Mapping Digital Transformation

Identifying and Understanding Pragmatic Trends in the Application of Technology to Improve Learning Impact

Analysis of the 2017 Learning Impact Award Winners

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Executive Summary

School districts and higher education institutions continue to enhance learning and academic performance with digital learning. As educators understand and experience its positive impacts, many may wish to incorporate more innovative approaches to improve access, affordability, outcomes, and experiences. **IMS Global Learning Consortium** (IMS Global) is a non-profit, member collaborative focused on advancing edtech interoperability and adoption practices to help higher education institutions, school districts, and edtech suppliers around the world enable next generation teaching and learning environments. In 2007, IMS Global created the Learning Impact program to identify and recognize breakthrough uses of technology in education that are helping to move the industry forward. The innovative ideas that are brought forth through this program help to guide the work of the IMS Global community, which is generally steps ahead of the edtech community at large.

The program has two components—the annual **Learning Impact Awards** (LIA) and this subsequent report—that together showcase evolving educational models and innovative edtech applications that improve learning impact through increased student access, improved student outcomes, and/or greater affordability. Each LIA entry aligns with a **Learning Impact Trend**. The Learning Impact Trend Framework (Fig. 1)—IMS Global's compilation of groundbreaking educational technology trends to help the education community assess the edtech landscape—evolves in tandem with edtech. One example of this evolution is, in 2017, the Framework redefines its "Learning Platform Innovations" trend to "Evolution to Next Generation Digital Learning Environments," reflecting the progression from single learning platforms to broader level innovation. A new Learning Impact Trend was also introduced in 2017—"Digital Credentials and Competency-Based Innovation"—recognizing edtech's expanding role in professional development and adult education to enable innovative competency-based programs to assess and award digital credentials beyond the traditional transcript.

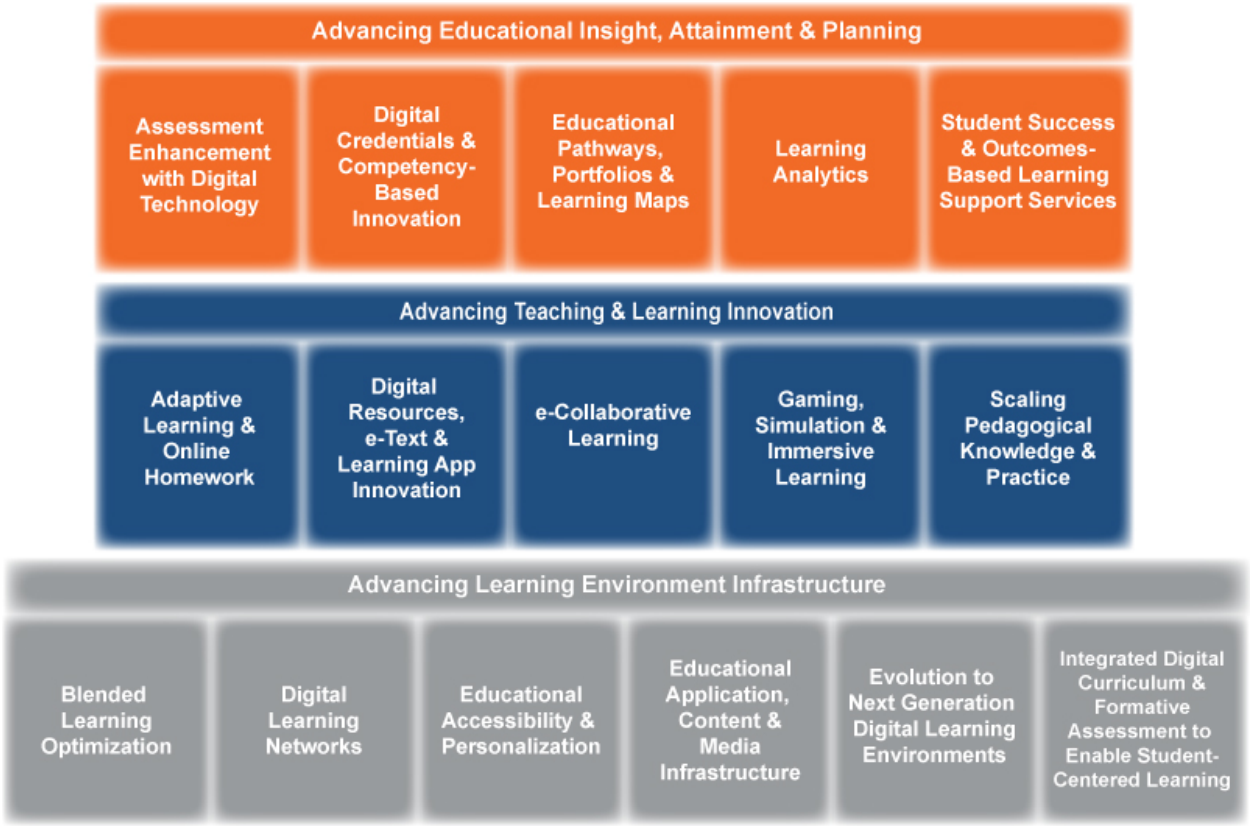

FIGURE 1. LEARNING IMPACT TREND FRAMEWORK CATEGORIES

This report links the 2017 LIA entries with a relevant Learning Impact Trend and synthesizes them into six themes of educational impact:

1 Interoperable Digital Ecosystems Represent the Next Phase of EdTech Adoption Path

2017 medalist **itsLearning and Houston Independent School District** (HISD) and two LIA finalists illustrated the value of an interoperable digital ecosystem, enabling disparate tools and systems to work well together to enhance learning while improving user experiences and leading to better outcomes for student success.

