Electronic Education Report

Business Intelligence on Opportunities in the Educational Software Industry

Walch Launches Curriculum Engine to Enable Course Building

Walch Mathematics (Portland, ME) in April is launching its Curriculum Engine, a platform created by the company to enable the on-demand design, editing and publishing of high school math courses that the creating district will own.

Walch president Al Noyes told *EER* Walch is reinventing the traditional publishing model by providing a curriculum-as-a-service platform, handing over tools to build courses to school districts and teachers.

Educators will use Curriculum Engine's course builder and database to find and assemble relevant learning objects in four steps. Once the user specifies high-level course parameters, selects learning targets and specifies the structure of their lessons, the Curriculum Engine

ACT Integrates Knovation & Looks to Match Schools' Needs

Randy Wilhelm, vice president for learning resources at ACT (Iowa City, IA) after the sale of Knovation (Cincinnati) to that company, has a message for entrepreneurs who might worry about the end game for the businesses they launch.

"There often is concern about the kind of exit you will have and what it might mean for you," Wilhelm told *EER*. "My purpose of helping kids learn every day is really important; it's nice to know that I could find an organization that matches that purpose."

Twenty years ago, when Wilhelm was a cofounder of netTrekker, the business that would become Knovation, he knew there would be a right time to hand off the assets to another organization. "I felt it would be about five

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EER Pulse

Top Accelerators Driving K-12 Innovation

- Learners as Creators: embrace real-world learning experiences that promote student generated ideas and solutions.

- Data-Driven Practices: leverage data about the student experience, measuring engagement and skills acquisition, to inform decisions.

- Personalization: find ways to provide individualized learning pathways and promote student voice, choice and autonomy.

Source: Driving K-12 Innovation, April report from the Consortium on School Networking.

EER District Spotlight: Branchburg Redefines Instruction with a Digital Learning Environment

The Branchburg (NJ) Township school district, a PreK-8 system with three schools, is working to create digital learning environments in classrooms by following a plan that provided devices, changes the instructional materials mix and incorporates technology into daily use.

Branchburg began the deployment of 1:1 Chromebooks four years ago at the middle school level, expanded to be fully 1:1 with Chromebooks for grades 2-8 and provides PreK-1 students with access to iPads as needed for instructional purposes.

Branchburg director of curriculum Jennifer Anderson told *EER* that the instructional materials that had been used in the district were working for students, but there also was a desire to incorporate changes made possible by technology.

Branchburg followed the SAMR model developed to enable teachers to infuse digital learning experiences into their instruction by moving them along the path from substitution to augmentation to modification to redefinition.

Branchburg middle school STEM coach Margaret Emmons told *EER* that it takes time for teachers to move from using technology as a substitute for pencil and paper to the final step, but in Branchburg the Chromebooks now are being used as hoped. "We have so many pieces in place that work together now, your routinely see people

at the redefinition level," she said.

Emmons gave the example of a social justice project that students work on throughout a marking period, using technology and outside resources to pursue learning that is authentic and deep.

Resources Available

In addition to issuing students Chromebooks, Branchburg has equipped its classrooms with presentation systems, usually SMART boards. For this school year, media centers were equipped with Nureva (Calgary, Alberta) boards, which provide a wide interactive workspace, access to content and tools for collaboration.

Branchburg is a Google for Education (Mountain View, CA) school with wide use of Google Classroom.

Branchburg reviews its subject area content on a rotating basis; the district is looking at potential new science resources currently.

Anderson said the district has had problems in the past with some materials not being updated as needed. The district now is seeing more offerings with the dual components of a physical text and online options, which she sees as a middle ground meeting the needs of all.

Some subject areas have moved more quickly to technology than others. World language instruction continues to center around a physical book, whereas the Discovery Education (Charlotte, NC) social studies techbook is used for that discipline.

Branchburg also employs supplemental resources, including McGraw-Hill Education's (New York) adaptive assessment and learning platform ALEKS, with teachers assigning specific content for students to work on in class or at home, or with student moving through the program their own pace.

Branchburg teachers also go to Teachers Pay Teachers for resources, and middle school teachers work together in professional learning communities on lessons for upcoming units.

Partnering with Discovery

Branchburg's relationship with Discovery Education extends beyond the use of techbooks and Streaming media,

as the company has been a district partner since 2010.

In the 2018-2019 school year, Branchburg is launching Discovery's Digital Leader Corps, having district educators participate in DLC and share with colleagues new skills and strategies to accelerate the creation of digital learning environments.

