

Curriculum Development and Revision Process

Connections Education of Florida, LLC¹ combines the latest learning theories in instructional design, curriculum, and assessment with more than four decades of research. Connections Education of Florida courses comply with research-based curriculum design standards to produce engaging courses in accessible formats. Building on our mission to help students achieve their greatest potential, we incorporate sound instructional design principles into our educational solutions to help administrators, teachers, and students achieve success.

Source of Curriculum and Course Content

Connections Education of Florida's curriculum and instruction reflect both schematically-based research and best practices for online courses. Connections Education of Florida's virtual instructional program and curriculum utilizes research-based resources and strategies to focus on student learning and to give students opportunities for extending learning.

Our courses emphasize 21st century skills, brain-based research, literacy strategies, authentic and engaging student work, and an "any path, any pace" philosophy. We have an independent group that collects assessment data from Connections Academy schools and runs statistical models against that data. The results of that analysis are funneled back into the product through curriculum design.

Connections Education of Florida also partners with third-party providers such as Edgenuity and eDynamics to license various courses and course content. This ensures that students have access to a full catalog of online courses and all of the tools and resources needed to succeed.

Research and Best Practice Used in Design

Connections Education of Florida's research-based² curriculum uses the following proven instructional principles:

- Curriculum fosters breadth and depth of understanding in subject areas;
- Content is aligned to Florida state standards;
- Curriculum is supported by quality, reputable, recently published textbooks and/or proven instructional resources and materials;
- Content and assessments are accurate and unbiased;
- Content is current, relevant, and provides real-world applications;
- Content is appropriate for the learner (age, ability, background, reading level, style);
- Instructional design is adaptable and flexible to meet individual needs;

¹ *Connections Education of Florida, LLC is the official name of the approved Full-Time VIP provider on the FL DOE Approved Provider list. Connections Education of Florida, LLC is a wholly owned subsidiary of Connections Education LLC ("Connections"). Connections also does business under the names Pearson Online & Blended Learning K12 USA and Pearson Virtual Schools USA. Connections operates three distinct business lines: Connections Academy, supporting full time K-12 virtual schools; District Partner Programs (formerly Connections Learning), providing K-12 schools with virtual courseware offerings; and Pearson Online Academy, a K-12 privately operated virtual school, accredited through the state of Maryland. Connections is a Pearson company.*

² American Psychological Association's Learner-Centered Psychological Principles: A Framework for School Reform and Redesign <http://www.apa.org/ed/governance/bea/learner-centered.pdf>

- Instructional design provides students opportunities to improve learning skills using technology (virtual labs and instruments, interactive tutorials, business software, online calculator);
- Navigation is intuitive and age-appropriate;
- Scope of course is appropriate with regard to amount of content, length of course and lessons, and course requirements;
- Lesson introduction is effective and presents lesson objectives, accesses prior knowledge, sets expectations, and motivates;
- Background information prepares students to access new content, skills, and strategies;
- Curriculum includes opportunities for developing problem-solving, critical thinking, and communication skills with real-world applications;
- Curriculum incorporates ongoing formative assessment and provides timely and appropriate feedback to students and teachers; and

Curriculum promotes active learning through interactive elements in each course (including online and/or offline interaction) that address diverse learning preferences, including textual, visual, auditory, and/or hands-on.

Supporting Research for Personalized Learning

Support for the need to expose students to online learning is evident in the 2015 article, *The Effectiveness of Online Learning: Beyond No Significant Difference and Future Horizons*, when Tuan Nguyen states "... about 92% of all distance and online education studies find that distance and online education is at least as effective, if not better, than traditional education."³

High-quality Teaching: Teachers are equipped with skills and technology to maximize student learning in an online environment. Research, focusing on online learning, echoes the critical importance of teacher quality and preparation. In November 2015, Mary F. Rice, Theron (Bill) East and Daryl F. Mellard published a study (*Teacher Preparation and Promising Practices in Online Learning*⁴) which analyzed effective teacher preparation and practice for the online learning environment. In the study, "...administrators indicated teacher preparation and ongoing support (e.g., coaching and professional development) was very critical. In fact, they agreed this topic was one of the most critical of all topics covered in the forum.

Administrators considered teacher preparation and support very important because they believed that teachers are the most important component of successful online learning once devices are in students' hands and working properly."

Through an award-winning Professional Learning model,⁵ teachers have gained an understanding of their role as facilitator, distinguishing changes to the online environment and their impact on student learning, and adapting to those changes while transitioning to their role as an online instructor. According to Rick DuFour and Douglas Reeves in their article, *Professional Learning Communities Still Work (If Done Right)* (October 2015),⁶ educators "...prefer professional development that helps them

³ Nguyen, Tuan (2015). "The Effectiveness of Online Learning: Beyond No Significant Difference and Future Horizons," MERLOT Journal of Online Learning and Teaching, 11(2). http://jolt.merlot.org/Vol11no2/Nguyen_0615.pdf

⁴ http://centeronlinelearning.org/wp-content/uploads/Superintendent_Topic_7_Summary_November2015.pdf

⁵ In April 2015, the Connections Professional Development Model was recognized with a silver award for Best Practices for Distance Learning Programming by the United States Distance Learning Association (USDLA). In May 2016 Connections was recognized as a Codie Award finalist for Best Professional Learning Solution for K-20 Faculty and Administrative Staff.

