GUIDE TO SELECTING CURRICULUM TO SUPPORT PERSONALIZED LEARNING

Phase Two: Determine offline-online curriculum alignment and the role of digital tools
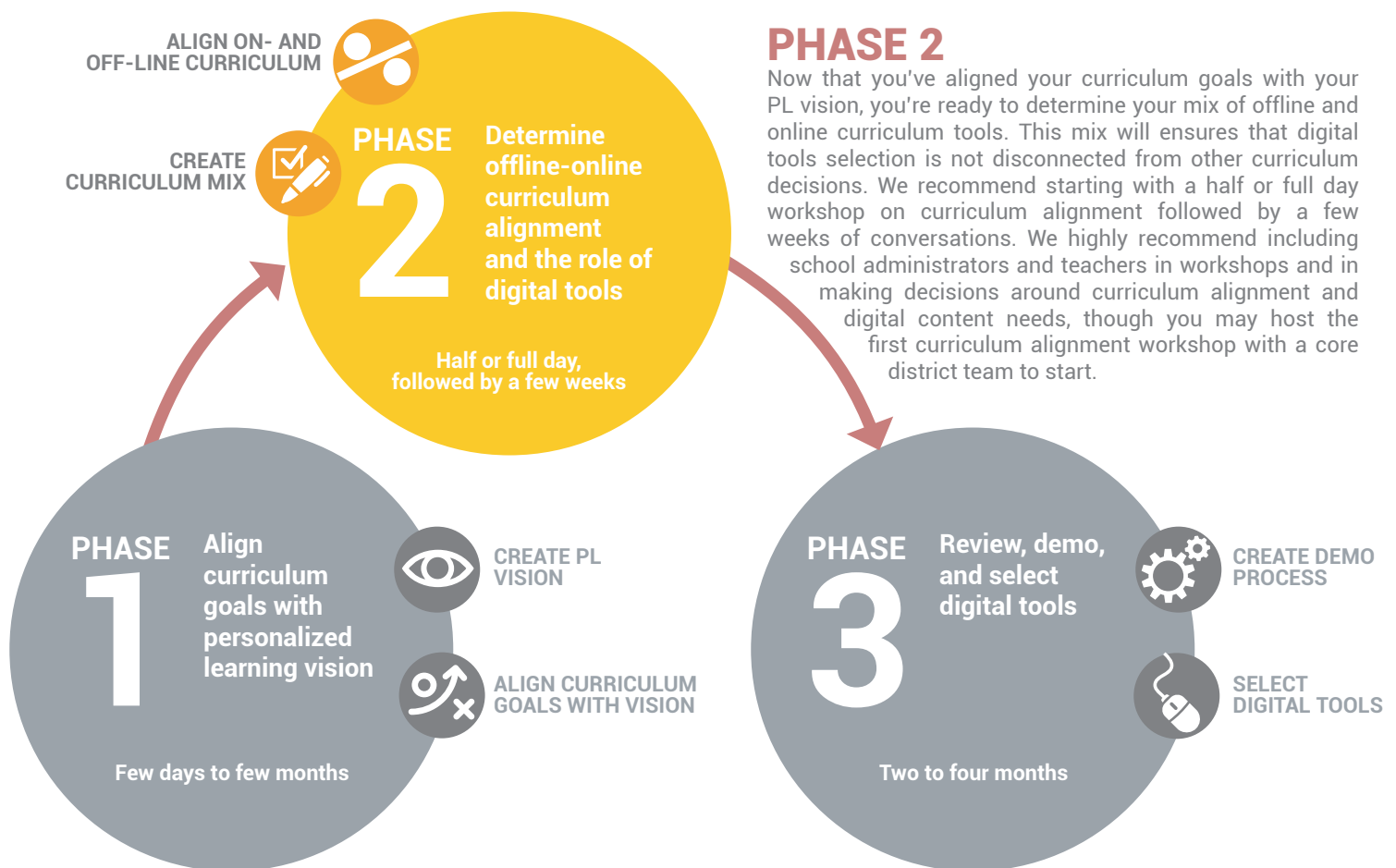
Education Elements

Learners of today. Ready for tomorrow.

Before starting this white paper, we suggest you review our [Guide to Selecting Curriculum To Support Personalized Learning](#), which outlines Education Elements' three phases of recommended focus for schools and districts.. This white paper highlights "Phase Two: Determine Offline-Online Curriculum Alignment and The Role of Digital Tools". It is preceded by a white paper highlighting "[Phase One: Align Curriculum Goals with Personalized Learning Vision](#)" and is followed by a white paper that provides key activities and resources for "Phase Three: "Review, Demo, and Select Digital Tools".

THREE PHASES OF
CURRICULUM ALIGNMENT AND SELECTION

ALIGN ON- AND OFF-LINE CURRICULUM

CREATE CURRICULUM MIX

PHASE 2

Determine offline-online curriculum alignment and the role of digital tools

Half or full day, followed by a few weeks

PHASE 2

Now that you've aligned your curriculum goals with your PL vision, you're ready to determine your mix of offline and online curriculum tools. This mix will ensures that digital tools selection is not disconnected from other curriculum decisions. We recommend starting with a half or full day workshop on curriculum alignment followed by a few weeks of conversations. We highly recommend including school administrators and teachers in workshops and in making decisions around curriculum alignment and digital content needs, though you may host the first curriculum alignment workshop with a core district team to start.

PHASE 1

Align curriculum goals with personalized learning vision

CREATE PL VISION

ALIGN CURRICULUM GOALS WITH VISION

Few days to few months

PHASE 3

Review, demo, and select digital tools

CREATE DEMO PROCESS

SELECT DIGITAL TOOLS

Two to four months

PHASE 1

A clear vision for personalized learning is an essential first step before any decisions about curriculum, instructional models, support, or professional learning can be made. We recommend that districts identify their needs, vision, and strategy before developing a curriculum plan and digital content portfolio. Vision-setting can take anywhere from a few days to a few months. And should include the voice of teachers, students, and school and district administrators.