Anderson said Branchburg wanted to better support teachers and find ways for them to explore new options and determine what works best for their students. The structure of the DLC allows that to happen on a larger scale and with quicker benefits than would be realized by teachers attending after-school or half-day professional development sessions, she said. ∎

NetDragon Revenue Grew in 2018

Revenue at NetDragon Websoft (Changle, Fujian, China) grew year-over-year in 2018, with the growth attributed to strong execution in the company's gaming and education segments.

Company revenue in 2018 was RMB 5.04 billion, up 30.2% from 2017. Converting RMB, official currency of the People's Republic of China, to dollars at the rate of 15 cents to 1 RMB puts revenue at $755.6 million. Education revenue was RMB 2.57 billion ($398.5 million), up 21.9% and representing 50.9% of total company revenue.

Company operating profit was RMB 526. 4 million ($79 million), versus an operating loss of RMB 30 million ($4.5 million) in 2017.

Education Business Highlights

NetDragon chairman Dejian Liu described the growth of the education segment's business as exceptional. In China, NetDragon remains focused on driving adoption of its software platforms. At the end of 2018, the installed base of the flagship platform 101 Education PPT in China was 5 million, compared to 1.2 million as at the end of 2017.

"In overseas, adoption of our interactive learning technologies continued to expand rapidly in both developed and emerging countries," Liu said. "As a result, Promethean strengthened its global market leadership in K-12 interactive learning technologies during the year with No. 1 market share in major markets including the U.S. and vast majority of the E.U. countries."

Promethean recorded revenue of RMB 2.2 billion ($330 million), up 25.9% year-over-year.

Liu said the 2018 acquisition of the global learning community Edmodo and its combination with Promethean positions NetDragon to offer a complete product portfolio that can support the learning process, in and out of the classroom with lesson preparation, lesson delivery, student collaboration, homework features, teacher-student-parent communications, education content marketplace and resources sharing.

The online community has accumulated more than 100 million registered users in 400,000 schools across 190 countries. NetDragon believes the member growth will lead to increasing opportunities for monetization.

NetDragon expects to start the online service monetization in the second half of 2019 with a planned launch of a new online tutoring service on Edmodo. Management also anticipates its new Promethean ActivPanel Element Series will accelerate cloud-based connectivity amongst students and teachers, and, together with Edmodo, drive user engagement both in classrooms and at home. ∎

Mission to Engage Students Motivates icivics

At icivics (Cambridge, MA) the mission is to engage students in meaningful civic learning and provide teachers with free resources that enhance their instruction and inspire their students, and the time is now.

Emma Humphries, chief education officer at icivics, told *EER* that the 2016 election was a "civics Sputnik moment" that rattled everyone, regardless of political persuasion, and led to feelings of insecurity about the future of the U.S. democratic republic.

"We are riding a wave right now, in a unique political moment, where there is a very large interest in civic education and we hope that will translate to state-level policy," Humphries said. "We want to be there on the ground and ready with the most effective resources to support learning."

Humphries said some states are models for civics education. Florida, for example, mandates a 7th grade civics course. She would like to see more mandates and robust

standards for civics education. She does not favor the path of some districts that require students to pass the citizenship test, saying that imparts information but reduces civics to a set of facts to be memorized.

For Humphries, civics includes knowledge, skills and a disposition to engaged citizenship. She wants student to know the terminology and information about the different forms of government and foundational documents, but also how the principles of American democracy play out in Washington, the state houses and in local government, while also facilitating early experiences in engagement. Civics differs from an American Government course in that the role of the student as citizen is more robust, Humphries said.

Resources Available

Resources used to teach civics are a mixed bag, according to Humphries, with schools still purchasing textbooks, but also seeking online resources like icivics provides.

"We think there is a growing appetite for different resources," Humphries said. "My sense is that the best teachers out there are pulling from multiple places; they are using the textbook when they have to, sometimes as a scope and sequence for their instruction, but they are going to other civic education resources and piecing together the most meaningful civics lessons for their students."

The icivics content library includes more than 200 resources, with 20 games, 180 lesson plans, and web quests.

Information about icivics originally was shared by the organization's founder retired Supreme Court Justice Sandra Day O'Connor and then spread by word-of-mouth. Now the company uses social media, emails to teachers and an educator network of 200 master teachers to share information.

