms of teacher interaction. Too little teacher interaction and students can feel like no one is listening. Too much and you run the risk of dominating the discussion which can limit or hamper students' interactions, both in terms of quality and quantity.

You will also want to establish guidelines for giving students credit for discussion board participation, and provide ways to allocate points for posting regularly, responding to classmates' posts, staying on topic, and responding in a thoughtful manner. Assessing the quality as well as the quantity of the students' online posts is important. Using rubrics will allow students to have clear guidelines of your expectations for the quality of their posts.

2.5.2 Feedback

Effective feedback highlights strengths and areas for improvement for student work, is given promptly and respectfully, and motivates students to improve. Feedback should build relationships, offer praise, suggest corrections, and offer support. In a blended classroom online tools can be used to facilitate these goals. Online rubrics within most learning management systems help teachers to quickly assess and communicate expectations to students. Feedback templates may be used to provide feedback about common weaknesses by completing a digital form for each student. Video and audio comments can allow for more complex feedback.

Peer Feedback

Quality peer feedback can allow teachers to spend their time more effectively. For instance, you can implement a three-before-me policy that requires students to receive feedback from three peers before submitting the project to you for feedback. John Hattie's (2008) review of research found that 80% of feedback that students receive comes from their peers. Unfortunately, 80% of that feedback is incorrect! As a result, you should help students learn how to provide quality feedback to their peers. For instance, you can create specific rubrics and then help students understand how to use those rubrics while providing feedback (2008).

Teacher Feedback

Student to teacher feedback can improve learning for all students. Again, John Hattie's seminal synthesis of over 800 meta-analyses relating to student achievement highlights the need for student-provided feedback. Hattie explained, "the most important feature was the creation of situations in classrooms for the teacher to receive more feedback about their teaching" because it created a "ripple effect back to the student" (2008, p. 12). Online communication can help students provide you with meaningful feedback because their comments can be anonymous. It can also give students the opportunity to provide you with feedback at any time. For instance, you could create an anonymous feedback survey using Google Forms linked in the sidebar of a course website that students can access while they are working on assignments.

Supporting Learning with Online Interaction

Sometimes teachers don't see a need to communicate online if students have the opportunity to do so in-person. However, there are advantages and disadvantages to both in-person and online communication. The challenge is leveraging the advantages of both in-person and online interaction. Some of the strengths of online communication include:

- **Flexibility:** Students can contribute to the discussion at the time and place that is most convenient and comfortable to them.
- **Participation:** All students can participate because time and place constraints are removed. The discussion is not limited to the time that class is meeting or to the students that are present or feel most comfortable speaking in front of others.
- **Depth of reflection:** Students have time to carefully consider their claims, provide supporting evidence, and engage in deeper, more thoughtful reflections (Mikulecky, 1998; Benbunan-Fich & Hiltz, 1999).

Notice how the strengths of online communication are some of the weaknesses of in-person communication.

2.5.3 Conclusion

Online interaction facilitates student learning by taking advantage of the strengths of both in-person and online communication. You can begin or improve your blended teaching by considering the advice and guidelines recommended in this chapter.

 2.6 Data Practices

Data Practices focus on the teacher's ability to use digital tools to monitor student activity and performance in order to make informed choices about interventions and to help all students progress.

Read more about data practices in K-12 Blended Teaching (Volume 1).

2.6.1 Performance Data

Performance data shows direct measures of how students perform on assessments. It may include measures such as grade books and state and national exams. Performance data can also be found in mastery or performance dashboards in an LMS.

2.6.2 Activity Data

Activity data are indirect measure of student participation and engagement. It includes attendance, participation, LMS log-in times, and engagement. Some of this data can be found in LMS dashboards; other data could come from one-on-one interviews or observations.

2.6.3 Learner Profile Data

Learner profile data are measures of a learner's background, interests, goals, and preferences. These data are just as important to data-driven instruction as performance data and activity data if teachers want to provide data-driven instruction and help students to personalize their learning.

Read more about learner profile data in section 4.1.3 in the Personalization chapter of K-12 Blended Teaching (Volume I).

 2.7 Personalization

Personalizing instruction focuses on the teacher's ability to implement a learning environment that allows for student customization of their learning goals, pacing, time, place, and/or path. It is the process by which teachers shift their focus from a classroom in its entirety to individual students. Through personalization, students begin to understand how they learn and how they become life-long learners. Helping students learn how to learn is a goal that almost all teachers have for their students; the question therefore becomes, "How do I empower students to personalize their learning in my classroom?"

Personalization means allowing a student's needs and desires to motivate what, when, where, and how the student meets the learning outcomes for a course (Patrick et al., 2013). This involves the teacher giving the students more freedom while still guiding and facilitating the learning process in the classroom. It is helpful to think about how learning can be personalized across various instructional elements, dimensions of personalization, and levels of student agency.

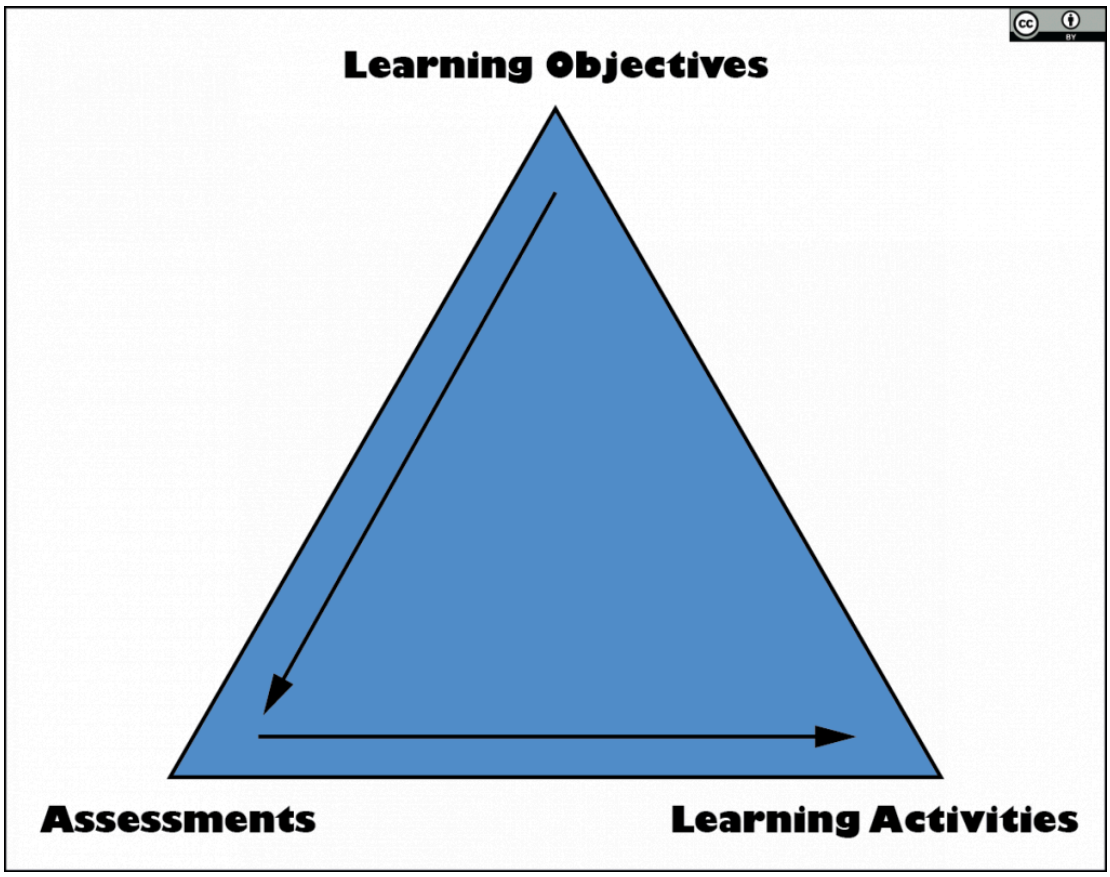
Read more about personalization in K-12 Blended Teaching (Volume 1).

2.7.1 Personalization Across Instructional Elements

Learning can be personalized along any of the three elements that commonly make up instruction: learning objectives, assessments, and learning activities (Figure 5). Describing the personalized learning of these elements helps explain what is being personalized.

Figure 5

Instructional Elements According to Backward Design



While some assessments may have mandated times, places, and formats, other assessments may offer students some flexibility in demonstrating their knowledge or ability. For instance, some assessments can be personalized by allowing students to choose how they show their understanding; the level of mastery they hope to attain on the assessment; how quickly an assessment must be completed; or even when and where the assessment should be completed—such as at home or in an alternate school environment during class, before school, or after school.

Similar to assessments, learning activities can also be personalized by allowing students to choose from various kinds of activities, formats, or media to use in preparing for assessments; how quickly learning should occur; when and where

study or completion of learning activities should occur; with whom the student would like to work; or even the learning habits students aim to develop while completing the learning activities.

We further discuss how these instructional elements can be personalized by describing the various dimensions of personalized learning below (Figure 6).

Figure 6

Dimensions of Personalized Learning

2.7.2 Goals

Teachers often feel pressure to make sure their students meet certain outcomes by the end of their time together. These learning outcomes and requirements are usually designated on the district, state, or even national level. However, students can benefit from being encouraged to set, track, and achieve their own short-term goals throughout their learning. As teachers help their students to make Specific, Measurable, Attainable, Relevant, and Time-Based (SMART) Goals (see Figure 5), they show that students are responsible for their own learning and give students the tools to reach their potential (Graham et al., 2019).

Figure 7

SMART Goals

It is important that both teacher and student work together to set appropriate goals to help the student reach the outcomes for the course and for personal growth. These goals, which can be academic (performance-based) or behavioral (habit-based), will allow the student to feel accomplished as they reach their own milestones throughout the course. The personalization of goals and the individual process of setting them will help motivate struggling students, showing them that they are growing in meaningful ways, and challenge advanced students, allowing them to set goals at their own level. Students and their teachers can also decide on personalized means of assessing if the students are reaching their goals and the learning outcomes for the course.

Not a Personalized Goal	Personalized Goal
The teacher decides that students will work towards 80% mastery of an assessment for a specific state standard.	Students aim for different levels of mastery, based on their previous performance data.

2.7.3 Time

Photo by Ales Krivec on Unsplash

Like most people, students often have a preferred time of the day in which they are mentally more astute and a preferred amount of time they can efficiently spend on a single task. As teachers get to know their students, they may begin to understand what these times are for each student. Personalizing time in a classroom allows students to focus on their more difficult content areas while they are more alert. In a full-day class, this may mean allowing some students to write in the morning, while others may choose to do so after lunch. In a period-based schedule, this may mean working with students to adapt the times and dates assignments are due, motivating students to work on their assignments at a time that cognitively works best for them. Additionally, some students may wish to work at home or

on a project before or after school. Personalizing time means allowing students to have access to the materials they need when they need them. It should also be noted that allowing students to work at a time that is best for them may also mean allowing them to work at a pace that is best for them.

Not a Personalized Time	Personalized Time
The teacher chooses when the whole class will participate in an instructional activity.	Students choose how to spend their time during a class's "flex" time.

2.7.4 Place

The personalization of place consists of both the location in which the students are learning and the people with whom they are learning (Graham et al., 2019). Personalizing place in a classroom allows students to learn the types of environments and interactions that are most conducive to their individual productivity while in a structured, low-stakes setting. This knowledge will benefit them as they graduate and move on to more high-pressured environments, such as college and careers. Teachers can open the space in their classroom to allow students to work in different groups or stations, or they may allow more freedom in what happens in the classroom or at home. The teacher can be in only one place at a time, so technology often plays a role in allowing students to have flexibility in the location of their learning by providing them with access to learning materials.

It is important to note that personalization is not always a separating process. There are many ways to group students in a classroom: in pairs or in small groups, with similarly skilled students working together, or with students on a spectrum of skills helping and tutoring each other (Graham et al., 2019). Teachers must decide how much freedom they give their students in determining both the other students in their groups and their roles within their respective groups.

Not a Personalized Place	Personalized Place
The teacher creates a seating chart and each student is expected to sit in his or her assigned seat.	Students are given a choice of where to sit based on several flexible seating options.

2.7.5 Pace

Personalizing pace allows students to adjust the speed at which they complete learning activities and content. While teachers may need to set a minimum pace at which student are allowed to work, adjusting the flow of material for each student helps to ensure that those who need more time to absorb the material are not left behind, while those who may grasp a particular concept more quickly are able to advance to activities that allow them to further develop their knowledge.

Not a Personalized Pace	Personalized Pace
The teacher determines when the class begins and ends working on a lesson or unit.	Students are able to work through units at the speed that works best for them, working ahead or slowing down as needed.

2.7.6 Path

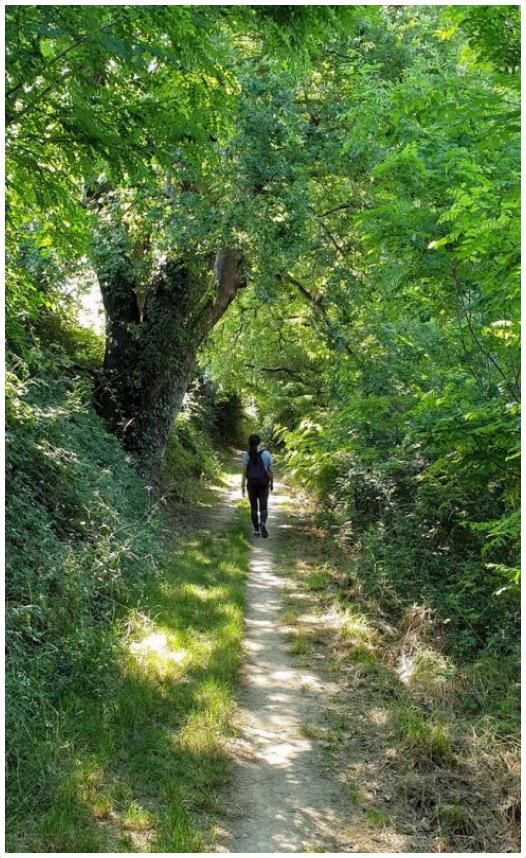
A personalized learning path consists of students choosing how they will achieve a specific learning outcome or personalized goal. While the personalized goal or learning outcome is the end result, with personalized paths the students are able to decide the learning activities they complete as they strive to reach that goal. These options can take a variety of forms: students choosing assignments from a list of different learning activities that all teach the same principle, students deciding whether they would rather listen to instructions through a recording or read them on a page, or students each choosing how they will show mastery at the end of a unit. While these methods help the students to

feel ownership and connection to their learning, it also can prevent the tedium of grading worksheets or multiple-choice exams for every unit.