PHASE 3

At this point, you've aligned your curriculum goals with your personalized learning vision, developed an online and offline curriculum mix, and defined the role of digital tools. You're ready to review, demo, and select digital tools. This phase is key to ensuring you get the the right tools based on the specific needs of your teachers and students, and that you include key stakeholders in the process. We recommend demoing tools for at least a few weeks and including feedback from students and teachers. From start to finish the review, demo, and selection of digital tools might take 2-4 months.

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Executive Summary

Across the country, educators are considering the role that curriculum, digital content and tools should play in personalized learning environments. Too often districts make crucial missteps in this effort, such as not aligning on a definition for curriculum or failing to identify the needs of students before entering the curriculum selection process. Education Elements has created two frameworks, the Curriculum Mix Framework and the Digital Content Needs Framework, to support districts through this process and to ensure you don't make these common mistakes.

- **The Curriculum Mix Framework** supports districts by establishing an operational definition for curriculum, aligning online-offline resources, and considering the curricular needs of teachers.

- **The Digital Content Needs Framework** supports districts by ensuring that student needs drive curricular selections and by creating a process for comparing digital content and tools.

Outlined in this white paper are steps to utilize these two frameworks within your school or district context. The white paper also includes helpful insights from districts across the country as well as examples and pictures of the Education Elements frameworks in use at districts.

It is our hope that these frameworks will both simplify and clarify the role and selection of curriculum, digital content and tools for your district, which, in turn, will create a better personalized learning implementation for your teachers and students.

I. Introduction

As an increasing number of schools and classrooms shift to personalized learning across the country, educators face many questions: What does personalized learning actually look like? How can districts support teachers, students, and families in learning about personalized learning? What role should technology play? And how can success truly be measured?

Underlying many of these questions is the need to define the purpose of curriculum and digital content and tools in a personalized learning setting. While educators are certainly familiar with the use of curriculum in a traditional classroom, a shift to personalized learning naturally leads educators to ask questions:

- **What is the role and function of curriculum and digital content and tools in a personalized learning classroom?**
- **How can we create a sense of alignment between online and offline curriculum?**
- **Does what we have for curriculum already work? If not, what needs to change?**
- **How can we navigate the hundreds of digital tools available?**
- **Who should be included in discussions about curriculum to support personalized learning?**

At Education Elements we believe that the first step in aligning offline and online curriculum is the creation of a clear vision for personalized learning. This vision should be at the forefront of all decisions related to personalized learning, including curricular decisions. As shared by Cari Jo Drewitz, Director of Curriculum, Instruction, & Assessment at School District 197 in Mendota Heights, Minnesota: "A strong vision for personalized learning is central to all decisions we make related to our implementation. We literally want to eat, sleep, and breathe that vision as it pervasively impacts our district's decisions, including our curricular decisions."

In our white paper titled "Phase One: Align Curriculum Goals with Personalized Learning Vision," we discussed the importance of creating a centralized vision for personalized learning and shared a process to accomplish this task. This vision should focus on the core "why" for pursuing personalized learning; with a compelling "why" established, districts are prepared to develop curricular goals that help them achieve that vision and engage in decisions regarding curriculum.

In our work with more than 115 districts and 500 schools, we have identified common pitfalls that often prevent a successful selection and implementation of curriculum to support personalized learning. These include:

- **A lack of alignment on what curriculum actually means,**
- **A lack of teacher voice and involvement in the selection of curriculum,**
- **Selection decisions that are made without first considering the needs of students,**
- **And the expectation that teachers will align offline and online curriculum without guidance, support, or training.**

The intent of this white paper is to provide guidance for districts as they consider how to approach curricular decisions in a personalized learning environment. By leveraging the two frameworks and processes identified in this paper, schools and districts can successfully mitigate these pitfalls as they navigate the selection of curricular resources to support personalized learning classrooms.

II. The Curriculum Mix Framework

"The Curriculum Mix Framework created a sense of awareness for our district and enabled us to become articulate about the various types of curriculum to support personalized learning. We now have a systematic approach to make all of our curricular decisions."

— Matt Kwiatkowski, Coordinator of PL and Instructional Technology, Marion Central School District, Marion, New York

Although the term "curriculum" is commonly used in education systems, districts often lack alignment on what the term actually means. This lack of alignment can lead to a wide variance in the way "curriculum" is utilized. This confusion only compounds as words like "online resources", "digital tools", and "personalized" are added to the mix.

Although we do not advocate a specific definition of these terms, we believe districts need to establish an operational definition specific to their district in order to create fluency across the organization. The Curriculum Mix Framework, if utilized well, can support districts in developing this sense of fluency as districts seek alignment for online and offline resources.

"As we approached the process of aligning our online and offline curriculum, we realized that we lacked alignment on what the terms meant. Using the mix framework to become fluent on what curriculum actually means was essential...We have since provided this training to all our teachers and train all our new teachers to understand this framework," states Ryan Russell, Assistant Superintendent for Innovation and Improvement, Metropolitan School District of Warren Township, Indianapolis, Indiana.

Additionally, decisions related to curriculum are often made by individuals far removed from the classroom, which can result in a poor selection of curricula for teachers and students. In contrast, we believe strongly that teachers should be involved in curricular decisions at all phases to ensure that the needs of teachers and students alike are met. Having a common language for talking about curriculum also makes the inclusion of teachers easier.

We generally observe that education systems think of curriculum in two distinct buckets: online and offline. Under this traditional lens, online curriculum is considered any resource that can be accessed through a device, such as a laptop or tablet, while offline curriculum is relegated to any resource that takes a print form (textbooks, worksheets, etc.). However,

using this basic view of curriculum can lead to disastrous mistakes for districts as online resources are perceived as "good" and "innovative" and offline resources are perceived as "outdated" or "irrelevant". This view of curriculum fails to recognize many factors important to the consideration of any instructional resource such as the quality of the curriculum, the level of rigor, and the lift required by teachers, among others.