⁶ <http://www.edweek.org/tm/articles/2015/10/02/professional-learning-communities-still-work-if-done.html>

plan and improve their instruction, is teacher-driven, includes hands-on strategies relevant to their classrooms, is sustained over time, and recognizes that teachers are professionals with valuable insights." Teachers are most satisfied when they are part of a learning community focusing on lesson planning, using data to personalize instruction, designing engaging content, and ensuring that all curriculum is aligned to state and national standards.

Timely and Actionable Feedback: The unique ability of an online teacher to communicate one-on-one with students and offer timely and actionable feedback is key to student success in an online learning environment. According to a 2014 study,⁷ 77% of students view face-to-face comments as "very" or "extremely effective." Whether the teaching is online or face-to-face, as described in this study, feedback is a critical element in supporting student learning. Feedback has a powerful impact on student learning, with an effect size of 0.75, placing it into the top ten influences on achievement (Hattie, 2017).⁸ Professional learning topics delve deeply into ways that teachers can reach students individually, so that students are receiving timely and actionable feedback. Teachers use collaboration in professional learning to discuss topics such as "...the main purpose of feedback is to improve the student's ability to perform tasks he or she has not yet attempted...In other words, we need to start from where the learner is, not where we would like the learner to be. We need to use the information we obtain from looking at the student's work—even though that information may be less than perfect—and give feedback that will move the student's learning forward."⁹ In his 2012 article, *Seven Keys to Effective Feedback*, Grant Wiggins notes, helpful feedback is goal-referenced; tangible and transparent; actionable; user-friendly (specific and personalized); timely; ongoing; and consistent."¹⁰ These qualities and instructional strategies are characteristic of the type of feedback that teachers provide to students.

Personalized Instruction: Students clearly benefit from instruction that is personalized in terms of pace, content, sequence, and style. In a study published in 2016,¹¹ students in a developmental math class experienced between a 13% and 27% increase in course completion using personalized learning in a digital platform. Robert Marzano and Michael D. Toth explain that "Within classrooms, there should be ample evidence of students wrestling with new content as they build the stamina required to reach higher levels of thinking. Without the opportunity to struggle with a problem or decision, for instance, students may attain surface-level knowledge of a concept, but be unable to utilize that knowledge in meaningful ways."¹² A goal of personalization via online instruction is for the student to demonstrate increased content knowledge and critical thinking. Research evidence suggests that application of a math concept, in varying contexts or in ways that offer critical thinking opportunities, is more effective in building fluency than doing repeated manipulations of numbers (NCTM, 2014).¹³ Instruction is personalized for every student, every day and professional learning supports teachers in implementing instructional practices that maximize student performance. Students work together on collaborative projects as well.

Data-Driven Instruction: Research on data-driven decision-making states "...educators should consult and factor in multiple sources and type of student data to get a more complete view of student progress

⁷ Turnitin.com (2014). Instructor Feedback Writ Large: Student Perceptions on Effective Feedback

⁸ Hattie, J., Fisher, D., & Frey, N. (2017). *Visible learning for mathematics: What works best to optimize student learning*. California: Corwin.

⁹ <http://www.ascd.org/publications/books/111001/chapters/Setting-Objectives-and-Providing-Feedback.aspx>

¹⁰ <http://www.ascd.org/publications/educational-leadership/sept12/vol70/num01/Seven-Keys-to-Effective-Feedback.aspx>

¹¹ "Using personalized learning, a developmental math professor increases her course passing rate". Website blog. Pearson Blog. Pearson, 2016.

¹² www.marzanocenter.com/files/Teaching-for-Rigor-20140318.pdf

¹³ National Council of Teachers of Mathematics. (2014). *Principles to actions: Ensuring mathematical success for all*. Reston, VA: Author

or achievement. These additional sources of data may be formal (e.g., chapter tests, class projects, or performance assessments) or informal (e.g., class discussions, homework assignments, or formative assessments). Looking at a broader array of data can help teachers avoid putting too much weight on a single measure of student performance and, therefore, reduce the risk of making inaccurate and invalid decisions about student learning and teaching effectiveness.”¹⁴ Training and professional development guide teachers through this process and help to ensure teachers are comfortable with the importance of using data to personalize instruction. Teachers are provided with tools and clear guidance on how to analyze and use student performance data to provide targeted instruction, intervention, lesson modifications, remediation, and enrichment.

Parent Involvement: According to the 2015 study *Parent and Student Perceptions of Parent Engagement at a Cyber Charter High School*,¹⁵ Borup and Stevens identify five primary type of parental engagement: nurturing relationships and interactions (with both their students and the teachers); advising and mentoring; organizing; monitoring and motivating; and instructing. The study also provides several examples of how parent engagement can be enhanced in a virtual school setting, especially when parents are given the additional tools to help reinforce the engagement. Connections Education of Florida provides Learning Coaches with tools (e.g., orientations, tutorials, synchronous webinar-type sessions, recordings, anytime access to a knowledge base, and more) to better engage with their students.

