

Designing for Personalization in an Online Learning Environment



Commonwealth Charter Academy (Harrisburg, Pennsylvania)

Challenge Question: How can districts create rich, engaging, and personalized learning experiences in an online learning environment?

Commonwealth Charter Academy (CCA) is a K–12 online school serving students across Pennsylvania. As CCA has grown and developed its online program, it has worked with a digital infrastructure and eLearning service provider to build its own customized Learning Management System (LMS) and their own courses. CCA developing its own platform and courses has enabled CCA leaders to incorporate Universal Design for Learning (UDL) principles into the design of personalized learning features and to continue to grow, test, and refine course elements to enhance the online learning experience for CCA students. CCA's online program incorporates both synchronous and asynchronous learning experiences; teachers are supported by an in-house team of instructional designers and coaches. The program is continuously evolving to reflect research and lessons learned: “Our point of view is that our curriculum and technology is rooted in the learning sciences and therefore will continue to evolve as we continue to acknowledge the research and actively support learning goals for our students.”

Setting the Stage

A core focus of instruction at CCA is on [personalizing the learning experience](#) for each student. The program is currently engaged in a multiyear initiative to design a personalized adaptive learning platform to enable teachers to facilitate personalized learning experiences for students based on learning needs, interests, and preferences. Based on its experiences with online teaching and learning, CCA continuously works to refine instructional designs in ways that will maximize collaboration and engagement through audio, video, chat, screen sharing, and white boards and leverages options such as polling, annotation, and emojis to encourage student interaction.

Although most districts are not able to develop their own learning platforms for online learning, the features, strategies, and tools that CCA teachers employ in the online environment may be useful to schools and districts as they think about best practices for online and/or remote instruction.

District Facts

- CCA is a K–12 online school district.
- Approximately 19,500 students across Pennsylvania are enrolled in CCA.
- 20% of students receive special education services.
- 3% of students are English learners (ELs).
- 49% of students are economically disadvantaged.

How Instructional Practices Laid the Foundation for Success

Building Teacher Technology Competencies Through Instructional Coaching and Just-in-Time Supports

CCA leaders expressed the critical importance of providing staff with the technology tools and resources they need in their classrooms matched with training and ongoing instructional support and coaching. Given the enormous number of educational technology tools on the market and the capacity for educators to feel overwhelmed by choices, CCA focuses on ensuring that the tools selected are high quality and explicitly meet teaching and learning goals.

Examples of Ongoing Support for CCA Teachers

CCA uses a variety of strategies to provide ongoing support and help teachers find and use the right technology tools to meet learning goals. For example, the English language department sends a newsletter to staff that features technology tools and instructional strategies to increase student engagement and communication with parents and families of ELs.

- EL Folio 2: [Tech tools to increase comprehensible input in ELs](#)
- EL Folio 5: [Teaching with visuals/Visual SOS \(Spotlight on Strategies\) from Discovery Ed](#)
- EL Folio 6: [Zoom translation tool](#)

Instructional coaches are the backbone of CCA's support for teachers; coaches provide support for implementing online instructional strategies and guide teachers through using student data to make data-driven decisions to personalize instruction. Instructional coaches train and model best practices and strategy applications in the online classroom, including teaching model lessons in the synchronous classroom and developing model asynchronous lessons to share with teachers as examples. The coaching team meets regularly to discuss the needs of both teachers and students, review data and learning objectives, and to support teachers in the planning and delivery of synchronous and asynchronous learning activities. Coaches collect feedback from teachers after each coaching session and work as a team to make changes to coaching plans to better meet the needs of teachers. Successful strategies, resources, and approaches are shared with all teaching staff during both formal and informal professional development activities to ensure that methods and messages are shared consistently across all grade levels.

As teachers try new tools and strategies and build expertise with using technology to personalize instruction, they become in-house experts who share what they know with other teachers. CCA instructional technology leaders collect "good-use" examples to help strengthen instructional practices and showcase teachers trying new things. Teacher experts are highlighted and become additional resources within the CCA community, providing mentorship to their colleagues, as well as becoming the "go-to" staff for specific topics and strategies (e.g., family outreach strategies, engagement strategies for online discussions).

Lessons Learned in Building Capacity to Teach Online

Providing ongoing support for teachers is a consistent theme in how CCA builds teacher capacity for teaching in an online learning environment. For example, each new teacher (whether new to the field or new to the school) is assigned a mentor. CCA employs a train-the-trainer model and provides all teachers with resources, coaching, and mentorship. CCA offers lessons learned, such as the following, in online teaching and learning:



- Focus on building relationships with students and their families. Technology cannot replace relationships; CCA teachers use virtual meetings, instant messaging, and phone calls to get to know students and their families and to follow up with individual students. If students are not participating in virtual lessons, connecting with them to understand what is happening helps instructors identify where they might need to modify their approach to better meet student needs.
- Instruction should be a mix of asynchronous and synchronous learning opportunities—it should not be about seat time in a virtual meeting. Consider recording synchronous lessons and offer students options for attendance. At CCA, students can either attend “live” instruction or watch the recordings later. This option supports students who may have other obligations as well as students who may need to slow down the pace of a lesson and have the choice to pause and review.
- Have a certain set of approved tools for teachers to use—there are so many tools available that teachers may be overwhelmed. Provide teachers with a robust set of vetted tools and support them in effectively using the tools. Before implementing new technology tools, ask, “Why are we using this tool in this situation? What is the purpose, and how does the tool support student learning?”
- Less is more in virtual instruction—too many tools can get in the way of teaching and learning. Recognize that every tool has a set of options and a set of limitations. Match technology to the learning goals and provide time and space for teachers and students to learn the tool and practice with it.
- When teachers are instructing via video, the teachers should pay attention to pacing—students may have connectivity issues or difficulty keeping up when teachers speak quickly. Repetition is important, as is learning to “read” the virtual space and identify when students are losing focus.