Traditional Lens of Curriculum

CURRICULUM → ONLINE / OFFLINE

In contrast, the Curriculum Mix Framework removes the terms online and offline and instead breaks the term "curriculum" into three areas of content, each of which can have online or offline components: Foundational, Adaptive, and Highly Customizable.

New Lens of Curriculum

CURRICULUM → FOUNDATIONAL / ADAPTIVE / HIGHLY CUSTOMIZABLE
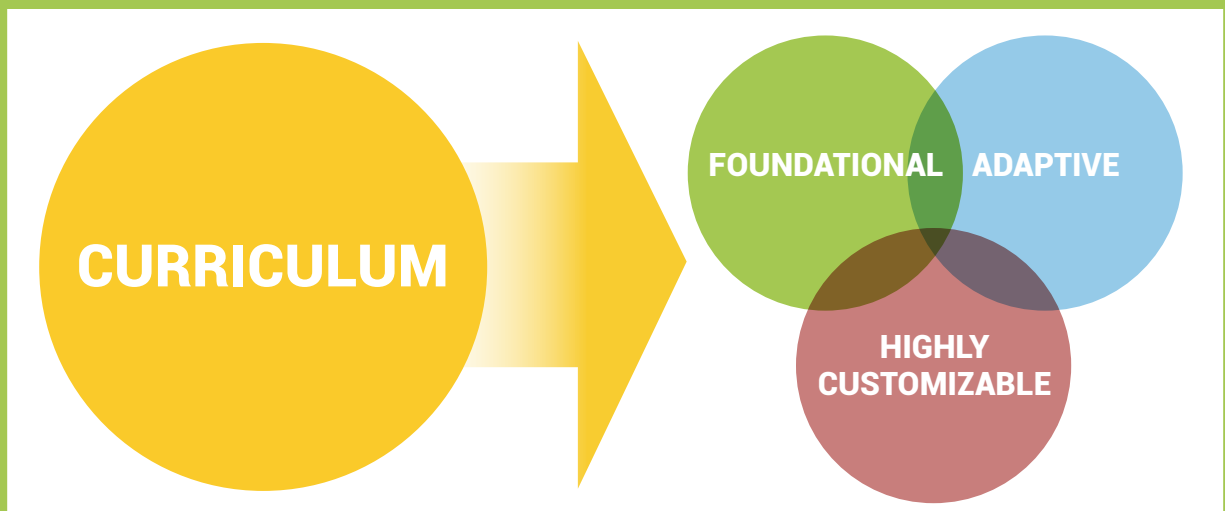
We believe that in order to align online and offline learning to support personalized learning classrooms, schools and districts need to determine an appropriate curriculum mix across these three categories.

- **Foundational Content:** Traditional core curriculum with a defined scope and sequence aligned to grade level (examples: curriculum guides and online or offline textbooks)

- **Adaptive Content:** Digital content that adjusts the path or pace of learning according to student mastery (examples: Dreambox Learning, i-Ready, Achieve3000)

- **Highly Customizable Content:** Teacher-customized lessons, tailored to fit individual learners' needs, interests, and skills (examples: teacher-created lessons in Google classroom, an LMS like Canvas, or in print)

"With the shift to personalized learning, our district was questioning the role that traditional curriculum and digital tools should play. The Curriculum Mix reaffirmed the role of Foundational Content and also helped us to consider the role that digital content and tools would play."

— Cari Jo Drewitz, Director of Curriculum, Instruction, & Assessment

III. Guided Steps For Utilizing The Curriculum Mix Activity

Create A Team: Create a core, cross-functional team to consider your district's curriculum and how it can support personalized learning. This team should include a mix of district-level staff (superintendents, curriculum leaders, technology leaders, etc.) as well as school-level staff (principals, teachers, coaches, etc.). We advise a group of 8-12 dependent on the size of your district.

"Including teachers on our vetting committee was vital for our success. Teachers are designers of learning and are best able to diagnose and prescribe the needs of students. Additionally, inviting teachers to join this team created a sense of autonomy and inclusion."

— Pamela Nathan, Assistant Superintendent for Curriculum and Instruction

Introduce The Curriculum Mix Framework: Contrast the typical view of curriculum (offline and online) with Foundational, Adaptive, and Highly Customizable content by categorizing examples of curriculum that already exist within your district. Using types of curriculum already embedded in your district will better ensure alignment on the meaning of each category.
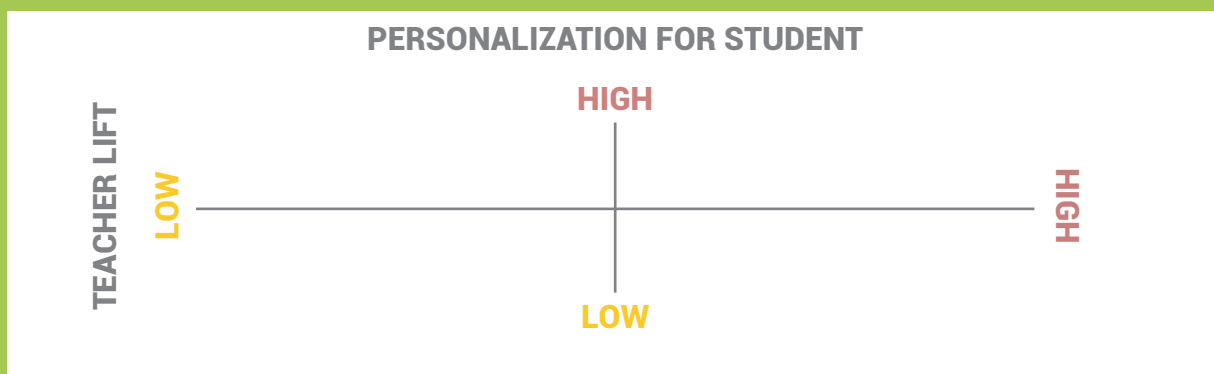
Current District Curriculum

FOUNDATIONAL CONTENT	ADAPTIVE CONTENT	HIGHLY CUSTOMIZABLE CONTENT

Consider The Role Of Each Content Category: In small groups or individually, invite the team to reflect on both Teacher Lift and Personalization for Student for each type of curriculum.