Based on the intimate knowledge parents have of their students, they are better able to offer their students a continuum of assistance, as needed in varying degrees, and be more strategic in how to help and engage with them.¹⁶

Basis for and Frequency of Revisions

Connections Education of Florida follows an ongoing, cyclical timeline of course updates. Daily maintenance occurs on an ongoing basis and is based on feedback from teachers, students, and parents. Revisions are made annually based on user feedback, state standards, and changes to state assessments.

Research Related to Effectiveness of Curriculum

Evaluation of the efficacy of the program components is focused on student academic and on-track performance, and includes successful course completion (course pass rates) and graduation rates to evaluate program effectiveness.

To measure the quality of our courses and instructors, we created the proprietary StarTrack rating system. StarTrack allows every student, teacher, and parent to rate each lesson from a low of one star to a high of five stars by clicking on a star in the lower right-hand corner of any lesson. With this system, users not only rate lessons, but they can also leave detailed feedback. Teachers and students can rate their experience with Connections’ courses using this system as well.

In addition, each year, we survey parents to get their feedback on our program and help identify what we are doing well and how we can improve. Our parents evaluate the program on a number of criteria,

¹⁴ Mertler, Craig A. Introduction to Data-Driven Educational Decision Making (2014), http://www.ascd.org/publications/books/sf114082/chapters/Introduction_to_Data-Driven_Educational_Decision_Making.aspx

¹⁵ <http://files.eric.ed.gov/fulltext/EJ1085792.pdf>

¹⁶ Borup, J. & Stevens, M.A. (2015). Parent and Student Perceptions of Parent Engagement at a Cyber Charter High School, *Online Learning*, Volume 19, Issue 5, pp. 75-83.

including student progress, teacher support, and quality of the curriculum. In the 2020-21 survey, 94 percent of parents agree that the curriculum is high quality, 93 percent of parents agree their children are satisfied with the program, 89 percent of parents are satisfied with the variety of learning activities, 92 percent of parents would recommend Connections to other families, and 92 percent of parents agree that our technology tools improve their child's learning experience.

Accurate, Free of Bias, and Accessible

Connections Education of Florida's content and assessments are accurate, free of bias, and accessible for students with disabilities and limited English proficiency.

Connections Education of Florida's virtual program does not discriminate students or families based on race, color, creed, national origin, sex, marital status, religion, ancestry, disability, or need for special education services.

In addition to aligning with Florida's adopted state standards, Connections Education of Florida courses comply with the National Standards for Quality Online Learning. Furthermore, Connections Education of Florida curriculum writers are trained in the National Standards for Quality Online Learning approach.

Each course includes unique and developmentally appropriate active learning activities that address diverse learning styles and preferences, including textual, visual, auditory, and hands-on. Connections Education of Florida builds courses and content that meet WCAG 2.0 "AA" standards it is accessible by all users, including successful application with assistive technology software and assistive technology devices. Connections Education of Florida has extensive experience in providing such accommodations and is Section 508 compliant. Furthermore, Connections Education of Florida maintains compliance with IDEA and has almost two decades of experience in meeting the individual needs of school-age students with disabilities in a virtual and blended school environment.

Instructional design elements support ease of navigation and clarity of content for all learners, with features that support ADA guidelines. Connections Education of Florida's online learning program provides the following supports:

- Keyboard navigation through elements such as drag and drop
- Text-to-speech alternatives for visually-impaired users or struggling readers, for almost all courses
- Speech-to-text alternatives for advanced voice recognition needs or struggling writers, for almost all courses
- Student performance feedback that does not rely on the use of color as the sole means of communicating student performance
- Format of focused objectives per lesson, chunked content, and built-in glossary with audio to help English Learner (EL) students
- Use of Universal Design for Learning (UDL) and other instructional design practices, such as multiple representations of text, managing cognitive load, and visual cues to provide context clues to struggling learners
- Use of note-taking to help the student organizer information on their own, which assist with processing information
- Closed-captioning (CC), which is included in all videos and animations with audio

- Glossary terms and critical reading passages that are paired with an audio component
- Translation for languages both spoken and sign, among others
- Adobe Connect LiveLesson® platform in HTML to meet accessibility needs during prerecorded and live, direct instructional sessions
- Available computer devices to utilize accessible hardware and software applications and browsers

National Collegiate Athletic Association (NCA) Approved

Connections Education of Florida has many Florida-approved high school core and elective courses that also meet the NCAA Eligibility Center's non-traditional core-course legislation. Connections Education of Florida's course list, which can be found on the Connections Education of Florida, LLC Virtual Instruction Program (VIP) disclosure website at <https://www.connectionseducation.com/florida-vip>, denotes which courses approved for use in Florida also meet NCAA requirements.

The complete list of our NCAA approved courses are listed on the NCAA Eligibility Center website under Pearson Online and Blended Learning. *Note: the NCAA website provides a complete list of NCAA-approved courses; however, not all courses on this list are currently available in Florida.*