Not a Personalized Path	Personalized Path
The teacher determines the sequence of activities that everyone in the class will complete.	Students choose from among a list of activities that will help move them towards mastery.

2.7.7 How to Begin Personalizing, Levels of Learner Agency

Photo by Paul Melki on Unsplash



While the task of personalizing a classroom seems daunting, it is important to realize that teachers do not need to start implementing all five dimensions of personalization across learning objectives, assessments, and learning actvities all at once. There are some domains that may already fit within a classroom's structure and others that may follow later. For example, a teacher may begin by helping students set their own goals, which might eventually develop into the personalization of path. The most important criteria are that a teacher starts with a student-centered mentality, builds a support system, and has a personalization plan in mind.

Becoming student-centered

The task of personalizing a classroom requires more than just a structural change in a classroom. It also requires the humility and patience to allow students more autonomy in their learning. The teacher must step away from a lecturing role and into the role of a facilitator and a guide, which often means getting to know the students in a more personal way. While it may be unfeasible to sit down with every student on a regular basis, even simple connections like sending surveys about students' preferences and needs can go a long way. These surveys can contain both multiple-choice sorting questions (Do you prefer reading instructions, watching video instructions, or both?) and open-ended, interest-

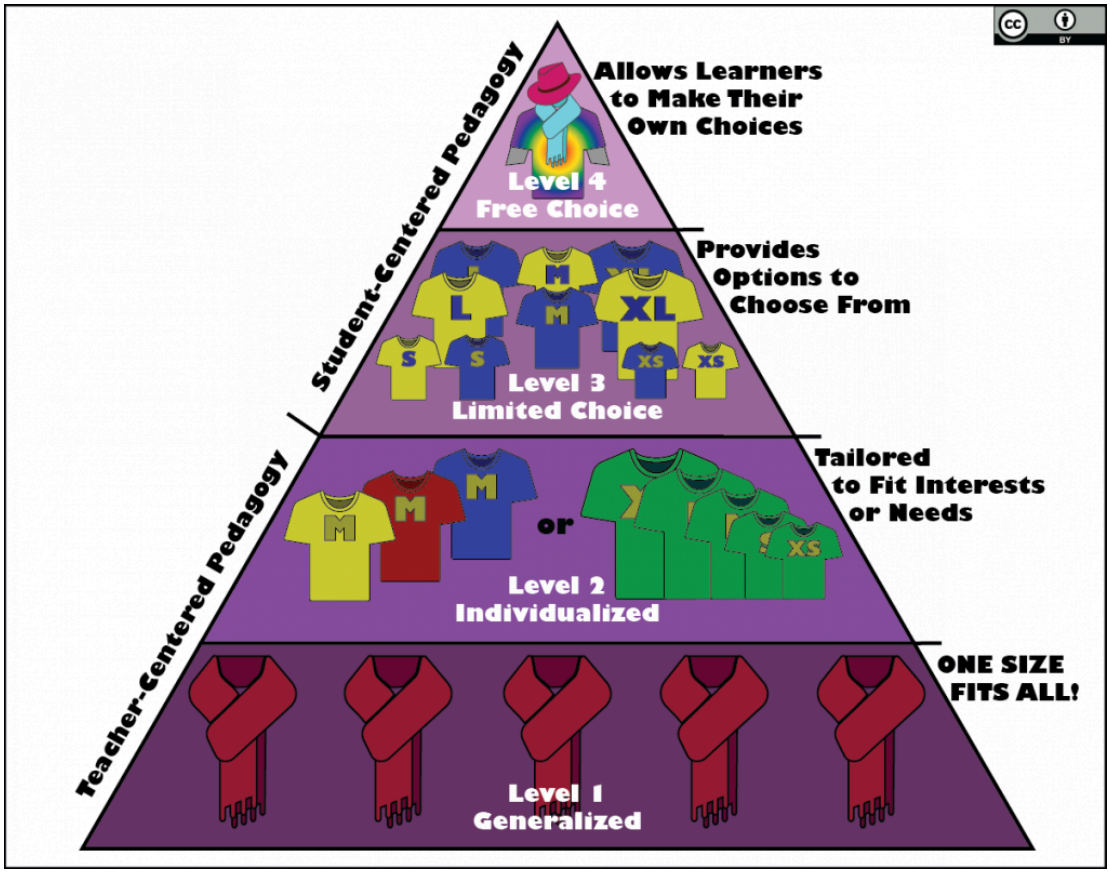
based questions (What do you like to do in your free time?) (Graham et al., 2019). The answers to questions like these can be used to develop a more student-centered classroom.

Short (2022) notes that teaching can incorporate four different levels of learner agency for personalization (See Figure 6). These levels are outlined as follows:

- Level 1 - Generalized Instruction. At this level, the instruction is largely teacher-centered and takes a “one-size-fits-all” approach to learning.
- Level 2 - Individualized Instruction. Instruction includes some differentiation, individualization, or adaptation. These modifications come from the teacher making decisions based on students' needs, interests, and abilities, or from technology that measures student knowledge or abilities and adapts instruction based on such data.
- Level 3 - Limited Choice. Students have some choice over their learning related to the goals, time, place, pace, and/or path of their learning. At this level, teachers provide students with options to choose from such as various levels of mastery to work toward, various forms of assessment to complete, or various videos to watch.
- Level 4 - Free Choice. Students fully direct the goals, time, place, pace, and/or path of their learning. At this level, students have full autonomy in directing their learning. It may be uncommon in K-12 contexts for students to reach this level all the time but there are opportunities for students to practice this level of agency. For example, students may freely choose the topic of an essay or whom to work with for completing a project.

Figure 8

Short's Taxonomy of Learner Agency



These four levels of agency can be applied to any of the five dimensions of personalized learning (goals, time, place, pace, and path) and to any of the three elements of instruction (learning objectives, assessments, and learning

activities).

Personalization plan

Personalizing learning is not the same as giving students free reign in the classroom. In order to truly help students, teachers need to find balance between the overall structure of the classroom and the flexibility of student choice within that structure. As the teacher begins a school year with a plan of what decisions the students will be able to make and which ones the teacher will resolve, the teacher will be more prepared to help students reach their full potential. However, in order to truly be student-minded, teachers must remember to maintain a flexible mindset as they create personalization plans. Once teachers begin to understand the unique individuals in their classrooms, they will be able to fine-tune their initial plans for personalization in a way that supports those students.

Teachers Talk: Results of Personalization

Watch on YouTube

Personalization is by no means easy, but it is feasible. As teachers approach their classrooms with the students' needs in the center of their pedagogy, the needs and desires of the students will frame how the learning outcomes are presented, achieved, and demonstrated. Students and teachers will benefit from the preparation and dedication that each will put forward in the learning process.

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3

Evaluating Blended Teaching with the 4Es and PICRAT

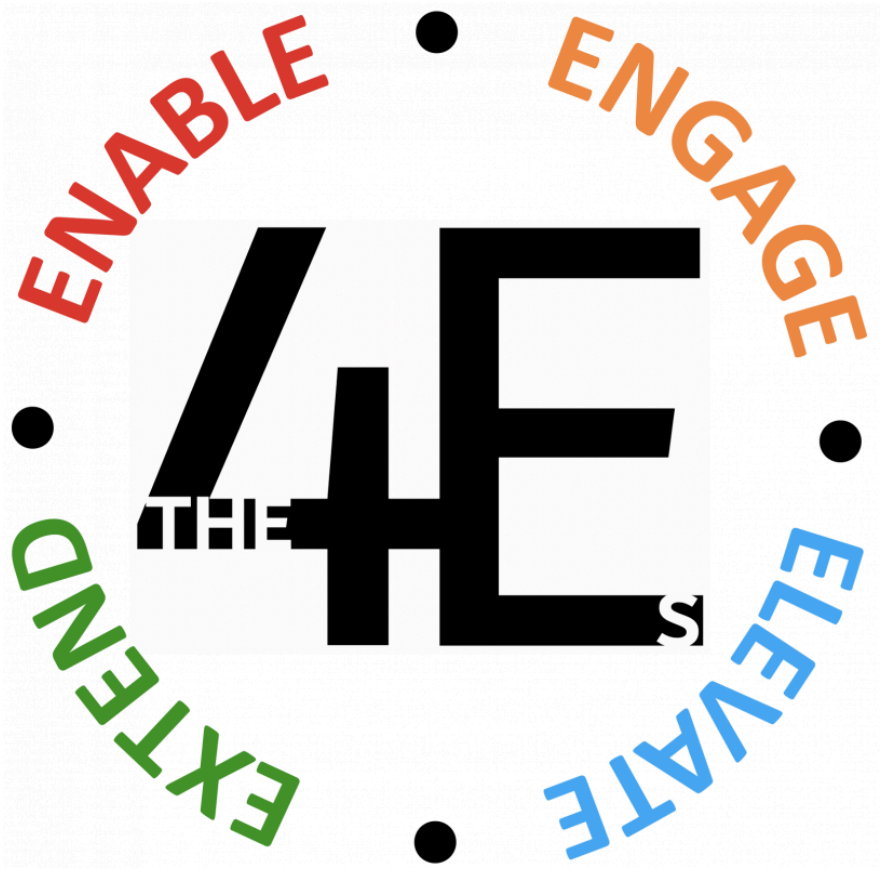
Jered Borup, Charles R. Graham, Cecil R. Short, & Joan Kang Shin

In the first chapter, we explored several scenarios and purposes for blending your students' learning. Regardless of your reasons for blending, it's important to evaluate your teaching and students' learning. Blended learning is the strategic combination of online and in-person instruction. But how will you know if your blended learning strategies are producing the intended results? As you implement your blended learning strategies, it's important that you examine and evaluate their effectiveness and how it has (or hasn't) benefited students' learning. Building on previous research and frameworks such as David Merrill's (2009) e3 and Liz Kolb's (n.d.) TripleE frameworks, we identified four evaluation criteria to determine the effectiveness of your blended learning strategies (see Figure 1). Specifically, our 4Es framework asks if your blended learning strategies:

- ENABLE new types of learning activities.
- ENGAGE students in meaningful interactions with others and the course content.
- ELEVATE the learning activities by including real-world skills that benefit students beyond the classroom.
- EXTEND the time, place, and ways that students can master learning objectives.

Figure 1

The 4 Es



"The 4Es" created by Jered Borup, CC BY SA

3.1 Enable

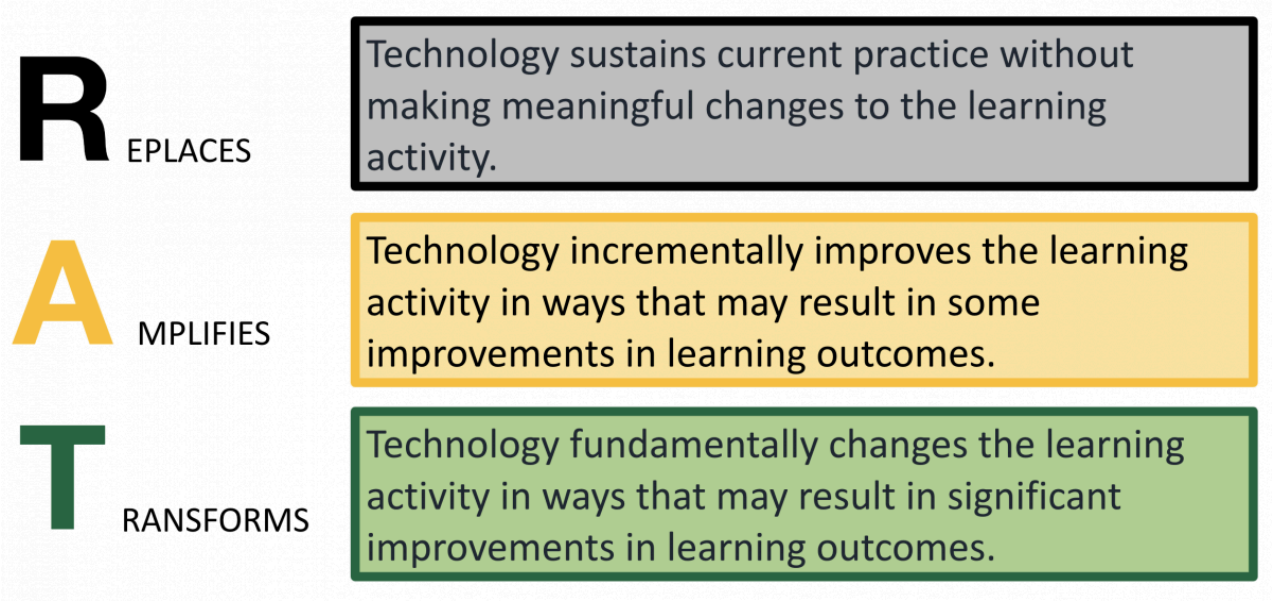
Guiding Question

Do your blended learning strategies ENABLE new types of learning activities?

Kimmons et al. (2020) used the RAT framework to explain that blended learning strategies can use technology in ways that replace, amplify, or transform learning activities (see Figure 2).

Figure 2

The Rat Framework



Education has a long history of using technology to simply replace or digitize learning activities that were previously done without technology. For example:

- handwriting an essay is replaced by typing an essay.
- writing on a chalkboard is replaced by writing on a digital whiteboard. Chalk on a board is replaced by pixels on a screen.
- reading a textbook is replaced by reading an eBook.