- **Teacher Lift:** how much time and effort is required from the teacher in order to use this type of curriculum?

- **Personalization for Student:** how well does this type of curriculum support personalization for individual students?

We suggest providing a printout of the quadrant below and placing sticky notes representing where each example of the curriculum within your district would align based on Teacher Lift and Personalization for Student.

Curriculum Quadrant

PERSONALIZATION FOR STUDENT

TEACHER LIFT

HIGH

LOW

LOW

HIGH

For example, when considering examples of Highly Customizable Content, teams generally conclude that this requires a high amount of Teacher Lift. To signify this, members of the team would place a sticky note representing a specific type of Highly Customizable Content further to the right on the x-axis of the quadrant. In future decisions, the realization that Highly Customizable Content results in high Teacher Lift should be considered since this may cause additional work to be placed on the shoulders of teachers. The team can then consider the level of Personalization for Student by moving the sticky note up or down on the quadrant until placed in the correct location.

However, while this example may be insightful, we encourage districts to conduct this activity with their teams using examples from within the district as this will provide value in determining both alignment and future needs.

Compare And Share Results: As this quadrant is completed, teams should discuss the differences, similarities, and items of interest. We believe that great value stems from the conversations that come as a result of this approach. Questions can include:

- What trends can be seen across types of curriculum (Foundational, Adaptive, and Highly Customizable)?

- How well does our current curriculum support teachers and students?

- In what areas is our team aligned? In what areas are we mis-aligned?

At the right are collective results from a team within the Erie 2-Chautauqua-Cattaraugus BOCES as they considered Teacher Lift and Personalization for Student for each of the three content areas using this quadrant.

Create The Current Mix: After leading a discussion around the results of the quadrant activity, participants should consider the current mix of Foundational, Adaptive, and Highly Customizable Content by creating a pie chart. To do so, participants should identify a specific grade level and subject area (e.g. sixth grade math, second grade literacy, or tenth grade biology) or specific grade band and subject area (elementary math or high school science). With a specific context selected, teams should consider how much time is spent utilizing each of the three content areas for a specified amount of time (we generally advise participants to consider this across a week). For example, in the mix below for a seventh grade math classroom, Foundational Content is used 60%, Adaptive Content is used 30%, and Highly Customizable Content is used 10%. This mix exists across a typical week in the classroom.

Curriculum Mix
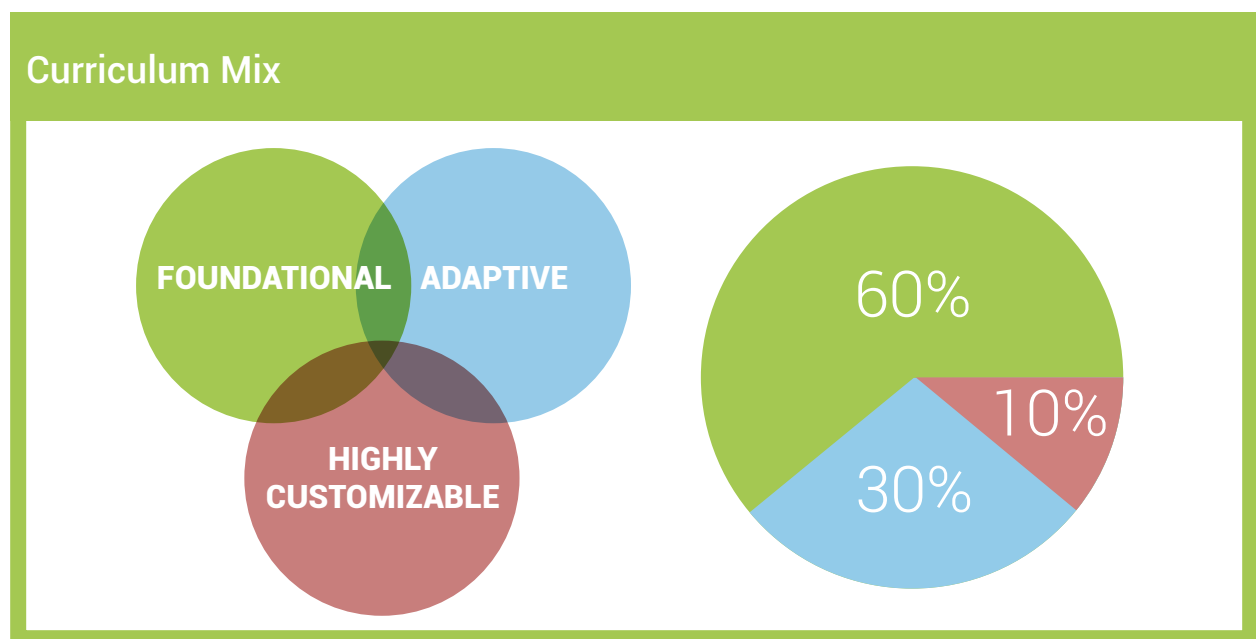
Compare Mixes Across Grade Levels And Subjects: With your current mixes in hand, compare and contrast with others in the room to see differences. This discussion is most helpful when considered in grade bands such as elementary, middle, and high and for specific subject areas like math, ELA, science, or social studies. You may even decide to create a trend poster. We find it is less important to agree on the "right" mix of curriculum and more important to engage in this conversation, thereby developing a shared vocabulary. As you go through this process, identify trends in your team's thinking about curriculum and its connection to the district's personalized learning vision. Some guiding questions include:

- Why did you select that mix of curriculum?
- Does your mix change as you move across K-2, 3-5, 6-8, or 9-12?
- Are there any trends you notice across the group's curriculum mixes (similarities or wide differences)?