Building Multiple Flexible and Accessible Technology Options Into Student Learning

The LMS that CCA has developed offers students multiple ways to engage with learning activities and to demonstrate understanding. The design of these features is driven by an instructional design process focused on Web Content Accessibility Guidelines (WCAG 2.0), with features and functionality built into the learning platform aligned to UDL principles. For example, students may select from multiple

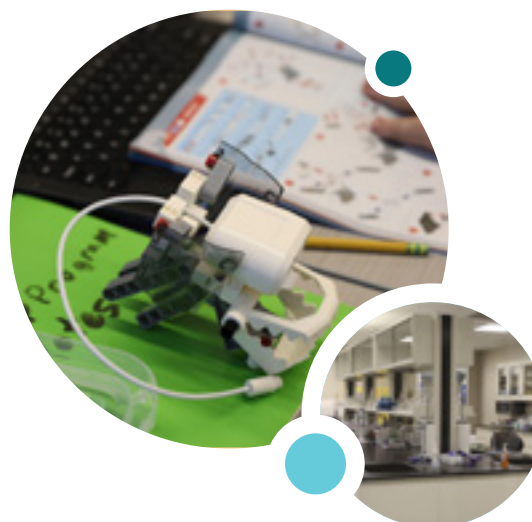
options for responding to questions, including audio and video and digital sketchpads. Synchronous classes provide Audio and video lessons all include both captioning and full transcripts, while asynchronous lessons are expanding offerings to include these options. Interactive components use both text and audio to support understanding. CCA incorporates scaffolds and supports around the available accessibility features to help students in using the supports and making independent choices about the tools that work best for them. For example, scaffolding tools to help students self-regulate and build independence are built into lessons (e.g., organizers, timers, checklists, and reflection questions), and vocabulary is pre-taught using audio, text, and images to build background knowledge. Lessons use consistent symbols for actions (listening, writing, submitting work) to help reduce the cognitive load required by learning online and to ensure students clearly understand what actions are taking place and when.



Teachers work closely with the instructional design team, instructional coaches and within their professional learning communities to use student data and student feedback to create lesson and assessment variants tailored to student needs and preferences. These variants for lessons enable the teacher to build in modifications, accommodations, and scaffolds for students to ensure they have the supports needed to perceive, interact with, and understand asynchronous lessons. Variants might include additional audio and video support, vocabulary, background information, and images to make content more usable to students and to give them multiple options for engaging with the material. Lesson variants also enable teachers to design lesson content to engage students in their specific interests and give them the opportunity to select activities and response options.

To create learning experiences that are both engaging and accessible for students, including students with disabilities, CCA's instructional design team to plan the design and content of each course in accordance with WCAG 2.0. The team reports that this collaboration, as well as the work to align courses closely to the UDL framework, has resulted in the inclusion of the following instructional design strategies that support student learning for all students:

- Chunking content into mini lessons that can be customized to include prerequisite or extended learning opportunities
- Use of multimedia lessons to build background knowledge before starting new content
- Providing frequent choice in formative and summative assessments so that students can demonstrate learning in a format that aligns with their needs, interests, and preferences



Using Assessment Data to Drive Personalized Instruction for All Students

With CCA's focus on building personalized and engaging online learning for students, the use of digital assessments (both formative and summative) to gain insight into student learning and drive instructional changes is critical. Data dashboards provide teachers and coaches with real-time access to data and analytics, as well as features for providing customized support, remediation, and extensions of learning goals. Coaches provide support to teachers on how to interpret data and use the data to create flexible student groupings in both synchronous and asynchronous instruction.

Currently, CCA is designing a suite of dashboards within the LMS to help teachers quickly analyze data from multiple sources and understand the performance of students individually and in groups so that teachers can make efficient and effective instructional decisions based on the integration of multiple data points as well as help students to understand their own learning. CCA uses ongoing formative assessment to immediately provide supportive content for students (e.g., additional lessons or videos) to reteach areas where students may have struggled. The built-in formative assessments provide teachers with tools to author hints and scaffolds on open-ended questions; in the future, students will be able to self-select hints as needed and can access scaffolds, such as sentence starters, graphic organizers, or background information, on the topic. Prior to beginning a lesson, teachers use a digital assessment to check for prior knowledge. The data collected are used to plan synchronous learning sessions and to customize content for each student. The LMS then delivers mini lessons to each student based on the student's specific level of knowledge on the current lesson. These tools, combined with standards-aligned summative assessments, are designed to provide students with multiple ways of demonstrating understanding and to provide rich data sets to support the personalization of learning. Exposure to data also supports students in understanding their learning and making choices about the supports and scaffolds they need to successfully navigate course content.



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