These replacements can be a fine use of technology. As long as students have access to the technology, digitizing learning activities can reduce costs following the initial investment to purchase the technology. Additionally, replacing a learning activity using technology can make some learning activities more efficient than they would be without technology. For instance, an essay typed in a word processor can be revised more easily and quickly than a handwritten essay. However, simply replacing an activity will not improve learning outcomes. Best case scenario, students will achieve the same learning outcomes—only more quickly and/or cheaply.

To enable new types of learning that improve learning outcomes, teachers need to use blended learning strategies that move beyond replacing to using strategies that actually amplify or transform learning activities from what could be accomplished without technology.

Amplifying a learning activity requires teachers to introduce technology in ways that enable incremental improvements while the core of the activity remains largely the same. For instance, teachers may find that many of their students have met the target learning outcomes when they are reading students' essays. As a result, the teachers may choose to amplify the essay writing process by having students work in a collaborative document that enables better collaborative opportunities, peer reviews, instructor feedback, and editing. Students can also include multimedia elements to enhance what is written in the essay. Or teachers may use technology in ways that allow students to publish and share their essays in authentic ways. Teachers may also use technology to improve pre-writing activities by engaging students in an online discussion activity to brainstorm and formulate ideas for their essays. What's important to recognize is that the core activity is still the same—writing an essay—but technology enables incremental improvements and enough of these improvements could impact learning outcomes.

Transforming a learning activity is different than amplifying it because the teachers' goal isn't to improve the activity; rather, it's to use blended learning strategies in ways that introduces a new learning activity that they wouldn't be able to do without technology. For instance, rather than making improvements to the essay, teachers may choose to transform

the learning activity by holding a film festival where students write a script, edit a video, and then “premiere” their videos to their classmates and others that are invited to participate.

3.2 Engage

Guiding Question

Do your blended learning strategies ENGAGE students in meaningful interactions with others and the course content?

Engagement is a term with many different meanings. Borup et al.'s (2020) review of research identified three dimensions of engagement:

- Behavioral engagement: the physical behaviors required to complete the learning activity.
- Emotional engagement: the positive emotional energy associated with the learning activity.
- Cognitive engagement: the mental energy that a student exerts toward the completion of the learning activity.

Teachers will often refer to these three dimensions of engagement when they talk about engaging students’ hands, hearts, and heads (see Figure 3).

Figure 3

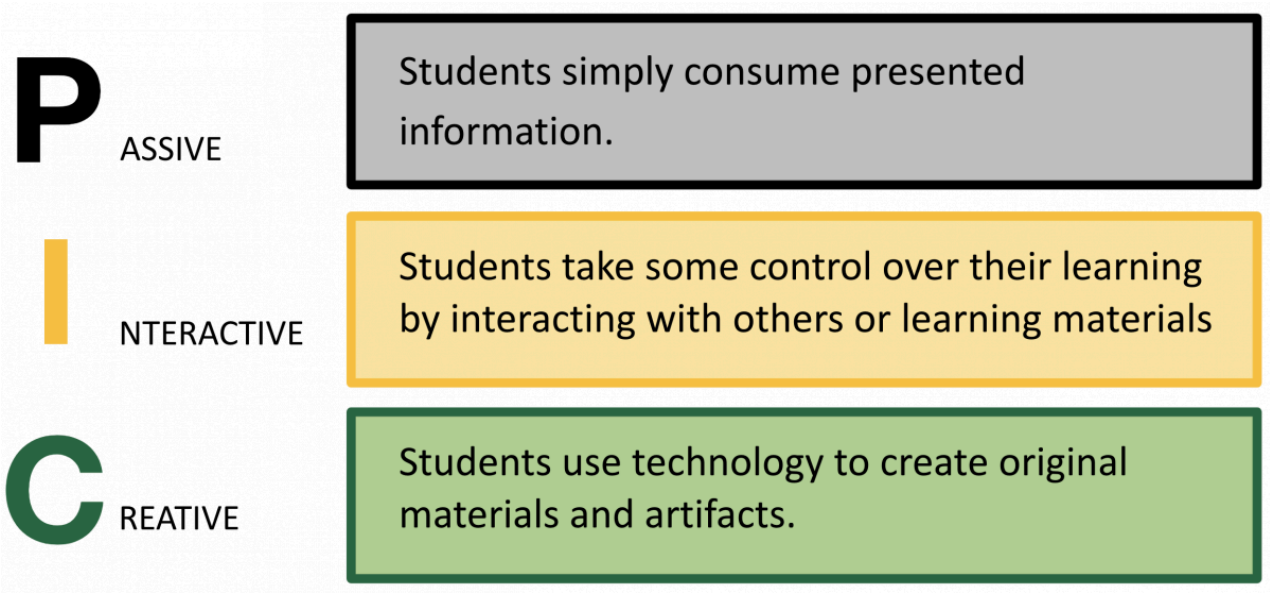
The Three Dimensions of Engagement

"Engagement" created by Jered Borup using images from Pixabay, CC BY SA

Of the three dimensions of engagement, behavioral engagement is the easiest to observe and categorize. Specifically, Kimmons et al. (2020) used the PIC framework to identify three types of behavioral engagement: passive, interactive, and creative (see Figure 4).

Figure 4

The PIC Framework

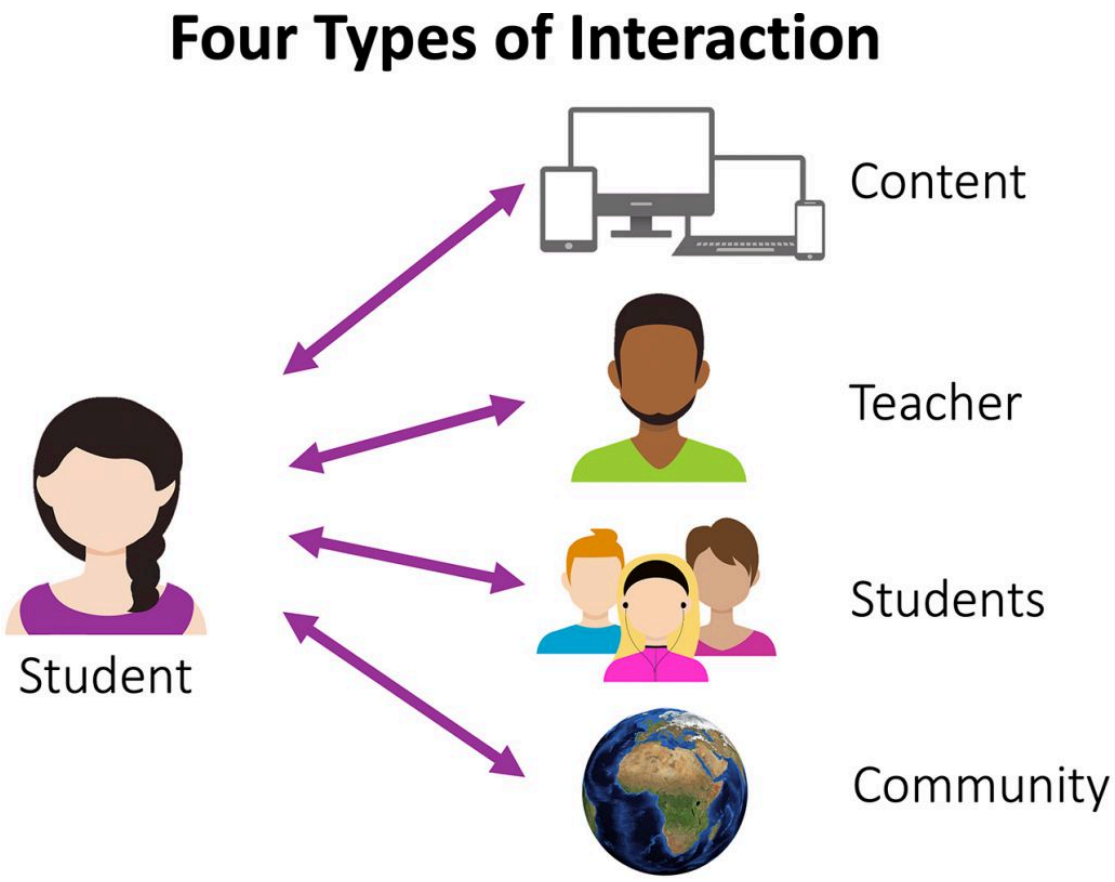


Passive learning examples include students watching a video, listening to a podcast, and attending a lecture. In some ways, these passive learning tasks represent the lack of engagement because they don't require or even allow for students to make meaningful choices or contributions.

Interactive activities are dynamic and require students to actively participate. Interactive activities include tasks where students are interacting with online content and tools. Interactive activities can also include opportunities for students to communicate with others such as the teacher, other students, and those outside of the classroom (see Figure 5).

Figure 5

Four Types of Interaction



Creative activities go beyond participation to actually creating something original like a blog post, edited video, or digital poster. Table 1 shares some additional examples of online passive, interactive, and creative activities.

Table 1

Examples of Passive, Interactive, and Creative Activities.

Passive	Interactive	Creative
• Watching a video. • Listening to a podcast. • Reading an online article.	• Playing educational games. • Participating in an online discussion. • Asking a virtual guest speaker questions.	• Writing an essay. • Editing a video. • Making an infographic. • Creating a website.

It's important to note that each type of behavioral engagement is important at different stages of the learning process. For instance, students may passively listen to a short lecture or watch a video before interacting with their peers regarding their thoughts about what they learned during the passive activity. Similarly, if students are tasked with creating a video essay, they will likely start with passive activities to develop a background understanding of the topic or to learn how to use the video editing program. Students could then interact with their peers to collaboratively create the video. Instructors can also consider when and where passive learning activities occur. For example, sometimes a flipped classroom trades having a passive video watching experience online to make time and space for an interactive/creative learning experience in-person.

When evaluating your blended teaching, it's important to see the value of passive learning activities while also understanding that these types of activities are limited in terms of deepening students' learning. Passive activities like watching a video or reading an article alone do not require students to demonstrate their comprehension of content or encourage higher levels of cognitive engagement, such as applying, evaluating, or creating. Too much time spent in

passive learning activities will limit your students' engagement so be sure to leave ample time for interactive and creative activities.

The following table provides examples of how technology can be used to replace, amplify, and transform activities that don't originally include digital technology (see Figure 6). As you read the table, notice that passive activities can be amplified or transformed by using technology to make the learning less passive and more interactive. Similarly, teachers can amplify and transform activities that are already interactive by using technology to adjust the time and place of the interactions or by allowing students to move beyond interactive activities to creative activities.

Figure 6

Examples Showing the Use of Technology to Replace, Amplify, and Transform No-tech Activities

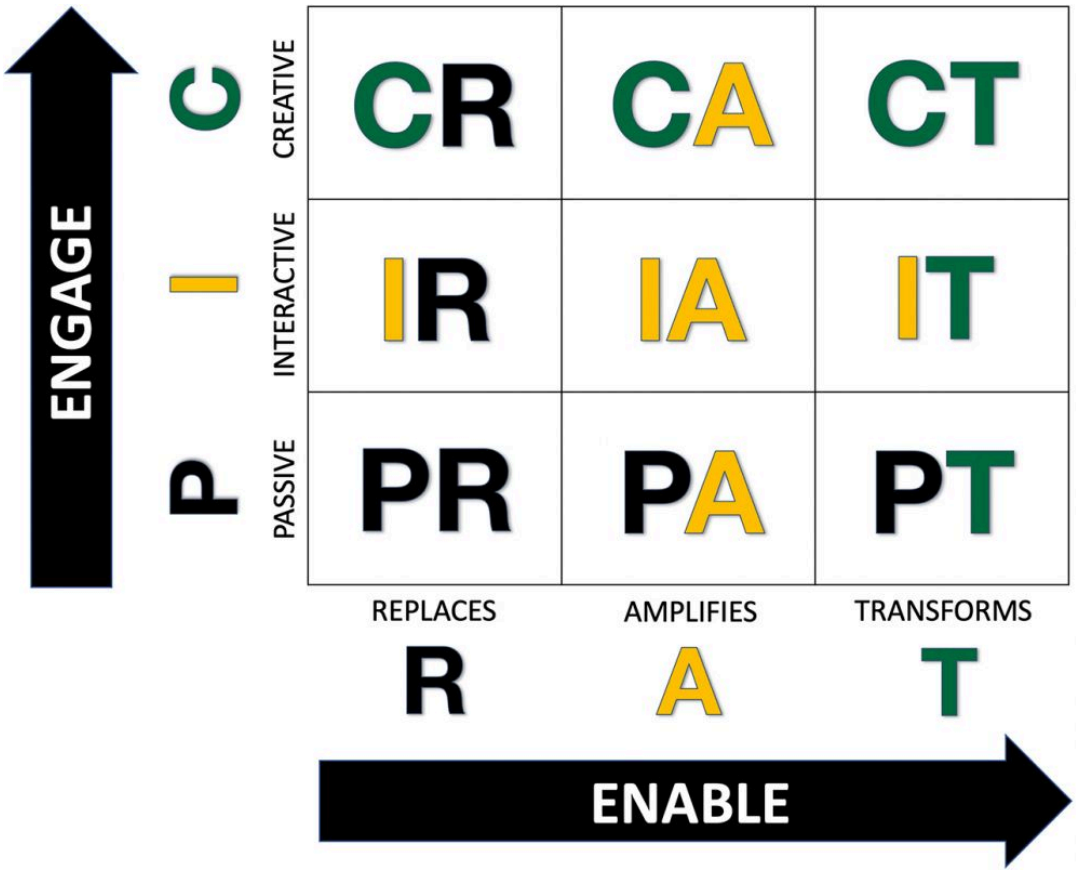
NO-Tech Activity	REPLACES R	AMPLIFIES A	TRANSFORMS T
CREATIVE ACTIVITY Students color and label a paper map of the continents.	Students label an online map and selecting colors for each continent.	Students use a tool like ThingLink to add videos and images that highlight the different attributes of each continent.	Rather than create a map, students collaboratively create a travel website that highlights the different continents for visiting extraterrestrials.
INTERACTIVE ACTIVTY Students engage in a classroom debate to demonstrate persuasive techniques.	During class time, students engage in a "silent debate" where comments are written on a discussion forum rather than spoken aloud.	Students engage in a debate that combines in-person communication with asynchronous online communication to increase student participation and reflection.	Rather than engage in a class debate, students collaboratively work on a school-wide or community campaign that includes digital campaigning using posters and public service announcements.
PASSIVE ACTIVITY Students listen to an in-person lecture to learn new concepts.	Students watch a video or online lecture.	Students watch a recorded lecture using a tool such as EdPuzzle that requires students to periodically answer multiple-choice questions.	Rather than watch a lecture, students learn concepts using adaptive learning software that automatically adapts what is taught based on student performance.