After creating their current mixes, Marion Central School District identified a strong need to select additional Foundational Content and Adaptive Content for high school teachers. Additionally, the district recognized that many teachers at the high school level were creating playlists, but needed a support platform to decrease the teacher lift for Highly Customizable Content. Finally, the district was able to identify redundancy in similar types of tools, which allowed them to save on costs by narrowing the district's list of digital content.
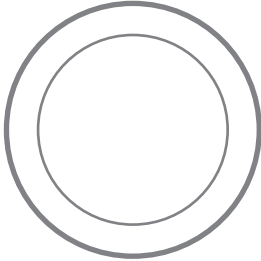
Create Ideal Future Mix: With a baseline understanding of the current curriculum mix, repeat the mix activity by considering what future mix you would like to see in the same specific grade level and subject or grade band area. This ideal mix should be based on what you hope to achieve as your district moves toward your personalized learning goals. Again, discuss these results as a group, even creating a trend poster across grade bands if helpful. Ask questions like:

- **How does the ideal curriculum mix compare to the current curriculum mix?**
- **How does the ideal mix change across grade bands?**
- **Based on what we see, what content areas will need to decrease? What areas will need to increase?**
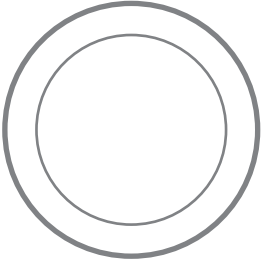
To add a sense of fun to the process, some districts have decided to use dinner plates instead of pie charts to consider the proper mix of meat, potatoes, and dessert. They asked their teams to come up with the "current dinner plate" and the "ideal dinner plate" for their mix. Below is an example from Freehold Township Elementary School District.
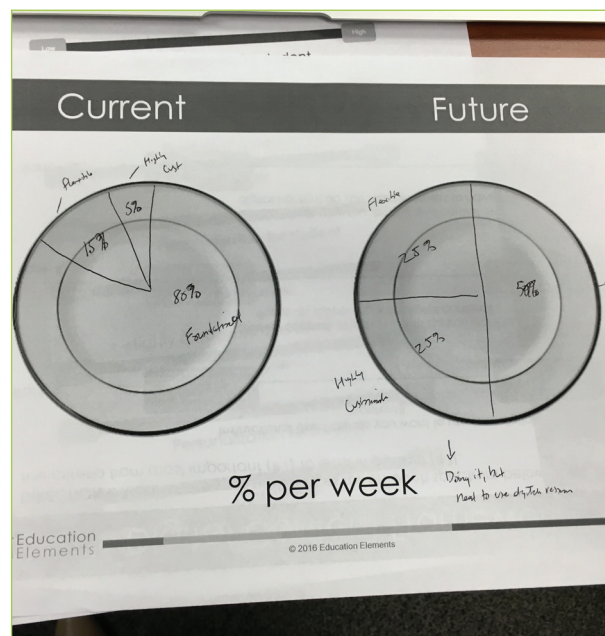
During the curriculum mix discussion, it may be helpful to create an inventory of your district's current curriculum resources. See the example inventory table below. Creating an inventory can often help districts identify gaps or redundancies in their current curriculum mix.

Curriculum To Support PL Models

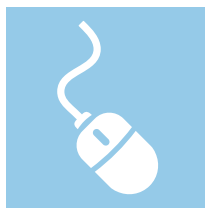|	ES ELA	ES MATH	MS ELA	MS MATH	HS ELA	HS MATH	HS SCI	OTHER
Foundational	Harcourt	Eureka		Eureka		Great Minds	Harcourt	
Adaptive	iReady NEED MORE	NEED	NEED	ALEKS	Compass NEED MORE	ALEKS Compass	NO NEED	
Highly Customizable	Google Classroom	Google Classroom	Google Classroom	Google Classroom	Google Classroom	Google Classroom	Google Classroom	

Through the Curriculum Mix Framework, Freehold identified a need for strong adaptive digital content and tools to support teachers with personalized learning. The district had already established small group instruction, the use of stations, and use of data, but teachers were spending a great deal of time creating websites of playlists to provide an individual student paths.

TAKING THE CURRICULUM MIX FORWARD

- Many districts have found value in repeating the curriculum mix conversations with teachers, principals, and curriculum users across the district to create fluency across teams. According to Pamela Nathan, Assistant Superintendent for Curriculum and Instruction in Freehold, "The Mix Framework gave us a common framing and language to have our curriculum discussions in our district leadership team." Freehold is currently planning to share the Curriculum Mix Framework with all teachers in their district to spread this common language.

- Continue to reflect on your district's vision for personalized learning. Do the ideal mixes align with your district's vision and goals for personalized learning? Do the ideal mixes align with the instructional models your district has designed?

- In all future decisions related to curriculum, whether selection or elimination, the curriculum mix should be considered. What impact will selecting or eliminating a curricular resource have on this mix?

- Many districts have found value in maintaining a district-wide curriculum inventory that aligns with the Curriculum Mix Framework. This inventory not only reinforces the purpose of each content area, but also ensures that the mix maintains its structure as tools are selected or eliminated. See example inventories for School District 197 and Freehold Township Elementary School District.

District 197 PL Digital Content and Tools
See this google doc for a description of the purpose and resources for digital content providers

CONTENT AND TOOLS FOR 2016-17

	Foundational Curriculum	District-Wide Digital Content	District-Wide Digital Tools	Site-Based Digital Content and Tools
Math				
Elementary	Everyday Math (K-4)	DreamBox (K-4)	Everyday Math Apps (K-4)	Unique (Fed. III)
Middle School	Holt - Holt Book 1, 2, Pre-Algebra and Algebra I	eTextbook (5)	GraphNCalc83 App (7-8)	iXL Math MobyMax (HMS SPED) Unique (Fed. III)
High School	Holt - Algebra I, Geo and Algebra II			MobyMax (SPED) Unique (Fed. III)
ELA				
Elementary	Reading Street Being a Writer, 2nd Ed.	Pearson SuccessNet-Reading Street (K-4) Raz-Kids (K-4) Writing Wizard App (K-1) Typing Agent (3-4)	PebbleGo (K-3) Word Wizard App (K-1)	Accelerated Reader (AR) Tumble Books Epic!
Middle School	Reading Street (5-6) Being a Writer, 2nd Ed., (5-6)	Pearson SuccessNet (Reading Street) Prentice Hall: Literature (5-8) Typing Agent (5-8)		Vocabulary.com (FHMS)