Partnerships also are important. For example, icivics partners with the classroom tool provider Nearpod (Aventura, FL), which imports icivics lesson plans and activities into their platform.

icivics also builds digital tools with the Library of Congress. In September 2018, icivics released DB Quest developed to teach history and civics using primary source documents and evidence-based learning. It fea-

tures a platform, accessible with mobile devices, that reinforces evidence-based reasoning and document-based questioning to teach students to identify and evaluate evidence, contextualize information, and write sound supporting arguments. Students are transported to dramatic turning points in U.S. history and immersed in the related debates.

Humphries said that technology has changed civics instruction, making it easier to infuse current events and to make civics fun. Also, while textbooks quickly can be out-of-date, technology instantly provides access to primary sources.

Very few teachers train to be civics teachers (Humphries noted that when Florida mandated civics former geography teachers were told to teach it), so icivics works to make teaching civics as simple as possible by providing on-demand, off-the-shelf resources that can be easily implemented in the classroom.

Teachers can download a lesson plan and use it tomorrow, according to Humphries, or play a game once to anticipate student questions and then add it to class.

Schools that prioritize a civics mission can see how it fits across the disciplines, although typically instruction occurs in the social studies space, Humphries said,

Race to Ratify is icivics' First History Game

In March, icivics (Cambridge, MA) introduced its first history game, Race to Ratify, which teaches the big ideas at the core of the ratification debate between the Federalists and Anti-Federalists during the adoption of the U.S. Constitution. The game was launched on the birthday of James Madison, known as the Father of the Constitution, and came after 18 months of work by icivics with educators, historians and game developers. Funding support came from the National Endowment for the Humanities.

Playing Race to Ratify, students travel across 13 states in 1787 to hear from a diverse cast of characters and to play a role in deciding whether the Constitution will become law of the land.

Race to Ratify is available for iPad and Android tablets. An extension pack is available to add context and reinforce game concepts.

reminding that the original mission of American public schools was a civics mission.

Resources from icivics reach more than half of middle school and one-quarter of high school classrooms, with use by more than 170,000 teachers and 5 million students in all fifty states.

The organization provides a full middle school curriculum and has put priority on finishing its half-complete high school curriculum. There are requests for resources for the growing population of English-language learners, prompting translation of some games to Spanish and inclusion of an ELL package with new games. ■

Instructure Expands with MasteryConnect Acquisition

Instructure (Salt Lake City) management described 2018—when revenue was $209.5 million, up 30.2% from 2017—as a year that saw revenue growth, enhanced operating structure and the definition and launch of growth initiatives. One of the growth opportunities for the company, best known for the learning management system Canvas, is in the area of assessment.

In April, Instructure agreed to acquire MasteryConnect (Salt Lake City), which provides software for assessment, including benchmark assessment, and for curriculum planning, along with free apps for teachers. The purchase price is $42.5 million, with approximately $12.3 million to be paid in share of common stock, per Instructure's filing with the Securities and Exchange Commission.

Instructure, which has partnered with MasteryConnect since 2016, sees the acquisition as a way to participate in a shift occurring at the state level with the replacement of high-stakes, end-of-year testing with new assessment models that use formative data to provide actionable insights for teachers and students.

"Together, Canvas and MasteryConnect will place valuable data in the hands of our teachers, not once, but throughout the year so they can focus on activities that increase student learning," Instructure CEO Dan Goldsmith said.

Teachers in more than 14,000 U.S. school districts use MasteryConnect, including Charlotte-Mecklenburg (NC), Oklahoma City and Alpine (UT), with many districts already using both MasteryConnect and Canvas together.

MasteryConnect will continue to be sold as a standalone offering.

Organic Growth & Acquisition

Instructure in July 2017, launched Gauge, an assessment management system that helps schools create formative, interim and benchmark exams, deliver them to individuals or groups of students and provides actionable data that can guide instruction.

In November 2017, Instructure acquired Practice, which brought video learning and assessment modules focused on continuous learning and coaching, initially for its Bridge corporate product but also seeing a potential fit with Canvas.

In February 2018, Instructure acquired Portfolium (San Diego), the free student portfolio network built to showcase the achievements, projects, and competencies of students to potential employers, as its first step into the student success market. ■

Follett Launches Classroom Libraries

Follett (McHenry, IL) in March launched Follett Classroom Libraries, as part of a company push to provide curated collections of resources for teachers and students.

Follett Classroom Libraries, which include fiction and non-fiction from a variety of publishers, were designed to integrate into elementary, middle school, and high school instruction, support teacher practice and to foster independent student reading habits. They also include home-school connection activities.