Kimmons et al. (2020) combined the PIC and RAT frameworks to form the PIC-RAT matrix that allows teachers to to chart how technology is being used in their blended learning strategies (see Figure 7). The matrix is a helpful tool for teachers to consider what the technology is adding to the activity. Ask yourself the following questions:

1. Is the technology being used to increase student engagement by making learning activities more interactive and/or creative?
2. Is the technology being used to simply replace activities or to amplify and transform activities?

Figure 7

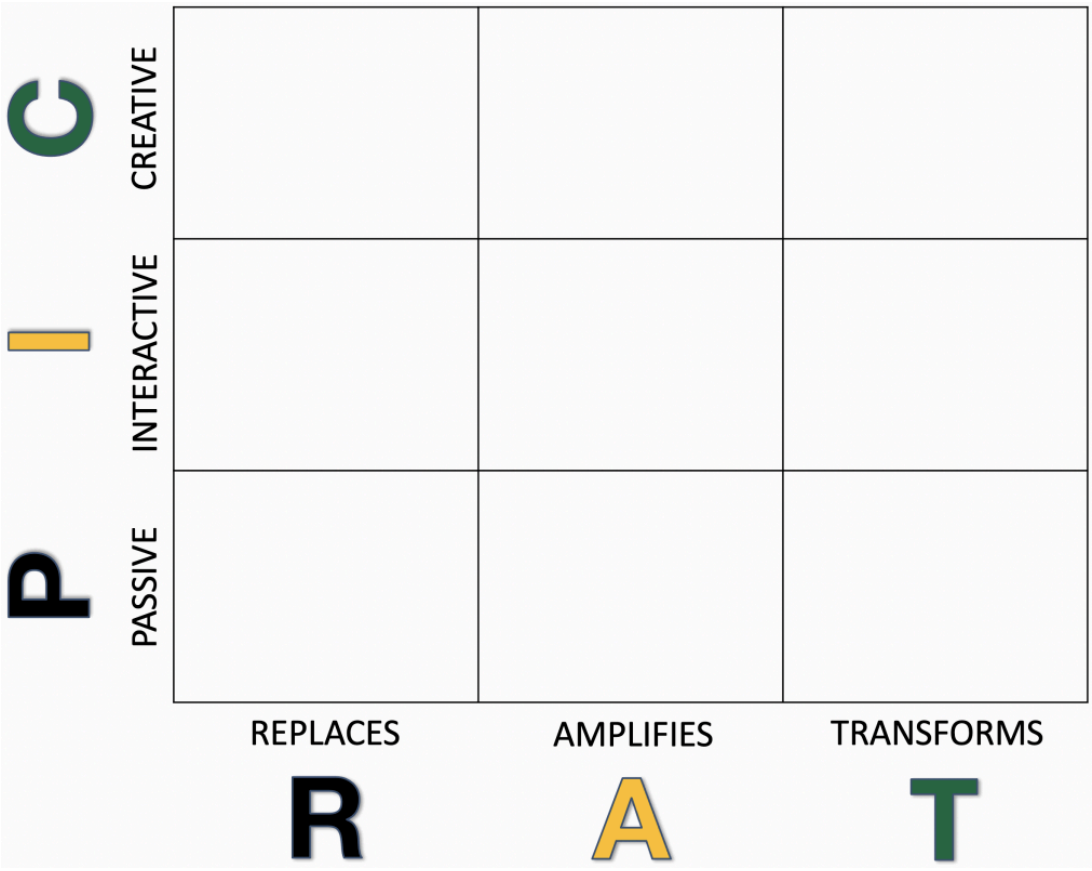
The PIC-RAT Matrix



When planning new blended or online activities, we recommend starting by focusing on the learning objective(s), then pulling out a piece of paper or pulling up a word processing document and filling out the PIC-RAT matrix (see Figure 8) with various ways that technology could be used to teach the learning objective(s).

Figure 8

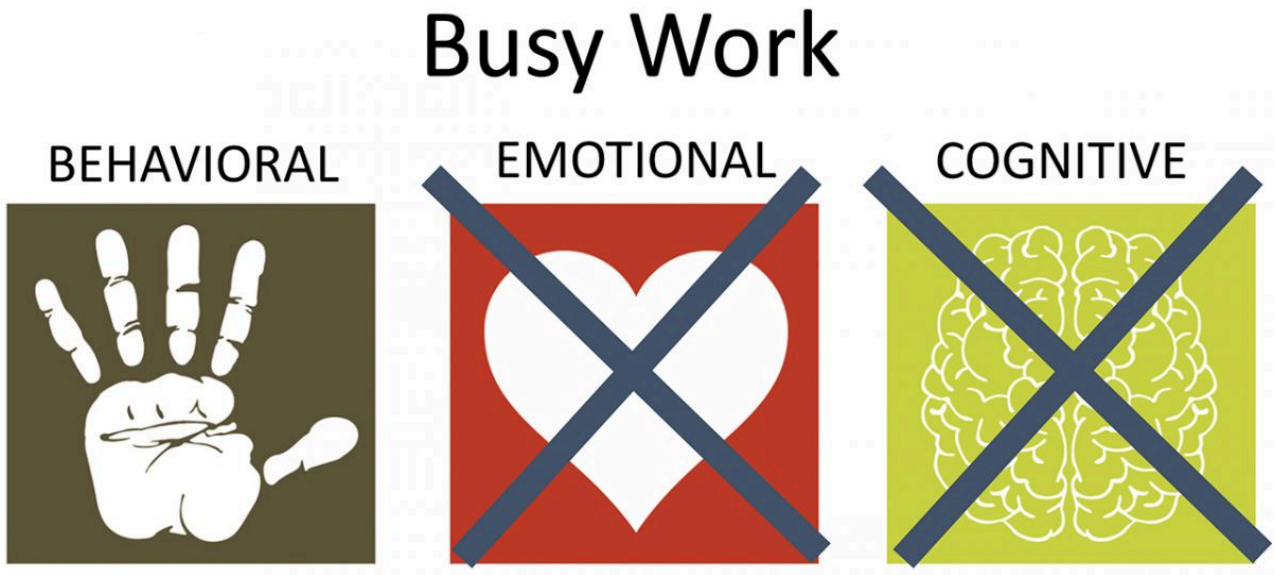
Blank PIC-RAT Framework for Brainstorming Activities Using Technology



Moving up and across the matrix will likely improve the learning activity, but it's also important to note that the PIC-RAT matrix doesn't actually measure the quality of the learning activity. It's possible for teachers to transform a learning activity by having students create something that wouldn't be possible without technology and still not actually improve students' learning or experience. In fact, it is possible to transform students' learning for the worse. For instance, using the example shared above, a teacher may transform an essay writing activity so that students create an edited video instead. While this transformation may be positive for many students, there could be some students who detest making an edited video and refuse to participate. Similarly, a teacher may transform a passive learning activity into a creative learning activity that isn't as aligned to the learning outcomes. As a result, when amplifying or transforming a learning activity to increase students' behavioral engagement it's important to consider the other two dimensions of engagement—emotional engagement and cognitive engagement. Students will perceive the activity as "busy work" if teachers only engage their hands but fail to also engage their hearts and minds (see Figure 9).

Figure 9

Busy Work



As you go through these chapters, you have the opportunity to reflect on what you have learned and to design your own activities in the Blended Teaching Workbook. Click on the link to access your workbook. Make sure you save a copy and keep it available, so you can return to it as you go through the chapters.

Blended Teaching Workbook

In your workbook is a copy of the PIC-RAT grid. Use it to brainstorm activities you could use in your classroom. You can access the workbook here.

3.3 Elevate

Guiding Question

Do your blended learning strategies ELEVATE the learning activities to include real-world skills that benefit students beyond the classroom?

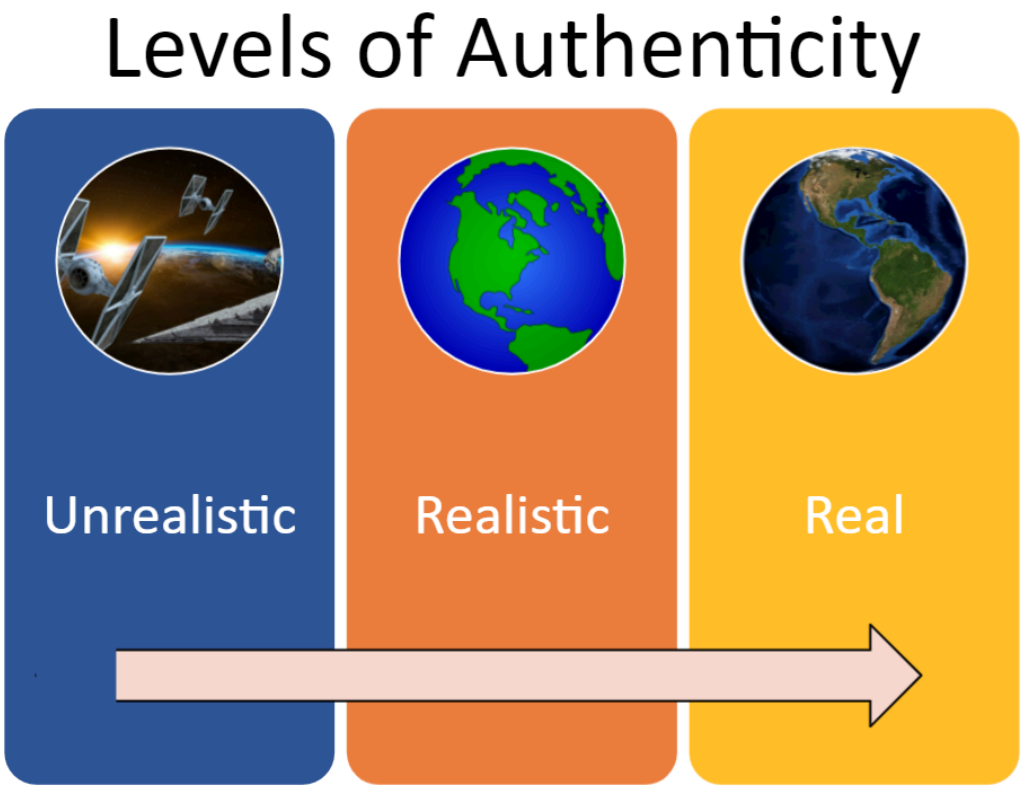
In addition to creating learning activities aligned with the course learning objectives, teachers' blended learning strategies can elevate students' learning to also include real-world skills that benefit students beyond the classroom. For example, the Partnership for 21st Century Learning stresses the need for students to develop the 4Cs—communication, collaboration, critical thinking, and creativity skills (https://www.battelleforkids.org/networks/p21). While widely-referenced and important, the 4Cs also take a somewhat narrow view of the skills that students need to succeed beyond the classroom. For Ontario's education agenda, Michael Fullan (2013) expanded on the 4Cs to include character education and citizenship. Social-emotional learning is also critical for human development. These skills are best developed in a social learning environment. Clearly, students can't develop communication, collaboration, and citizenship skills in isolation. Even critical thinking and creativity skills are best developed when working with others. This provides more support for balancing passive activities with interactive and creative activities while urging teachers to elevate their instruction.

Learning activities are also best elevated when activities are situated in authentic tasks and projects. There are three levels of authenticity when you are considering the problems and stakeholders that students will be working on and with (see Figure 10).

- Unrealistic: These scenarios and problems can be out of this world—literally! Stakeholders and problems can be science fiction and include anything from time traveling to establishing a colony on Mars. They are intended to make the unit more exciting and emotionally engaging while still requiring students to demonstrate important knowledge and real-world skills.
- Realistic: These are scenarios and problems that feel like they are real but aren't. Real people can even serve as stakeholders but they are really just acting. For example, students might simulate creating a new business by coming up with a new product and working in groups to come up with the name of the product, a business plan, and a marketing plan. It is completely realistic, but they won't be really starting a new business!
- Real: This is the gold standard because you have real people who are really interested in and will benefit from students' work. These stakeholders can be of any age and in and out of the school. For example, students could work in groups to discuss some problems in their community, such as littering in their local park or school grounds. They might create memes, GIFs, and short video public service announcements to urge people to keep the park and playground clean that they can post on social media and distribute through local government social media.

Figure 10

Levels of Authenticity



"Levels of Authenticity" created by Jered Borup using images from Pixabay, CC BY SA

Authentic assessments are often renewable rather than disposable. Consider the target audience of most assessments —who it is that students are completing assessments for—themselves, their community, their teacher? Often assessments are completed for an audience of one, the teacher. The teacher then evaluates the assessment, provides

the student with some feedback, returns the assessment to the student, and hopes that the student uses the feedback to enrich their learning before the assessment is discarded in the trash can (or on the floor, or left on a desk) when class ends. These assessments are often seen as "disposable assessments." They are meant to be used and then discarded without retaining any real-world value.

“A ‘renewable assessment’ differs in that the student’s work won’t be discarded at the end of the process, but will instead add value to the world in some way.” (David Wiley, 2016)

A movement toward assessments that can exist in a world that is larger than the four walls of a singular classroom can make learning more authentic and elevate what students learn and do beyond content-based curriculum and contexts. For example, a community college instructor found that having her students write an openly licensed textbook that would be shared with other students instead of traditional essays caused them to "write better than they've shown me in the past" (Short et al., 2024). Students want to know that their work matters and is destined for more than the nearest trashcan.