Freehold DISTRICT TOOLS

	MATH	ELA	SCIENCE + SOCIAL STUDIES
Foundational	• Bridges (K-2) • Envisions (3-8)	• Pathways Reading/Writing- TC K-8 • Expert 21 (6-8)	• Thematic units, kits - NGSS standards • Thematic units - NJCCCS for SS
Adaptive	• Learn Bop (6-8) • Front Row (3-5) • Reflex (3-5) • Math180 (intervention)	• iReady (K-2) • Achieve3000 (3-8) • Read180 (intervention)	• Achieve3000 (3-8) • Gizmos (6-8)
Highly Customizable		• Small group instruction • Peer Conferencing • Flexible Grouping • Google Drive • Schoology	
Supplemental		• Learning A-Z • BrainPop • Newsela • World Book Online	• Learning A-Z • BrainPop • Newsela • World Book Online

IV. The Digital Content Needs Framework

"The Digital Content Needs Framework has taught us to ask the important questions about the 'why' instead of focusing on the digital tools themselves,"

— *Erin Meehan-Fairben, Director of K-12 Instruction, Wayne-Finger Lakes BOCES, New York*

With an understanding of the role of curriculum established through the Curriculum Mix Framework, teams are prepared to make decisions about the specific role of digital content and tools. If used appropriately, digital content and tools can provide great value in a personalized learning classroom and can ensure districts meet their personalized learning goals without relying solely on more "lift" from teachers.

At Education Elements, we emphatically believe that digital content and tools can not and will not replace the role of a teacher in a classroom. As stated by Thomas Arnett, Senior Research Fellow at The Clayton Christensen Institute, "Those who proclaim that computers will replace teachers often naively reduce teaching to mere instruction and assessment. In doing so, they forget the true breadth and complexity of the job teachers perform."[1]

We believe that by leveraging digital content and tools, the role of the teacher can be enhanced significantly and teaching can become a more sustainable career.

- Digital content and tools can create time and space for teachers to focus on targeted instruction, conferencing with students, goal-setting, relationship-building, higher-order thinking, reteaching, and more.

- Digital content and tools can provide students with individualized instruction based on their specific needs. Many tools offer students the opportunity to take a diagnostic exam for an initial placement. Then, the underlying algorithm of adaptive digital programs scaffolds instruction and questions to the needs of each student.

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[1]Arnett, Thomas. "Will Computers Replace Teachers?" 2013. http://www.christenseninstitute.org/blog/will-computers-replace-teachers/

- Digital content and tools can provide content for a variety of purposes including introduction to new material, practice, acceleration, remediation, and creation.

- Digital content and tools can provide immediate feedback for students at a speed that would be difficult for teachers to replicate.

- Digital content and tools can provide an individualized pace for students as students are no longer bound by the pace of the class.

- Digital content and tools can provide actionable data for teachers that can inform classroom instruction.

Districts should begin the process of selecting digital content and tools by first identifying the need(s) they are seeking to address with those tools. Consider the curriculum mix created through the activities in this white paper; is there a need for digital content and tools to support Foundational, Adaptive, or Highly Customizable curriculum gaps? After your district has assessed the overall inventory needs, consider the specific needs of your student population. We have often found that when districts do not identify the student needs that digital content and tools will address, they often waste considerable time, resources, and finances. According to Jaraun Dennis, Chief Technology Officer of Uinta County Schools 1 in Evanston, Wyoming, schools and districts often struggle to select digital content and tools because they treat the selection process "...like a trip to the candy store. Teachers and administrators go to a conference, see rows and rows of shiny new digital tools, and make a purchase simply based on what they see." Jaraun continues, "Using this approach, districts end up with lots of digital tools that sit on their shelves without being used and the blended or personalized initiative never reaches its full potential." In contrast, by leveraging the Digital Content Needs Framework, educators are forced to place the needs of students at the center of the digital content and tool selection process.

Although we all wish there was a "silver bullet tool", a single digital tool simply cannot meet the needs of all students. The Digital Content Needs Framework emphasizes this point by forcing educators to identify student needs along three spectrums: Instructional Use, Student Support, and Teacher Input.