All bundles are designed around mentor texts with lesson plans, guided reading texts, and independent reading texts. Three types of libraries are available with the launch:

- Social and Emotional Learning, focused on self-awareness, self-management, social awareness, relationship skills and responsible decision-making;

- Next Generation Science Standards, a cross-curricular supplemental resource aimed at activating students' curiosity as they explore life science, Earth and space science, physical science, or engineering and technology;

- Striving Readers, developed to engage all students, but especially those who are reading at or below grade-level expectations and are trying to improve.

The new libraries also can be purchased in combination with Follett's Classroom Ready Collections, which debuted in 2018 and offer vetted and aligned digital libraries of open educational resources for English language arts, science, and social studies. ■

Walch, cont'd. from p.1

assembles a course, which than can be reviewed, edited and published.

Some other educational publishers have talked about the concept of curriculum-as-a-service—for example, LearnZillion in 2018 launched a solution with tools for districts to create, organize, and customize materials that align to their instructional goals—but Noyes said the Walch solution is different in that in empowers the creation of a complete course.

Building a Course

"We are providing a virtual curriculum department, the curriculum department in the cloud—on-demand, with all you can eat curriculum," Noyes said, noting it is more difficult to define the algorithms of course, as opposed to putting together a lesson.

While it may take 12 to 18 months to build a course, Noyes said the Curriculum Engine reduces that time to minutes. The course-building can be done by supervisors, coaches or teachers, with a variety of ways to proceed from using wizards or going straight to forms. The power user can get quite granular but the person who wants to build quickly and efficiently still can maintain quality, Noyes said.

The Curriculum Engine unpacks state standards so that curriculum leaders or teachers can search by standard or skill, identify the content they need and then assemble it in the way that best meets their instructional objectives.

There are several reasons schools might choose to build their own courses, with one being the gaps educators perceive in existing materials, Noyes said, He noted teachers now spend substantial time searching sites like Teachers Pay Teachers, Engage NY and even Pinterest looking for resources.

Walch has built, curated and organized thousands of instructional objects, including open educational resources, that can be part of courses built. Their repository includes resources from Desmos (San Francisco), provider of free graphing calculator and math activities, and GeoGebra's (Linz, Austria) free online math tools.

The types of materials looked for varies by district and teacher, according to Noyes, but he believes Walch make teachers' lives easier by providing them with resources that meet their needs while removing the friction around trying to keep static curriculum up to date.

Noyes said there is recognition that different students have different needs, but there has not been recognition that different teachers have different needs and that resources need to adapt to those needs.

Also, a Course Provider

Walch is a 90-year old company that up until 15 years ago focused on selling supplemental education products through catalogs and dealers to teachers. Seeing limited potential for that business, management went out to the market to explore needs and found educator dissatisfaction with the traditional off-the-shelf resources they had available to them.

Georgia educators asked for math curriculum based on their standards, and Walch worked to develop an aligned, coherent set of curriculum for that state. That work was duplicated in North Carolina and eventually expanded to 10 states. With the advent of the Common Core State Standards, Walch built a series of integrated math courses aligned to those standards.

Walch hears from customers that they also would like courses for middle school math. Developing those could be part of the company's future path.

Walch courses include student and teacher resources and assessments, including consumable print workbooks. The print/digital mix is up to the district. Walch core curriculum pricing is equivalent, or slightly less than, that of off-the-shelf programs, Noyes said.

Walch traditionally has not participated in state textbook adoptions, seeing a better fit working to build relationships with individual districts. Noyes said the number of students using Walch courses in in the tens of thousands. Districts can choose to use the ready-made math courses

as is, or they can edit course sequences, lesson structures and day-by-day content to meet their needs.

Walch courses also can be customized for the platforms districts use—for example, Charlotte (NC) wanted to deliver its curriculum on the Canvas learning management system. Courses built via the new Curriculum Engine can be ingested into any LMS through common cartridge; if a district does not have an LMS, the Curriculum Engine can provide LMS functions. ■

Knovation, cont'd. from p.1

years from the start of the business, around 2004—clearly, we did not do that," Wilhelm said.

There were a lot of years in the middle when Wilhelm was concerned about finding the right buyer, but when he met the management of ACT and saw how that business was transitioning from an assessment company to a learning company, he saw a great, if not immediately obvious, fit. In November 2018, Knovation was acquired by ACT.