Table 2 gives some examples of renewable and disposable assessments.

Table 2

Renewable and Disposable Assessments

Renewable Assessments
• Students create a documentary about the life of a war veteran in their community. • Students create tutorial videos to help teach math concepts to peers. • Students create artwork to beautify the walls of city buildings. • Students create a picture dictionary to share with younger students.
Disposable Assessments
• Multiple choice exam • Short essay quiz • 5-page paper to check understanding or ability • Spelling test
Additional Resources
• Renewable assignments: Student work adding value to the world • Non-disposable Assignments in Intro to Philosophy • From Consumer to Creator: Students as Producers of Content • Are your assignments renewable or disposable? • What is Open Pedagogy -> Killing the disposable assessment

3.4 Extend

Guiding Question

Do your blended learning strategies EXTEND the time, place, and ways that students can master learning objectives?

Another way that blended learning strategies can improve learning activities is by extending the time, location, and ways that students complete learning activities. Attempting to extend students' learning time and location is nothing new. For instance, students have long had flexibility in the time and location that they completed homework. However, too often students are tasked with completing homework without adequate support resulting in frustration for both students and parents, as hilariously shown in the following video clip.

Watch on YouTube

Using technology teachers can not only provide students with more sensory-rich learning materials, within a learning management system (LMS) they can also provide them with digital scaffolding and direction to successfully complete learning activities using those materials. For instance, it's relatively easy for teachers to create short instructional videos that can help students to learn new concepts or complete learning tasks. One teacher (Farah, 2019), explained that creating instructional videos allowed him to "clone" himself so students could receive his help in the moment they needed it, not when he was presently available to help them. Once teachers feel comfortable making quick videos, they can use them to provide targeted scaffolding anytime students find something confusing or difficult. This allows the teacher to tailor instruction to specific students or classes.

This use of technology can also provide students with the flexibility in the pace of their learning and allows teachers to implement mastery-based grading. For instance, when learning activities are clearly organized in an LMS, students can complete and submit assignments that the teacher can then review and provide feedback on until students achieve

mastery. Providing quality feedback efficiently is especially important in a mastery-based grading system. Although detailed feedback is always time-consuming, technology can help lighten the load as we will see in the following chapters of this book.

Teachers can also extend the ways in which students complete learning activities. For example, teachers may provide students with multiple learning paths to choose from using a choice board. A choice board is a graphic organizer, usually in a grid of 4, 6, or even 9 spaces, with activities that students can choose to do. Often teachers design them to appeal to their learners' interests, talents, and abilities. Creating multiple activities that all lead toward mastery of your learning objectives allows students choice in their learning path—hopefully with choices that will motivate them and inspire them to do their best work. Once learning has been extended, teachers can also provide students with opportunities to form their own learning path and/or set learning goals.

3.5 Conclusion

Combining in-person and online instruction doesn't mean that the blended learning will be high-quality—or even good. As you begin to blend your students' learning, you will likely find that some lessons or even entire instructional units don't go as well as expected. The opposite will also be true and you will find that other blended lessons and units go incredibly well. As blended teachers it's important to carefully evaluate what works and what needs to be improved or even replaced. The 4Es framework can help you recognize quality blended teaching and learning. Specifically, as you plan new blended instructional units or evaluate previous blended instruction, ask if your instructional unit would or did:

- ENABLE new types of learning activities.
- ENGAGE students in meaningful interactions with others and the course content.
- ELEVATE the learning activities by including real-world skills that benefit students beyond the classroom.
- EXTEND the time, place, and ways that students can master learning objectives.

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Borup, J., Graham, C. R., Short, C. R., & Shin, J. K. (in progress). Evaluating Blended Teaching with the 4Es and PICRAT. In C. R. Graham, J. Borup, M. A. Jensen, K. T. Arnesen, & C. R. Short (Eds.), *K-12 Blended Teaching (Vol 2): A Guide to Practice Within the Disciplines , 2*. EdTech Books. https://edtechbooks.org/-aCm

Discipline Specific Blended Teaching

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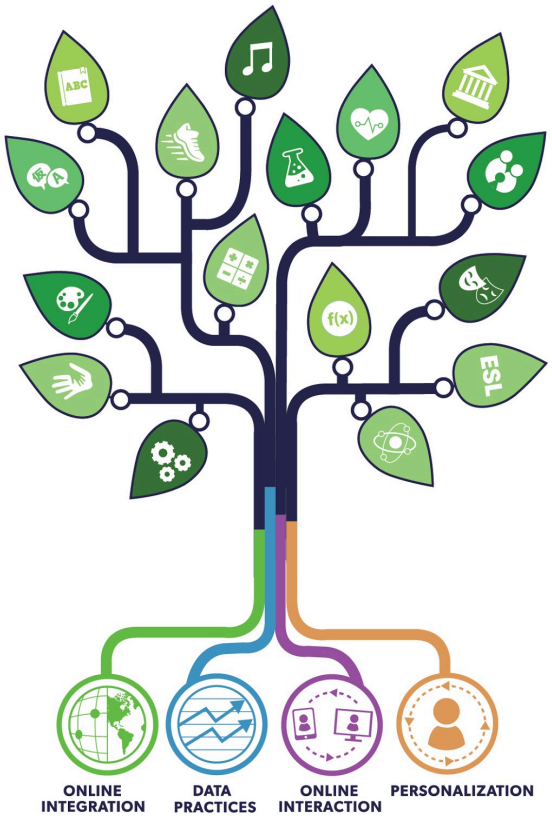
4

Family and Consumer Sciences (FCS)

Intro to Blended Teaching

Michelle Jensen, Charles R. Graham, Jered Borup, Karen T. Arnesen, & Cecil R. Short

4.1 Purpose



The purpose of this chapter is to help you prepare to design and implement blended learning within the family and consumer sciences classroom. The image on the cover of the book shows a broad range of disciplines, each represented by a branch of the tree. The four core skills for blended teaching are represented by the common roots of the tree that feed the branches.

While there are some broad commonalities in how blended learning looks across disciplines, there are also many subtle and unique approaches to blended teaching within each discipline. Family and Consumer Sciences (FCS) teachers can benefit from examples of blended teaching in FCS classrooms. As a result, this book is geared towards providing examples of blended teaching that are specific to the FCS classroom.

4.2 Meeting the FCS Blended Teachers

In these chapters, you will receive instruction and ideas from experienced family and consumer sciences teachers. They will help you see blended teaching in FCS through the lens of the blended teaching competencies: online integration, online interaction, data practices, and personalization. Learn more about these teachers below.

Meet Your Teacher–Marianne Beck (0:59)

Meet Your Teacher–Mary Alice McCarlie (2:16)

Meet Your Teacher–Heather Ostler (1:03)

Meet Your Teacher–Megan Wakefield (2:23)

Meet Your Teacher–Natalie Wilson (2:23)

A special thanks to the reviewers of these FCS chapters. They include a mix of preservice teachers, in-class teachers, administrators, and higher education faculty.

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5

FCS: Why Blend?

Natalie Hancock, Christina Lewis, & Michelle Jensen

5.1 Blending in FCS Teaching

The first question you should ask yourself before embarking on the journey of blended teaching is “Why blend?” Teachers who are still searching for their answer to this question may end up spending a lot of time and energy implementing changes that do not serve any larger goal or purpose.

Guiding Question: Why Blend?

Teachers must answer the question “Why blend?” It is not sufficient to blend just because it is popular or because others are doing it.

In the two videos below, Megan Wakefield, and Natalie Wilson explain how blended teaching has improved their classrooms. What reasons might you have for blending?

Why I Blend–Megan Wakefield (4:15)

Watch on YouTube

Why I Blend–Natalie Wilson (0:57)

Watch on YouTube

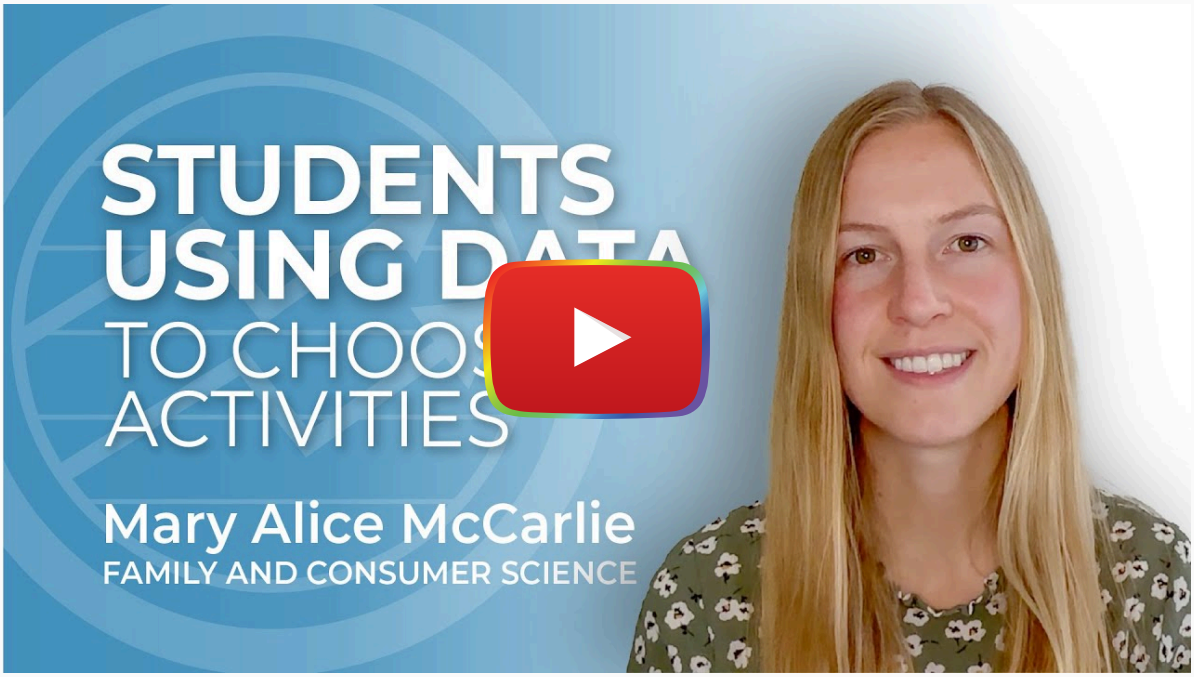
5.2 Reasons for Blending

There are three primary reasons why teachers choose blended teaching:

- **Improved learning outcomes—**Blended classrooms can increase personalization, allow for more individual and small group instruction, and make better use of classroom time.
- **Increased access and flexibility—**In blended classrooms students have access to materials anywhere and anytime. In addition, they have access to resources and activities that are unavailable to them without an online component.
- **Increased efficiency/cost—**Blended classrooms can help students complete learning activities in less time and with less energy**,** reduce printing costs, and help students stay more organized (less likely to lose assignments).

Mary Alice McCarlie explains how blended learning provides both efficiency and personalization in learning.

Why I Blend–Mary Alice McCarlie (1:55)



Watch on YouTube

Oftentime teachers have multiple reasons for blending, but almost always one of these three reasons is primary in their minds. Table 1 below shows some simple FCS examples and how they might help the teacher to achieve multiple purposes simultaneously.

Table 1

Examples of Multiple Purposes for a Blended FCS Activity

Blended Example	Blended Purpose
Facilitates student understanding, and feedback during the creation process.	Learning Effectiveness: Sharing videos online eliminates the need for students or teachers to write down step by step the creation process. Because feedback is easier to provide, students can receive more detailed feedback.
	Access and Flexibility: It is also easier for students to go back and review the concept that was demonstrated.
	Increased Efficiency/Cost: It saves the effort and cost to make physical copies of directions for students. Using videos online can also make the collaborative process and providing feedback more efficient.
Creates a space for discussions that involve all class members.	Learning Effectiveness: Many students struggle to fully participate in class discussions for a varieity of reasons, and others dominate these conversations. Online discussions give everyone the opportunity to participate (meaning they have time to discover what they think and write about it), creating more robust, reflective, and divergent discussions.
	Access & Flexibility: Online discussions allow all students to voice their ideas.

Blended Example	Blended Purpose
	Increased Efficiency/Cost: Online discussions efficiently give every student a voice. They also free up classroom time for other activities.
Promotes differentiated instruction in hand-on lab based courses	**Learning Effectiveness: Based on student data, students can be assigned learning activities specific to their weaknesses. Students who don't need to work on sewing a button don't have to. Students who don't understand how to apply cooking terms can receive instruction and activities designed to help them learn this concept.**
	Access & Flexibility: Students have access to instruction specifically targeted to their needs. They have the flexibility to access the content they need and which they have not already mastered.
	Increased Efficiency/Cost: Students don't waste time where they are already proficient. They don't have to wait for other students to catch up or worry about being behind.

Think about why you would like to blend your classroom. In your blended teaching workbook, write your thoughts, creating your own purpose.

Blended Teaching Workbook

Write a brief statement about why you want to blend your classroom. Which purposes and outcomes are you most interested in for your blend? Access your Workbook here. Make sure you save your copy where you can access it as you go through the social studies chapters.

5.3 Common Challenges to Teaching FCS: Problems of Practice

All teachers face challenges. It's part of the nature of sharing a learning journey with a large number of young people. For many teachers like **Marianne Beck, below,** blended teaching helps them adress and overcome some of those challenges.

Your choice to blend will be more meaningful to you and your students if it helps to address challenges that you and your students face in the traditional non-blended classroom. We refer to these challenges as "problems of practice."