While one district may diagnose a need to better support English Language Learners who are below grade level, another may see an opportunity to support advanced students who need to work on content above grade level. In each situation, the digital content and tools selected should align with the identified need.
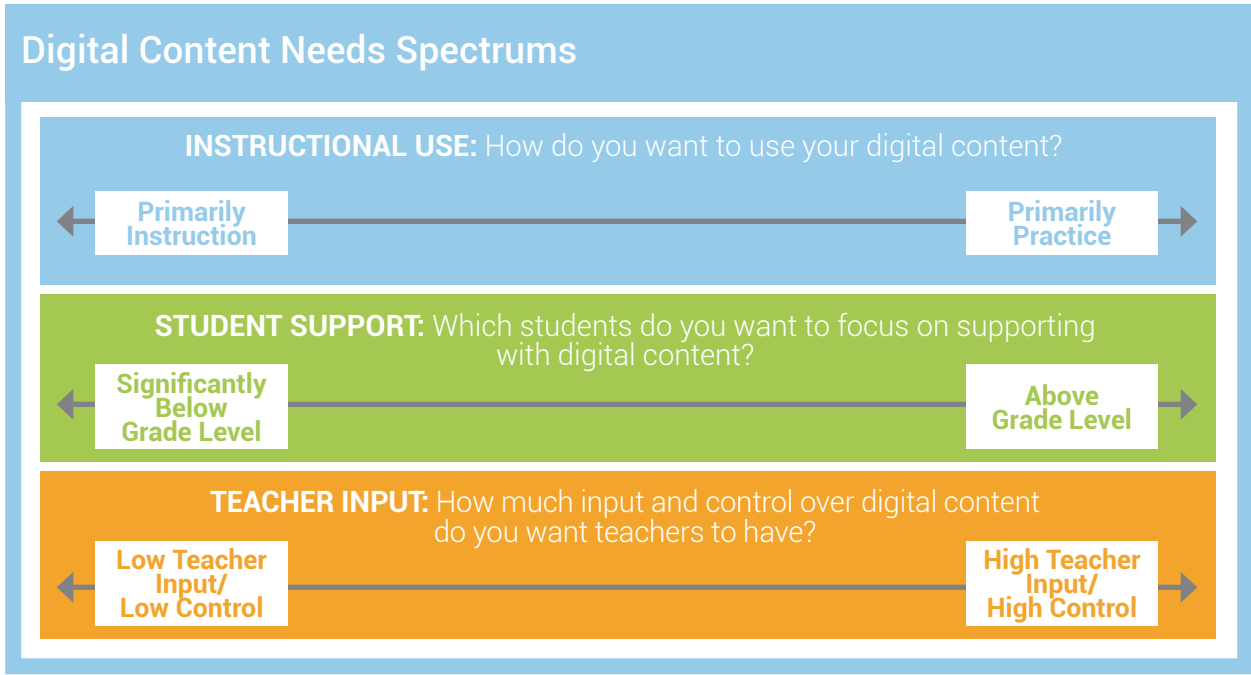
By using this framework, schools and districts are able to ask themselves key questions, such as, "Are we looking for a tool for remediation or to introduce new concepts?" and "Do we want a tool that teachers can assign, or are we looking for a tool that is adaptive?" Across a district, you may need to account for several needs, such as math practice for elementary students or leveled-reading for struggling middle school students. We recommend focusing on one need at a time as you complete the Digital Content Needs Framework.

"I have seen the buildings in our district who have followed this approach be successful with their blended learning implementations. When a building has not followed this approach and just looked for "the best" they have been disappointed in the digital content because the tool didn't match the job they were asking it to do," states Tammy Hermance, Blended Learning Coach, Greeley-Evans District 6, Greeley, Colorado.

V. Guided Steps For Utilizing The Digital Content Needs Framework

Determine Area Of Need: Using the same team or a similar team as the one mentioned for the Curriculum Mix Framework activity, determine the grade level, subject area, or student population for which you will identify the need. We recognize that many schools and districts have several needs for which they are seeking digital content and tools. Encourage individuals to focus on one need at a time, such as 3rd grade math or 11th grade social studies. If other needs exist, the process should be repeated.

Consider The Role Of Each Spectrum: The Digital Content Needs Framework includes three spectrums. Have each participant place a dot on each spectrum based on the specific need you are seeking to solve.

Digital Content Needs Spectrums

INSTRUCTIONAL USE: How do you want to use your digital content?

← Primarily Instruction ———————————————— Primarily Practice →

STUDENT SUPPORT: Which students do you want to focus on supporting with digital content?

← Significantly Below Grade Level ———————————————— Above Grade Level →

TEACHER INPUT: How much input and control over digital content do you want teachers to have?

← Low Teacher Input/ Low Control ———————————————— High Teacher Input/ High Control →

Note that there is no need to reach consensus yet; instead, all participants should express their opinions by placing dots on the spectrums and then explain their answers. Use the guiding questions below to help you place your dots.

Instructional Use:
How do you want to use your digital content?

Primarily Instruction:
Introduce or re-teach material to students and provide opportunities to practice and demonstrate mastery. Characterized by relatively higher cost, longer sessions, more standards coverage, and core content.

Primarily Practice:
Offer students opportunities to practice and demonstrate mastery, but offer little to no instruction. Characterized by lower cost, shorter sessions, less standards

Student Support:
Which population of students will you support with digital content?

Below Grade Level:
Learning material for students who are one or more years below grade level or designed exclusively for students in need of intervention with scaffolding down several grade levels. Characterized by practice and/or instruction, additional scaffolding. Often requires daily use.

Above Grade Level:
Learning material appropriate for students who are performing one or more years above grade level. Characterized by practice and/or instruction, content is not necessarily more rigorous, but presents material at the next grade/subject level.

Teacher Input:
How much input and control over digital content do you want teachers to have?

Low Teacher Input/ Low Control:
Adapt to students' needs by providing targeted instruction and/or practice with virtually no input from the teacher. Characterized by loose alignment to offline instruction,requires little input from the teacher (less time consuming to manage).

High Teacher Input/ High Control:
Enable teachers to assign lessons and/or practice opportunities to students. Characterized by potential to have tight alignment to offline instruction, requires regular input from the teacher (more time consuming) and assignable.

Compare Results: Based on the dots you placed on the spectrums, engage in a healthy discussion centered on student needs for digital content and tools as well as on teacher needs and capacity. We encourage participants to aggregate results into one place like a poster, google doc, or spreadsheet. Take an opportunity to discuss questions like the following either as a whole group or in small groups:

- • What trends exist across the spectrums?
- • Are we generally aligned or misaligned? Why?
- • What do these spectrums reveal about the needs of students in our district or school?

At right is an example of the collective results from the Metropolitan School District of Warren Township for elementary math using the spectrums from the Digital Content Needs Framework.
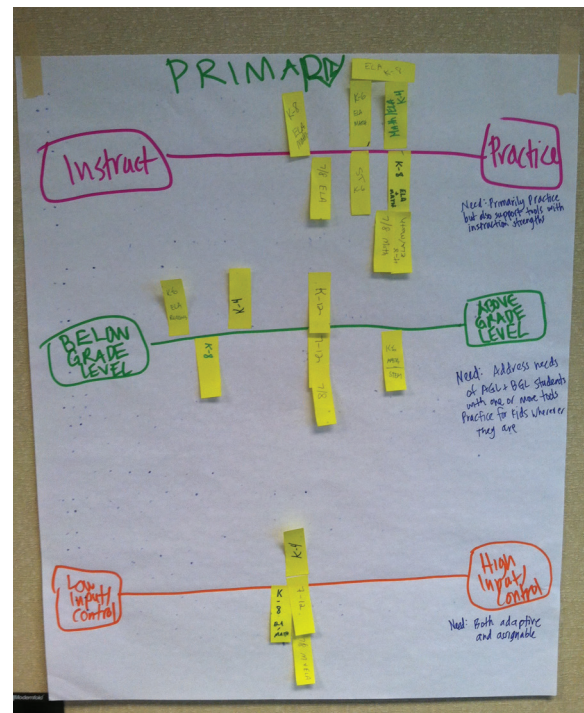
TAKING THE DIGITAL CONTENT FRAMEWORK FORWARD