Virtually the entire Knovation staff has been retained by ACT, with the company setting up a branch office in Cincinnati.

Wilhelm said ACT works with three pillars of the student experience: measurement, learning and navigation. The ACT standardized test for college admission is the flag-

ship product of the company, but Wilhelm said there is a lot of work to be done to help students get ready for college and careers.

Wilhelm works on organizing learning resources, including those previously part of ACT, and making them available across the enterprise. ACT has been growing through acquisitions, and Wilhelm believes the company will continue to review other opportunities.

Knovation had spent time and company resources to develop a program that could give business partners access to its content and metadata in a positive user experience, and Wilhelm had concerns that an acquirer might want to shut down the partner program.
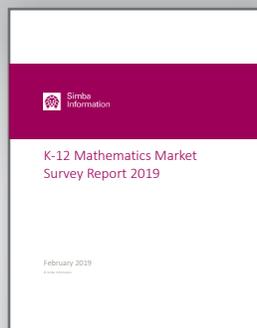
However, ACT was excited about that element and had some of its own partner models running. Wilhelm said the company will continue to choosy about who to work with but sees partnerships as a growing area and plans hiring more staff for that important part of the learning resource experience.

Resources Sought

In terms of what instructional resources customers are looking for, Wilhelm said that is unique to each school because of what they have and where they are falling short.

"On a broad basis, there is a strong appetite for using free and open educational resources in the classroom, so long

as they are organized well and they can be delivered well to students," he said.

The federal #GoOpen initiative and the growing number of state resource repositories are driving acceptance of alternative instructional materials, and Wilhelm said that as budgets get tighter, superintendents and assistant superintendents ask teachers to use content they can find and share.

Wilhelm said many, although not all, teachers like to be artists and creators in charge of what is being delivered to their students, as opposed to just directing the students to a chapter in a textbook.

"Premium paid content from the premium publishers still is valuable, and schools still are spending a lot of money on it, but the shift is on," he said. "I think, over time, we will be seeing more and more created content and curated content used in the classroom—as we postulated 20 years ago." ∎

News Briefs

▶ The learning management system from **itslearning** (Bergen, Norway) received a March update that focused on increasing the functionality of its built-in Microsoft (Redmond, WA) tools, including Word, Excel and PowerPoint, and ensuring that content is accessible to all students.

▶ **Microsoft** (Redmond, WA) in March released Minecraft: Education Edition Version 1.9.0, expanding the number of platforms supports, adding new features and features and fixing issues around improved performance and stability. Users who already have Minecraft: Education Edition installed on Windows 10 and iPad will be updated automatically.

Around the Schools...

▶ **Scientific Learning** (Oakland, CA) is expanding its implementation of its Fast ForWord program in the Norwalk (CT) school district to include students in 14 of its 20 schools. Goals are to address reading deficits, close learning gaps and improve students' academic growth.

▶ The Nebraska Educational Service Unit Coordinating Council selected **Impero Software** (Simi Valley, CA), a provider of remote monitoring and management software for education, as a vendor partner for the 2019-2020 school year, allowing schools to obtain special pricing on the company's flagship product, Impero Education Pro, if they purchase it through the Nebraska ESUCC, by May 15. Impero Education Pro is comprised of three core modules—EdTeach for classroom management, EdProtect for student safety and EdAdmin for network management.

EER Stockwatch 2019
Share Price Values for Instructional Technology Providers, March 20–April 3, 2019 (closing prices)

	Ticker	Mar. 20	Mar. 27	April 3	% Chg. 3/20-4/3	% Chg. YTD
Houghton Mifflin Harcourt	HMHC	$7.17	$7.12	$7.82	9.1%	-10.6%
Instructure	INST	$45.08	$45.77	$46.25	2.6%	25.1%
K12 Inc.	LRN	$32.89	$33.51	$35.10	6.7%	42.5%
Pearson	PSO	$10.89	$11.01	$11.02	1.2%	-6.5%
Rosetta Stone	RST	$22.31	$21.44	$21.57	-3.3%	29.8%
Scholastic	SCHL	$39.60	$39.50	$40.38	2.0%	1.2%
Average for Group		$26.32	$26.39	$27.02	2.7%	16.9%
NASDAQ Nat'l. Mkt. Composite Index		7,728.97	7,643.38	7,895.55	2.2%	21.3%

HMH, Rosetta Stone and Scholastic listed on the NASDAQ; Instructure, K12 Inc. and Pearson on NYSE
Source: Yahoo Finance and Simba Information.