Why I Blend–Marianne Beck (1:12)

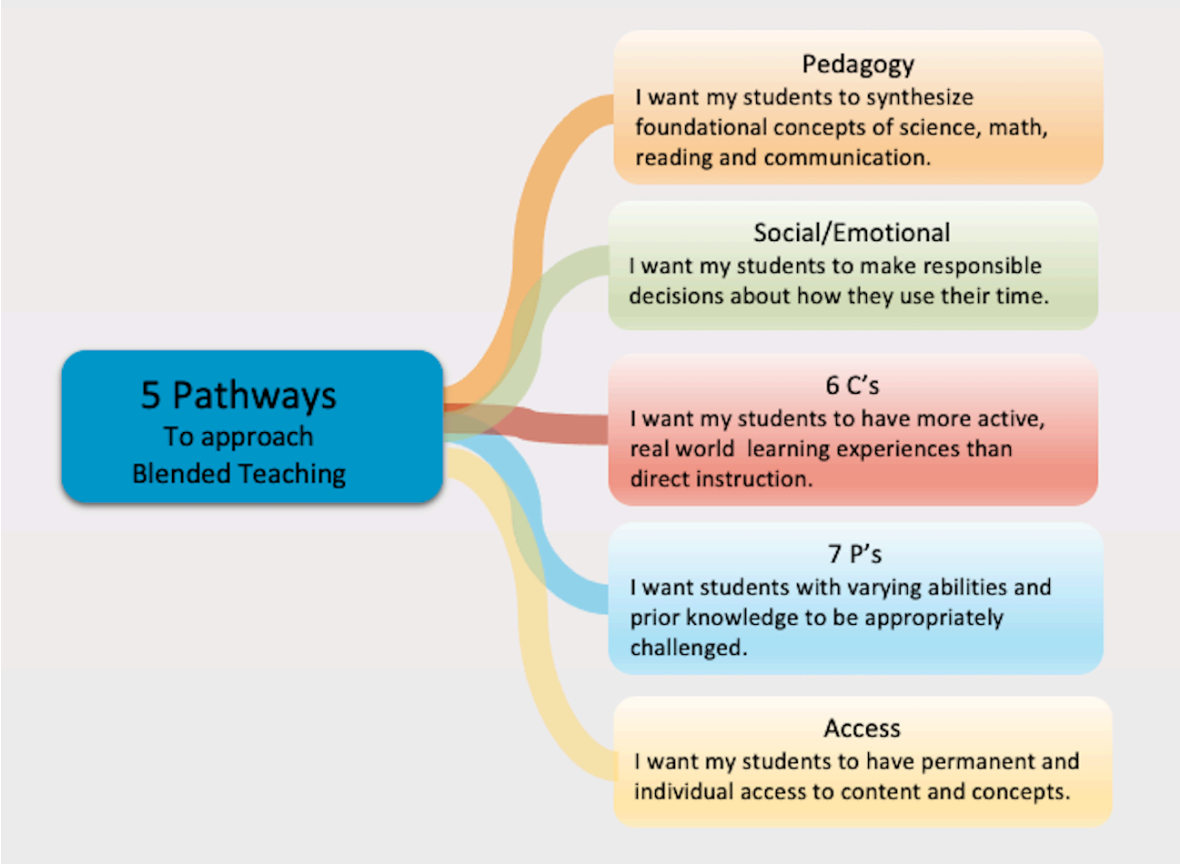
Definition: Problem of Practice

A problem of practice is a current problem or challenge that you believe could be improved through blended teaching.

Problems of practice can fall under any of the three purposes outlined in section 1.1. However, the most meaningful and powerful problems of practice for teachers deal directly with improving learning outcomes for their students.

Fig. 1

Problems of Practice in Family and Consumer Sciences



These five pathways are a powerful tool to help you think deeply about problems of practice that are relevant to you. Once you identify specific challenges in your current approach to teaching, you will be able to begin to explore what online approaches may be combined with your in-person approaches to make a better experience for your students and you alike. This process engergizes you and your teaching. Teachers who choose to blend often find that they enjoy teaching in new and fulfilling ways.

Heather Ostler explains how blending allows for better connections with students which in turn makes teaching enjoyable.

Why I Blend–Heather Ostler (4:05)

Finding Your Problems of Practice

Now that you have reviewed the five pathways to identifying problems of practice, it is your turn to look at your own practice and try to identify a couple of challenges that you can consider as you continue throughout these FCS

chapters. What student outcomes and teaching practices would you like to improve? What stands in the way of your teaching having the impact you would like it to have?

Blended Teaching Workbook

Identify 2-3 problems of practice (PoP) that you can use as you consider blended options for your classroom.

Note: You should identify several problems of practice (PoP) because not every PoP has a good blended learning solution.

If you haven't already opened and saved your workbook, you can access it here.

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6

FCS: Online Integration & Management

Michelle Jensen, Natalie Hancock, & Christina Lewis

6.1 Online Integration and Management in Family and Consumer Sciences

Integration is at the very heart of blended teaching. It has to do with how you combine your in-person FCS classroom with online activities (remember the baker mixing dry and wet ingredients from Chapter 1). Because the main component of blended learning is integrating online and in-person activities, online integration is a good place to begin thinking about blending your classroom.

This is where you as a FCS teacher can consider what specific online practices can help you address the problems of practice you identified in Chapter 4–1. The more examples of blended teaching you have personally seen and the more experience you have with online teaching, the easier this process will be for you. But even if you are just starting out, you will probably have a few ideas of your own. This chapter will help you explore more ideas.

Although blended teaching can seem overwhelming, experienced blended teachers say that the best way to go about this process of starting to blend is to think big but start small. Small beginnings allow you to wet your toes in the process, focus on specific pedagogies and activities, see the benefits and drawbacks, and make improvements on a small scale without becoming overwhelmed by the process.

6.2 Planning for Integration

You can take that first small step by doing the following:

1. Identify the problem of practice and the learning objective that you are interested in blending.

In this video Heather Ostler explains how Blended Learning helps her to meet the goal of creating student independence.

Creating Student Independance–Heather Ostler (2:00)

Natlie Wilson uses Blended Learning to prepare students for cooking labs and to support them when they miss a lab.

Using Online Activities to Prepare for a Lab–Natalie Wilson (1:49)

2. Think about activities, both in-person and online, that could support the student learning. A framework for this process is to:

a. Think about activities that involve students interacting independently with content,

b. Think about activities that involve students interacting primarily with each other, and

c. Think about activities that might involve interaction with an instructor.

In this video Mary Alice McCarlie explains how she determines what activities to put online.

Determining What Activites to Put Online–Mary Alice McCarlie (1:38)

3. Consider how the online activities and the in-person activities can connect.

4. Choose one of the activities you have considered and create a blended lesson.

In this video Marianne Beck explains why her sewing students learn content online and practice in person versus why her design students learn content in person and then apply them online.

Online Itegration–Marianne Beck (1:54)

See the example below in Table 1 for how this process might work. The teacher in this example explores several activities that could be blended. You have a similar chart in your Blended Teaching Notebook.

A teacher might identify the problem of practice: I want my students to be more precise and careful when reading and following a recipe or sewing pattern. The learning objective states: "Students will independently take measurements, determine pattern size and make pattern alterations."

Here are some ways she could combine online and in-person activities.

Table 1

Planning for Online Integration: Student-Content Interactions

Student-Content Interactions
Online Activities:

Student-Content Interactions

1. Provide students with the back of a pattern envelope to read, students use Draw It (a annotation tool) to determine the correct pattern size based on measurements and finished piece measurements. Use one color of text or drawing for finished pattern sizes and another color for measurement sizes. That shows evidence as to why the pattern size was chosen.
2. The student will create a document starting with one paragraph identifying the importance of ease in the pattern and its effect on the finished piece. (wearing ease, design ease, layering ease, & negative ease) They may continue to add information including images about what they are learning and how they are demonstrating their learning during the sewing process.

In-person Activities:

1. Students practice pattern layout on fabric and cut pattern pieces using appropriate marking techniques.

Connection: The students will use the size and measurements to cut the correct pattern size and connect the importance of ease in the pattern on the finished product.

Table 2

Planning for Online Integration: Student-Student Interactions

Student–Student Interactions

Online Activities:

1. In an online discussion, students are able to ask questions of one another about challenges with the sewing process including pattern layout, cutting, marking, and sewing their projects.
2. Students will be put into groups and will give appropriate feedback on the Google Doc of the people in their group throughout the project.

In-person Activities:

1. Students ask questions of one another in person while working on their projects.
2. The students will meet in person after they have all completed their projects to share.

Connection: The questions and support students provide for one another will lead to sewing projects they can all be proud of.

Table 3

Planning for Online Integration: Student-Instructor Interactions

Student–Instructor Interactions

Online Activities:

1. The teacher will leave feedback on the discussion board and in the students' google docs.
2. The teacher will give feedback on the complete sewing project document once it is complete.

In-person Activities:

1. The teacher will meet briefly in person with each group to answer questions and to assess progress.

Connection: The teacher will respond online to the discussions and will be available in person while students work. She will use what she learned from their discussion board and docs to guide her in-person meeting and to later give online

Student–Instructor Interactions

feedback.

Blended Teaching Workbook

In your workbook, using one of your problems of practice, fill out the Planning for Online Integration table.

If you haven't already opened and saved your workbook, you can access it here.

6.3 Selecting a Blended Teaching Model

Once you have chosen an activity or activities to blend, consider which blended teaching model best fits the activity. (For a review of blended teaching models, see Chapter 2: Online Integration in *K-12 Blended Teaching: A Guide to Personalized Learning and Online Integration*.)

In a FCS classroom a flipped model may take the form of students learning content and skills by viewing slides, digital documents, or tutorial videos and then demonstrating what they have learned through an in-person sewing, design, or cooking project.

A station/lab rotation model could take the form of students moving between kitchens and digital stations. Kitchen stations might focus on different commercial kitchens including hot food, garde-manger, bakery & pastry or different positions including head chef, sous chef, line cook etc. In digital stations students might research and select recipes online or document learning outcomes their group has accomplished.

In this video, Mary Alice McCarlie explains how she determines what model to use in the different classes that she teaches.

Selecting a Blended Teaching Model–Mary Alice McCarlie (1:54)

6.4 Deciding What To Do In-person in an FCS Classroom

Blended learning is the *strategic* combination of online and in-person modalities. But how do teachers decide which activities to do online and which to do in person?

One way to begin answering the question of what can be done most effectively in person is to look at your strengths as a teacher, the needs of your students, and the types of activities that lend themselves to the best use of the in-person space and labs.

For example, students may be working (collaboratively or alone) on a sewing project. You want to do this in person because you know they will have many specific, unique questions. Since you have posted tutorials online in your learning management system, you may recommend students look there first. This will free you up to answer more difficult questions and check progress and key points in the process. This creates a learning environment where

students can get answers in the moment that they come up and prevents students from getting stalled in the process and keeps energy high. It also helps assure that students don't have to back up and redo work.

Similarly, you may want to begin a discussion in person. You want students to get excited about the topic and begin thinking about the possibilities of the discussion. Once they've had this beginning, they may be more ready to participate in an online discussion.

Perhaps you are good at bread making, and your students enjoy seeing you demonstrate kneading. You might want to introduce this new skill in person so that you can point out how the dough should look and feel and allow students to see and feel it in person.

Discussions of goals and progress may be activities that work best in the in-person space.

Know yourself, your students, and your subject matter well enough to determine what you want to preserve for the in-person space.

Once you know how you can best use the in-person space, you can begin to explore ways to use the online space to allow the kinds of activities you want in the in-person space, to best use the affordances of the online space, and to make meaningful connections between the two modalities. Answers to the following questions may help you decide.

- Can I put some instruction online so I have more class time to work with students individually or in small groups?
- Can putting an activity online increase student participation?
- Can I use the online space to allow my students to personalize the pace, path, time, place, or goals of their learning?
- How can I use the online space to target individual learning needs?
- Can I use the online space to help students increase ownership of their learning?
- Can I use the online space to give my students access to materials they wouldn't otherwise be able to have?
- Can I use the online space to teach the same concept in different ways, so learners will have more than one option in their learning?
- Can I use the online space to allow for greater learner-learner interaction and collaboration?
- Can I use the online space to adapt or differentiate materials to meet different students' needs?
- Are there new ways I can use the in-person space when I put some of the instruction and activities online?

In this video Megan Wakefield explains how she decides if an activity should be online or in person.

Blending Instruction–Megan Wakefield (3:37)

6.5 Evaluating Blended Activities

Blended learning is not just about using technology in the classroom. It is about strategically combining technology with in person activities to improve pedagogy and student outcomes.

Review Chapter 3: Evaluating Blended Teaching for guidance in how to evaluate the blend you have created.

In addition, the PIC-RAT framework provides a means of evaluating your use of technology to see if it is adding value to your classroom. It helps you evaluate students' relationship to technology as well as its impact on traditional practices.

For a complete explanation of the PIC-RAT framework, See 2.3.1 "The RAT Framework," 2.3.2 "Blended Activities that Engage (The PIC Framework)," and 2.3.3 "An Evaluative Framework for Blended Teaching" in Chapter 2 "Online Integration" of *K-12 Blended Teaching: A Guide to Personalized Learning and Online Integration*.

6.6 Planning Blended Routines and Behaviors

Establishing routines in a blended classroom is crucial. Helping students understand when and how to move around the classroom, how to access an LMS or other online programs, how to log in and out, where and how to store hardware, how to communicate civilly and respectfully, and how to turn in assignments is essential to creating a usable blend. In addition, making plans for how to manage off task behavior can prepare you for situations that are sure to arise.

Process for Implementing Routines in a Blended Classroom:

1. Decide specifically the kinds of behavior and routines you want to put in place.
2. Spend the first two or three weeks really drilling and practicing those routines.
3. Set clear expectations.
4. Decide what you will do to help students who have a difficult time meeting the expectations. How will you respond to them?
5. Evaluate your plan and make adjustments as needed.

In this video Megan Wakefield explains the additional classroom management principles she needs to be mindful of in a blended classroom.

Establishing Blended Routines–Megan Wakefield (4:20)

Here Heather Ostler also explains the importance of establishing Routines.

Establishing Routines–Heather Ostler (2:55)

In Table 2 below your mentor teachers share tips they have learned and implemented that have helped them establish routines to manage their classrooms. As you read through them, think of your classroom. Are any of these tips appropriate for your setting? What ideas come to mind of ways you can effectively manage your own classroom?