- • Similar to the Curriculum Mix Framework, we strongly encourage schools and districts to engage teachers in the Digital Content Needs Framework activities. Many districts have found value in allowing teachers in common grade bands and content areas to conduct this activity in order to align on the student needs that digital content and tools will seek to meet.

- • With an understanding of student needs, districts are prepared to enter phase three of our suggested three-step process to select curriculum: Review, Demo, and Selection of Digital Tools. You can see more on that topic in our Phase 3 whitepaper. While Education Elements remains completely agnostic when it comes to selecting digital content and tools, we do support districts to identify the tools that will best meet their student needs by providing our Digital Content One Pagers.
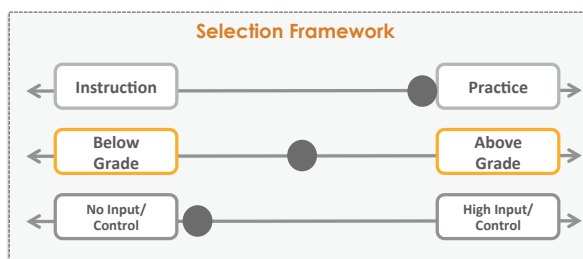
VI. Education Elements' Digital Content One Pagers

Unfortunately, no accreditation standards or common mandates are currently in place for digital content and tools. As a result, there is no simple way to compare digital content and tools. To remedy this situation and to better support districts in navigating the hundreds of digital content and tools available, Education Elements has created Digital Content One Pagers as a starting point to compare digital content and tools.

To do so, we sift through hundreds of digital tools to create a consideration set based on a rigorous, 30-point rubric that considers reporting capabilities, standards alignment, student experience, technology factors, and more. We create a Digital Content One Pager for each digital tool that passes this vetting process. Currently, we have an inventory of over 75 Digital Content One Pagers.

Each One Pagers has a variety of features that allow for easy comparison, including the following:

- A spectrum snapshot that displays where the digital tool lies on the three spectrums of the Digital Content Needs Framework,

Selection Framework

Instruction — Practice
Below Grade — Above Grade
No Input/Control — High Input/Control

- A description of the tool's intended use and target population including grade level, subject area, and standards alignment,

Digital Content Provider X is a core or supplemental science solution for middle school students (grades 6-8) designed to deliver 100% of the content differentiated to each student's individual Lexile level.

- Usage recommendations and suggestions,

Usage + Implementation + Layering

- **Recommended Usage:** 2 sessions/week; 30-45 minutes per session
- **Implementation:** eScience3000
  - *Direct Instruction* (lab or rotation): teachers can provide direct instruction; students can apply strategies and show mastery while completing readings and investigations.
  - *Classroom Rotation (lab, rotation, flex):* Students can work independently or in small groups on Investigations to demonstrate understanding. Articles can be used to build or extend background knowledge for projects, experiments or class discussions.
  - *Small Group Instruction/Intervention:* provide guided science lessons using leveled articles
- **Layering:** eScience3000 provides short investigations and full lab activities with each lesson. These activities were designed to be conducted in the classroom, offline. Experiments can be as short as 15mins or as long as a semester (tracking the growth of a plant for a semester).

- Hardware and device recommendations,

Hardware and Technology

- Mac or PC; Chrome devices
- Android and iPad Apps
- Browsers: Internet Explore, Chrome, Firefox, Safari
- Integration with Highlight: SSO (for desktop) & Provisioning available

- Information about reporting capabilities,

Data available in the Provider

- Student usage (time spent in the lesson)
- Student Progress (through the tabs of each lesson)
- Lexile Level
- Standards based reporting
- Number of assignments completed
- Grades / Test scores

- And various tips and items to consider for each digital tool.

As shared by Tammy Hermance, *"The Digital Content One Pagers all follow a similar format, so they enable us to compare digital content at a glance without having to visit each website and wade through tons of information. Once we have started using a digital content provider, I like to go back and revisit the one-pager to see if there is a feature listed I haven't seen yet, or something that I missed."*

VII. Conclusion

The shift to personalized learning encompasses many factors, including a shift in the understanding of curriculum and digital content and tools. For many districts, this can be a daunting task. The Curriculum Mix Framework and the Digital Content Needs Framework are designed to focus district and school teams as they consider the role of curriculum and digital content and tools. As educators engage in this process, they will be guided to identify and select resources to ensure that teachers and students can succeed.

Wherever your district is in your personalized learning journey, we encourage you to leverage these frameworks to better consider your curricular needs, and we are happy to support you in this effort. As always, reach out to us with any questions or ideas on curriculum and personalized learning! We'd love to hear your feedback on this white paper. Reach out to us at info@edelements.com or tweet about this series at #PLcurriculum.

Scott Johns is an Associate Partner at Education Elements. A former teacher, he has worked with educators across the country as districts make systematic shifts toward personalized learning. Scott holds degrees from Brigham Young University and Johns Hopkins University.

THE CORE FOUR
ELEMENTS OF
PERSONALIZED LEARNING

Integrated Digital Content

Digital content allows for a differentiated path and pace

Targeted Instruction

Instruction aligns to specific student needs and learning goals

Student Reflection and Ownership

Ongoing student reflection promotes ownership of learning

Data Driven Decisions

Frequent data collection informs instructional decisions and groupings

Check out the Core Four Elements of Personalized Learning white paper

Education Elements

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