Table 4

Blended Learning Routines

Blended Learning Routines—Teacher Tips

Student Movement	• Will you have activities that require the movement of students (such as in a station or lab rotation).
	  ◦ Will students be moving all at the same time?
	  ◦ At different times?
	  ◦ Plan an efficient way to facilitate those movements.
	• I have my students do three things when they coming class:
	  ◦ Open their grading portal and check their grades.
	  ◦ Open their email.
	  ◦ Open the class website to see if there are any new posts.
	• Be very clear. Make few rules but enforce them well.

Hardware Management	• Don't waste time plugging in computers between periods. Make sure they're plugged in at the end of the day.
	• Use of cell phones (some teachers collect them so they don't have them in class; others let them use them for assignments) Keeping Chromebooks or other hardware charged (if devices are kept in the classroom; students don't take them home).
	• Establish a routine for making sure computers are plugged into the right charging station.
	• Create checklists.
	• Make assignments.
	  ◦ Make sure computers are plugged in and charging.
	  ◦ Sanitizing computers.
	  ◦ Keeping a log of damages or problems.
	• Assign specific computers to specific desks or specific students; this increases accountability.
	• Teach how to hold and carry devices; practice.

Software Management	• Teach how to turn on the computer, log in, and access the internet. • Practice using the LMS, opening it, finding assignments, checking grades, submitting assignments, etc. • If you have specific formats you want students to use when submitting assignments, teach them what they are. • Create checklists. • Teach how to download, upload, and organize files. • Have the students practice everything you teach.
Student Questions	• Teach them where to find answers before they ask you. • Establish specific ways to contact you outside of class and how to address you politely. • Teach how to use email. • Establish "expert" students that other students can turn to help. • Create instructional videos or review pages students can access when they have common questions.

Classroom Configuration	• Decide what kinds of activities you do in your classroom. Are there classroom configurations that will support those activities? For example:
	  ◦ Create a comfortable reading space.
	  ◦ Create a space for collaboration, where students can talk together.
	  ◦ Create a quiet space for writing or other thoughtful activities.
	  ◦ Do you have fewer than 1-to-1 devices? If so, create a space for working on computers.

Blended Learning Routines—Teacher Tips

Off-task Behavior	• Use software that allows you to monitor what is on the screen of each student. • Teach them to monitor themselves. • Sometimes if I have problems with students straying away from what we're doing on their computers, we shut down the computers and use paper again for a day. • Even good students can get off task. I try to always walk around the classroom, both to be available for help and to give quiet reminders to stay on task. • Utilize your LMS or other software to keep track of online behavior. • I have a table by my desk. If there is a student who is really having a difficult time staying on task, I place him or her on that table away from the other students and monitor that student more closely.
Other	• **Discussing principles of Digital Citizenship such as password management, online privacy and safety.** • Help students develop time management skills, so that they use their time as efficiently as possible.

FCS teachers say they typically spend two to three weeks at the beginning of the year establishing routines and expectations and teaching students how to use the technology. But, they say, it pays off in the long run with a smooth running class and increased opportunities for interaction and personalization—all of which they see as positives in their blended classroom.

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7

FCS: Online Interaction

Michelle Jensen, Natalie Hancock, & Christina Lewis

7.1 Online Interaction in Family and Consumer Sciences

Review foundational knowledge about Online Interactions in K-12 Blended Teaching (Volume 1).

FCS classrooms thrive on interactions with and between students. Both in-person and online interactions and feedback provide students with ways to share and support their positions, give and receive feedback, and to present both written and spoken opinions and positions with both civility and evidence.

In this video, Natalie Wilson discusses how she uses online interactions to connect with students, provide feedback, and create collaborative learning activities for her students.

Feedback and Stuent Connection–Natalie Wilson (2:27)

7.2 Student to Student Interactions

Talking, discussing, reading, sharing, and applying instruction in a class or in a lab are at the heart of any Family and Consumer Sciences class. Conversations around these activities can help students to build critical thinking skills, express themselves, learn to be flexible in their approach to solving problems when needed, and learn skills that will help them be successful in future careers and throughout adulthood.Technology can enhance these activities, increasing student confidence, collaboration, and engagement.

There are many technologies that support online discussions. Here are a few of them and how they can be used in FCS. (You might want to become proficient with one technology then branch out to another one. Don't try too many at once.)

- Discussion Boards: Usually part of a learning management system (LMS), they allow threaded discussions that can be tied to the grade book.
- Padlet: An online bulletin board where students can post and reply to comments using text, images, audio, and video. Students can also create timelines, storyboards, and collages individually or collaboratively.
- Screencastify: A video/audio tool that allows students to add pictures or text on a project, give feedback on the application of curriculum through labs and written or oral presentations , and explain their work. It can also be used to make instructional videos with interactive abilities (that can also be turned into quizzes), and create situations where students think aloud about their learning or curriculum and share their videos with each other.
- Google Docs: A collaboration tool, where students can write and receive feedback and suggested edits on their projects or labs and where students can collaborate on projects.
- Google Slides: Similar to Google Docs, Google Slides allows students to individually or collaboratively create presentation slides. Google Slides is also increasingly used to generate quick ideas and brainstorming, with each student or group of students having one slide.

Just like in-person discussions and interactions, online interactions can become stale if they do not include variety and contrast, inviting students to think deeply and/or creatively.

In this video Megan Wakefield describes several ways she uses online discussion and other student to student interactions in her FCS classes.

Online Discussions–Megan Wakefield (5:29)

Here are some other ideas that are relevant to a FCS class.

Table 1

Online Discussion Ideas

	In-person	Online
Class Introductions/ Get to Know You Activity	2. The teacher and class members learn about one another and continue to build on that to strengthen in-person relationships.	1. Students introduce themselves and respond to specific questions about their personal experiences with a topic or what they would like to learn.
Brainstorming	2. The teacher can refer to those toys during discussions of different stages of child development.	1. In an online discussion, students discuss their favorite toy with one another.
Brainstorming/ Project	2. In class the teacher introduces a project where students will work in groups to plan a menu for an event their group selects. 4. Students meet in class to solidify their menu plan and create a digital	1. Students watch a video about menu planning for various events. 3. In an online discussion each group member takes a role in the planning and brainstorms ideas for the event menu and comments on other group members ideas.

	In-person	Online
	presentation of it based on the online discussion.	5. One member of each group posts their digital presentation to a new discussion that everyone in the class can see. 6. Every member of the class comments on at least 3 posts.
Project Presentation 1	1. Introduce a Career Research activity and explain the expectations for the research project. 2. Students may begin work in class or complete all of the work in class by researching online.	3. Each student creates a slide and or video presentation about the career they are researching. 4. Students post their presentation in an online discussion and review and comment on others' presentations.
Project Presentation 2	2. Students access physical materials for their projects in class. 4. Students also ask questions of other students in person. 5. Students complete their sewing projects in class using the tools available there.	1. Students select a sewing project and access directions and tutorials online. 3. Students ask questions of other students in an online discussion. 6. Students benefit from an authentic audience by posting images of their completed projects in an online discussion. 5. Students review and comment on others' presentations.
Jigsaw Learning	1. Share several topics for student groups to choose from. Provide a BRIEF description. 2. Students collaborate in class to research their topics and prepare a slide or a presentation on their topic.	3. Students continue to collaborate online– outside of class time or from different areas of the room to build the presentation in slides or another online platform. 4. Students post their presentation in an online discussion and review and comment on others' presentations.
Troubleshooting Support	**1. Demonstrate how to use the sewing machine to students.**	2. Create a discussion thread in your LMS where students can ask for help and other students can answer their questions.

An online discussion is most effective when the instructions are clear. For a review of how to create an effective discussion board post, see 5.2.2 Building Community and Setting Expectations in *K-12 Blended Teaching (Volume 1).*

Blended Teaching Workbook

In your Blended Teaching Notebook create an online discussion for the lesson/content area that you are addressing with your problem of practice. How will you make it engaging for the students? How will you target your problem of practice?

If you haven't already opened and saved your workbook, you can access it here.

Not all online interaction has to take place in a discussion. It can take place in a shared Google Doc, in a real-time Zoom meeting, through blogs or social media, through visits to each other's websites, etc.

- Students could share their favorite foods, clothing items, accessories, or fashion trends on a class web page, including details like where to find a food or how to make a clothing item or accessory along with an explanation of why they like these things.
- Create a page for students to share their completed projects.
- Create an "I found" page for students to record examples of sewing techniques or design styles they find in the community.
- Have a contest to see who can find the most examples of a specific element of design in popular media. Create an online bulletin board for students to share what they find.

Student to student or peer interactions can be powerful. Students can help each other, answer questions, give feedback, take feedback, explain concepts, and counsel with each other.

7.3 Teacher to Student Interactions

Interactions between students and the teacher are also important in an FCS course. Experienced blended teachers often report that their interactions with students online have strengthened relationships and contributed to student growth. What are some ways teachers can foster these interactions?

- Participate in online discussions. You don't have to chime in and respond to everyone's posts. Instead your role in a discussion board is to guide and facilitate the discussion. You can monitor what is said for civility as well as content. If a discussion is going in a nonproductive direction, you can gently guide it back. You can respond honestly to good ideas and interesting insights. You can suggest further resources.
- Provide feedback. Students appreciate and need feedback. Teachers find that giving some types of feedback online is much easier than feedback with traditional paper and pen.
    - Give feedback on assignments through the LMS you use. Check out the ways your LMS allows you to communicate with students about their assignments. If you are using rubrics for grading, you can give very specific feedback then allow your students to improve the assignment. Your LMS may have additional ways to contact students.
    - Use written, audio, or video feedback. Some students prefer written feedback because they can access it easily; others prefer audio or visual because it's easier for them to understand and feels more personable. There are also times when it's easier to provide audio or video feedback compared to typing out feedback comments. For instance, Mote is a Chrome extension that allows teachers to quickly add audio recordings to Google Document and Google Classroom gradebook. There are also several free screen-recording tools that allow you to create quick video recordings and then share them with students using an unlisted link. There are times when text, audio, and video feedback are the most effective and you can use all three during the year.
    - When students are online working during class, walk around the classroom, answering questions and giving verbal feedback as needed.
    - Schedule one-on-one meetings with students to discuss their progress and provide feedback.

In this video, Mary Alice McCarlie explains how her students benefit from online feedback.

Student Feedback–Mary Alice McCarly (1:03)

In this video Megan Wakefield explains how using a learning management system allows her to easily provide timely specific feedback to her students. She also discusses the importance of training her students to use the feedback.

Giving Feedback–Megan Wakefield (4:17)

- Explain to students your process for receiving emails from class members. Encourage them to email you with questions, explain when you will be available to look at emails, and answer them as promptly as possible.
- Email students who are not in class, letting them know that they were missed.

The online space significantly increases opportunities for interaction between students and content, students and other students, and students and teachers. Students who never or rarely speak in class may find themselves suddenly communicating on a regular basis. The results of learning through a combination of content, interactions, instruction, and feedback can improve student outcomes, investment, and engagement with the subject matter. You don't have to start all at once. Just choose one interaction that looks promising to you—and begin.

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8

FCS: Data Practices

Christina Lewis, Natalie Hancock, & Michelle Jensen

8.1 Collecting Data in FCS Courses

Data can inform various aspects of your teaching. It can help students see their own progress and areas that need improvement. It can provide information that students can use in setting goals and evaluating their progress. It can help you understand what specific students have learned or still need to learn, and how you should adjust your instruction to fit the needs of the learners.

Technology has greatly expanded the way data can be recorded, collected, organized, and used in a timely and efficient way. Remember, the purpose of collecting data is to provide timely and appropriate intervention and extension for essential learning skills and standards. Because of technology, you can quickly and easily collect and use data to inform your instruction, group students, plan intervention and extension activities for students who need it, and target specific needs of the whole class, small groups, and individual students.

In order for data to be useful, you have to design ways to collect it with a desired outcome in mind. What do you want the data to tell you? There are many types of data and ways to collect it that can enhance learning in your FCS classroom. You may want to use formative assessments, observations, performance criteria, and rubrics aligned with essential learning standards.

In the following video, Megan Wakefield discusses how she uses a variety of online platforms to collect formative and summative assessment data.

Reflection Question: What tools do you have available in your LMS and externally that you can use to collect data on your own students' mastery of the learning objectives?

Revealing Learning Gaps–Megan Wakefield (3:19)

Here are a few examples:

Table 1

Collecting Data—Some Ideas

Desired Data	Ways to Gather the Data Using Technology
Student Demographic Data	This data will be found in your Student Information System. This could be a program such as Skyward, PowerSchool, or a data dashboard program. These tools can be used to learn about the demographics of your students: ethnicity, race, individualized educational plan, low income, primary language, language spoken at home, etc. Knowing student demographics can help you have cultural awareness in your classroom. • Training/resources needed to obtain/access data: Training on your school/district's student information system or data dashboard.
Student Characteristics	This data comes from teacher-made resources that help you get to know your students. You might use an online form or survey to have students answer questions about their learning preferences (alone, in groups, reading, watching, writing), their best time of day for studying, hobbies, pastimes, their perceptions of their strengths and weakness in the subject area, what they want from the class, what they are nervous about in the class, types of assessments and activities they prefer, etc. Notice and take notes on students' participation, interest in reading materials, friends, attention, outside interests, interaction with others, clues about home life, etc. • Training/resources needed to obtain/access data: How to create an online survey platform such as Google Forms and find the results. You will need a system for compiling observations, perhaps a spreadsheet.
Mastery/Proficiency Data	This data may be in your Learning Management System (LMS) or an outside mastery tracker that you set up. It may include data from activities, labs, and assessments. This data can include student proficiency of learning standards and performance skills. This data can be useful in making decisions about instructional methods, curriculum, and learning interventions needed. • Training/resources needed to obtain/access data: Training in using a grade book system or other grade tracker.
Performance Skill Mastery Data	This kind of data is important in hands-on, project-based learning. This data can be collected using observation, video recordings, pictures, posters, rubrics, a lab sheet, or a performance checklist. Technology can be useful in demonstrating or passing off performance skills. • Training/resources needed to obtain/access data: Training in a learning management system, grade book, spreadsheet, or technology with recording ability.
Goals and Progress Toward Goals	This kind of data is also known as progress monitoring. You can keep track of goals and the progress students are making in a spreadsheet or goal sheet you create. This information can help you identify curricular pacing, mastery levels, and • Training/resources needed to obtain/access data: Training in excel or google sheets.

Desired Data	Ways to Gather the Data Using Technology
Help-seeking strategies	Observe how your students seek help and record what you see: Do individual students seek help online, from other students, from you? Are they afraid to ask for help? Do they seek help when they might figure it out on their own? • Training/resources needed to obtain/access data: A system for compiling observations.

Blended Teaching Workbook

In your blended teaching workbook, you have a blank table like the one above. Decide what sources of data you would like to use in your classroom. Fill out the chart based on what data you want to collect. You may have to ask others for ideas on types of technology and what you need to learn to use the technology.

8.2 Utilizing Data in FCS Courses

Tracking data can help you improve both student learning and your own teaching. One of the biggest advantages of blended teaching is being able to collect data in real time to inform instruction. Because data can help you know your students' skill and proficiency levels on learning objectives, it can help you in creating curriculum, differentiating and personalizing activities and assessments, helping students set goals, tracking progress, and adjusting instruction based on the data you have collected. It can also help you see areas for growth in your instruction, allowing you to improve your teaching practice.

As you watch the example from Natalie Wilson below, notice how she uses data to inform both herself and the students.

Reflection Question: What are ways you could improve your class's learning by collecting and analyzing data?

Preventing Mistakes–Natlie Wilson (2:10)

Using Data to Assess Learning & Inform Instruction

Because data in a FCS class often comes from student performance and student activity, if you pay careful attention to student data, you can learn a lot about how your students learn and best teaching strategies to use. What activities led to the best results for what kinds of learning outcomes? What confused your students? What are they most engaged in? Does their engagement also lead to understanding and mastering learning goals? Reflecting on questions like these can help you evaluate yourself as a teacher and your students as learners. They can lead to insights that can strengthen your teaching practices and help students achieve mastery on their goals.

In the following video, Heather Ostler uses online quizzing to reinforce learning concepts.

Reflection Question: How can you use online assessments to measure progress toward learning objectives?

Building Sticky Learning–Heather Ostler (2:04)

Quizzes are a common source of data. How can you use quiz data to improve your teaching and increase student learning? Here are some steps to take in analyzing and responding to data:

1. **Review the quiz data:** After giving the quiz, take time to review the results of the assessment. Look at each questions' results for patterns or trends in student achievement. Look to see what areas students reach proficiency in and where they need additional instruction or practice.
2. **Identify additional learning needs:** Use the quiz data to identify which learning objectives students have not yet mastered. Identify whether additional time and practice is needed for individual students, small groups, or whole class. Identify specific learning objectives that students did not reach mastery yet.
3. **Adjust instruction:** Once you have identified learning needs from looking at the data, adjust your instruction. This could involve re-teaching concepts that students struggled with, providing additional practice time or resources, or offering extension activities for students who have demonstrated mastery of the material.
4. **Provide targeted feedback:** Use the quiz data to provide specific and timely feedback to students. This could involve identifying areas where they need to improve or providing praise and recognition for areas where they demonstrated mastery.
5. **Monitor progress:** Use subsequent activities, quizzes, or assessments to monitor student progress and evaluate the effectiveness of your instruction. Continue to adjust your instruction as needed based on continual data analysis.

Teachers use data in all sorts of ways. In the example below, Mary Alice shares ways she uses data in her FCS classroom. What ideas do her experiences give you?

Data to Improve Instruction–Mary Alice McCarlie (1:45)

Conclusion

Blended Teaching Workbook

Think of one source of data that you are not using but that you could use in your classroom. In your workbook, outline a way to collect that data and ways you can use it.

If you haven't already opened and saved your workbook, you can access it here.

Collecting and using data with technology may feel intimidating. You may think you cannot do it or you do not know where to start. But if you think about it, you are already collecting informal data all the time. You are quizzing students, discussing topics, observing their performance, reviewing student work, and assessing content mastery. It is time to

take the next step and find more formal ways to collect and analyze data. Data can open your understanding of your students, their learning needs, and your instruction as a teacher. It is not just the collection of data, but what you do with it that makes a difference in student learning.

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9

FCS: Personalization

Christina Lewis, Natalie Hancock, & Michelle Jensen

9.1 The Importance of Personalization in a FCS Classroom

In each of our classrooms, there is a different and unique blend of student personalities, abilities, and learning styles. Personalized learning is an approach to teaching that tailors instruction to the individual learner. The goal is to create more engaging and meaningful learning experiences for each student. Personalization can take many forms such as personalized goals, time, place, pace, and path to mastery. This gives students voice and choice in their learning which increases student engagement.

It is helpful to approach personalization and the idea of student control in two different ways: through allowing students to personalize along the dimensions of personalization and through allowing students to personalize learning objectives, assessments, and activities we use in our teaching.

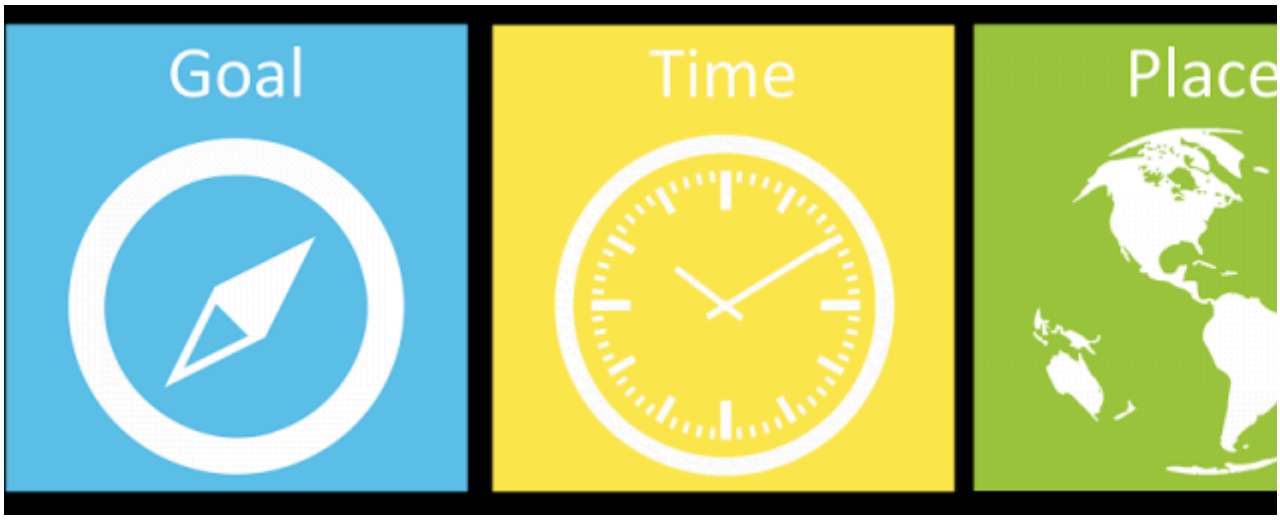
9.2 Strategies to Personalize Learning in a FCS Classroom

One way to think about personalization is to examine the ways students can receive personalized instruction. The five dimensions of personalized learning are guidelines for ways or methods we can apply to allow our students to personalize their learning. These dimensions are goals, time, place, pace, and/or path.

Reflection Question: In what ways could personalization increase learning and engagement in your classroom?

Figure 1

Five Dimensions of Personalized Learning



In the sections below we will explore each of these dimensions.

9.2.1 Personalizing Goals

Goals are a means of making choices specific and purposeful. Facilitating goal setting increases student ownership of their learning, encourages lifelong learning skills and attitudes, and increases motivation and self-regulation abilities.

In order for students to personalize their goals, you and they need to understand something of their needs and proficiencies as FCS learners. This is where you can use the data you have gathered from the activities mentioned in the Data Practices chapter.

Personalizing Goals–Mary Alice McCarlie (3:12)

Information from such sources helps you understand where students are in their abilities, skills, and aptitudes. Learning outcomes and standards give focus for where students are expected to be. The difference between where students are and the course outcomes is the place for growth—and goals.

Goals are not goals if they are just aspirations. Writing goals down and tracking them are important processes for achieving them. Here are a few ideas about goal setting conferences and how they might be used in an FCS classroom.

In Class

- Teach and discuss the purpose for setting goals.
- Help students develop a growth mindset; create a culture of growth.
- Introduce a goal setting process such as SMART (specific, measurable, attainable, relevant, and time-bound)

Conferencing (regular goal setting meetings)

- Some teachers meet with a few students a day or a week, taking several weeks to meet with every student.
- Others plan a station or lab rotation, where students are working independently, then pull students out individually for a short consultation.
- Use these conferences to review current data and areas of growth.
  - Discuss growth in content areas.
  - You may also want to allow students to practice making goals outside the scope of your learning outcomes, such as personal health; interpersonal goals; self-regulation goals.
- Invite the student to evaluate where new growth can take place in your content area and make goals for that growth.
- Record progress toward previous goals and new goals. Include a chart to help students visualize progress.

Monitoring (tracking progress between conferences)

- Pair and share—place students in pairs (which either you or the students choose). The students share their goals with each other weekly and help their partner revise the goals if necessary. They also report their progress.
- Students can keep an online daily or weekly journal in which they reflect on and record their progress toward their goals or struggles they are having. Teachers check in weekly and address individual student needs.
- Students turn in an online exit ticket daily, reporting that day's progress, struggles, or need for help.
- Create charts to record student progress during the year.

9.2.2 Personalizing Path

When you allow students to personalize their learning path in your classroom, your students are not all doing the same assessments and activities. You may find that you have become a curator of resources and activities that will best help your students. These resources/activities can be compiled in playlists or choiceboards, which give the students choice about the order in which they complete the activities or about which activities they choose to do.

Honoring Student Choice–Megan Wakefield (3:19)

9.2.3 Personalizing Pace

Personalizing pace means allowing students to take more or less time based on their own ways and pace of learning as well as their personal and family life circumstances. It often includes giving students a window of time on due dates for completing activities, assignments, and assessments. Personalizing pace encourages students to manage their time. They know what they need to do and when it needs to be completed, but they also know the other demands on their time (sports, school, play, family and work obligations) and learn to plan for these situations.

9.2.4 Personalizing Time

In a traditional classroom, students may have a class period to finish an assignment. In a blended classroom this time can be expanded to include time outside the class. Because activities can be accessible outside of the classroom, students can choose times that work well for them. For example, a student may have a difficult time learning in the morning, when he has class. But because he can access his assignment later in the day, he is able to complete it and do a good job. Time is closely related to pace. Because students are not bound to a specific time to do an assignment, they can increase or decrease their pace according to their own preferences, needs, and abilities.

9.2.5 Personalizing Place

Personalizing place revisits traditional practices about place. Because blended courses often include online instruction, students can choose to do activities at home or at school. In addition, they can access instruction when they have to

miss activities because of illness, travel, or extra-curricular activities. However, another aspect of place is the configuration of the classroom. Classrooms are often viewed as rows of desks or sometimes desks grouped into tables. But classrooms don't have to look this way. They can be made more comfortable, inviting, and conducive to the kinds of activities that take place in a blended classroom.

9.3 Personalizing Activities and Assessments

Approaching personalization through the five dimensions is one way of planning to personalize. Another way is to look directly at what you do in your classroom. Typically teachers plan assessments and activities around learning objectives to make sure they cover the material they are mandated to cover. Finding ways for students to exercise choice in some or all aspects of these activities and assessments is another way to foster personalization in your classroom.

9.3.1 Personalized Assessments

What do assessments look like in your classroom: an essay exam? A final paper? Short answer questions about a text? A presentation? Do all your students do the same thing?

Personalizing assessments means giving students choices in the ways they demonstrate mastery of a learning outcome. Often this means creating a list of ideas that students can choose from, while also allowing them to suggest their own ideas.

- How were these assessments personalized?
- How are these assessments different from traditional assessments?
- What kinds of growth do these assessments encourage in the students?

Personalizing Demonstrations of Learning–Heather Ostler (1:50)

Table 1

Personalized Assessments

Personalized Assessments
Students choose the media they use for the assessment: powerpoint, google docs, video, etc.
Students choose the form of the assessment: mindmap, essay, documentary, brochure, story, art, performance, exam, etc.
Students choose the topic of a piece of writing or other form of assessment.
Students choose to do the assessment in groups or on their own.

Blended Teaching Workbook

In your Blended Teaching Workbook, create a few ideas of personalized *assessments* that students can choose from in order to show mastery of the content area you choose earlier.

If you haven't already opened and saved your workbook, you can access it here.

9.3.2 Personalized Activities

Personalized activities are based on data and goals. Students can choose activities that help them accomplish their goals from playlists and/or choice boards that give them choice in path, pace, time, and place. They may include online interaction as well as online integration of activities that are personalized or differentiated for individual students.

Choice Boards and Projects–Megan Wakefield (4:41)

Blended Teaching Workbook

pencil icon) Blended Teaching Workbook In your Blended Teaching Notebook create a few ideas of personalized *activities* that students can choose from in order to show mastery of the content area you chose earlier.

If you haven't already opened and saved your workbook, you can access it here.

Personalization is a powerful pedagogical tool. It allows students to grow where they need to grow and in a way that is meaningful to them. It combines all the other competencies of blended learning: online integration, online interaction, and data practices to create a unique learning experience for each student. Throughout these chapters you have learned how to use these competencies in a FCS context. Now it is up to you! You are ready for that first small step!

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Appendices

Appendix B: Research

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Appendix B: Research

This book was written for practitioners and so does not reference research throughout, as you might see in an academic publication. However, the editors are well-published researchers in the area of K–12 blended and online teaching.

If you are interested in the research related to the K–12 Blended Teaching Readiness model that is used to organize this book, below are some references that you can look up. Also, please feel free to reach out via email to charles.graham@byu.edu or any of the other editors.

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