2 EdTech Continues to Alleviate Digital Content Creation, Curation, and Management Complexities

As digital content use grows, so do the complexities around their selection and use. 2017 medalists **University of Central Florida Center for Distributed Learning**, **Trinity Education Group and Texas Education Agency** (TEA), and **McGraw-Hill Education** as well as five finalists presented edtech solutions to facilitate digital content selection, management, and ensure content alignment with academic, state, and accessibility requirements.

3 Technology Rich Learning Environments Produces Innovative Course and Tool Solutions to Address Specific Academic Needs

This category explores edtech's impact across the education spectrum. 2017 medalist **W.W.Norton & Company and State College of Florida** as well as five finalists enhanced the class experience through gamification, facilitated discussion board use, and video. Four finalists showcased edtech solutions that resolved accessibility, course completion, and other learning issues. Finally, 2017 medalist **Infocomm Media Development Authority of Singapore (IMDA)** and three finalists' technology exploration programs introduced preschool and school-age children to today's tech-infused world.

4 EdTech Assessment Solutions Strengthen the Instructor/Student Connection

Edtech continues to enhance student assessment through timely performance evaluation and improvement interventions. Solutions presented by 2017 medalist **eXplorance** and two finalists showcase edtech-based personal feedback, interactive questioning, and written assessment tools.

5 Digital Credentials and Competency-Based Programs Focused on Mapping Learners' Educational Plans and Demonstrating Mastery Gain Momentum

An exciting development in the 2017 LIA competition was the numerous edtech-based adult learning and professional development entries. 2017 medalist **IBM** and four finalists utilized digital badging, competency-based education, as well as online programs and resources to help workers develop relevant skills and credentials for today's workplace.

6 EdTech Decision and Learning Analytics Solutions Continue to Thrive in Today's Data-Informed Educational Environment

The use of data and analytics in education continues to expand as technology reporting capabilities improve. Entries from 2017 medalist **Houston Independent School District** and four finalists demonstrate this range, from dynamic, in-class feedback solutions to data-driven longer-term planning tools.

The 2017 LIA entries map to IMS Global's **Digital Learning Revolution Program**, a strategy for institutions to enact when adopting an open standards-based ecosystem. The program enables both a straightforward evolution to digital and provides the foundation for more revolutionary approaches to improve teaching and learning.

The Digital Learning Revolution Program comprises a four-tiered, evolutionary edtech adoption path: Tier 1) **Commitment**—to utilize IMS Global's open standards and conformance certified solutions; Tier 2) **Foundation**—necessary to build an interoperable digital learning ecosystem that is sustainable; Tier 3) **Instructional Impact**—connect together digital products to enable student-centered learning and other more revolutionary teaching and learning approaches; and Tier 4) **Advanced Insights and Achievements**—to improve insights and reporting of student learning experiences and competencies (Table 1).

The Digital Learning Revolution Program—LIA Award theme connection provides concrete examples of the edtech adoption path, helping educators to visualize as well as actualize their own digital learning revolutions.

TABLE 1. DIGITAL REVOLUTION PROGRAM & LEARNING IMPACT AWARD THEMES

Digital Learning Revolution Program Adoption Tier	2017 Learning Impact Award Themes
Foundation	Interoperable Digital Ecosystems Represent the Next Phase of EdTech Adoption Path EdTech Continues to Alleviate Digital Content Creation, Curation, and Management Complexities
Instructional Impact	Technology Rich Learning Environments Produces Innovative Course and Tools Solutions to Address Specific Academic Needs EdTech Assessment Solutions Strengthen the Instructor/ Student Connection
Advanced Insights and Achievements	Digital Credentials and Competency-Based Programs Focused on Mapping Learners' Educational Plans and Demonstrating Mastery Gain Momentum Ed-Tech Decision and Learning Analytics Solutions Continue to Thrive in Today's Data-Informed Educational Environment

The submission period for **2018 Learning Impact Awards** entries begins 8 January and ends 28 February 2018. Medalists will be announced at the **Learning Impact Leadership Institute**, 21-24 May 2018, in Baltimore, Maryland.

2017 Learning Impact Awards Finalists

IMS Global Learning Consortium's annual **Learning Impact Awards** (LIA) program recognizes applications of educational technology that address significant educational challenges. Regional winners, along with other finalists selected by LIA evaluators, advance to the final round of competition, which is held in conjunction with the annual **Learning Impact Leadership Institute**. Judges assess LIA entries based on the use of technology in an educational institution context, using eight learning impact evaluation criteria: Access, Accountability, Adoption, Affordability, Innovation, Interoperability, Innovation, Organizational Learning, and Quality (Fig. 2). IMS Global announces the platinum, gold, silver, and bronze medalists at the Learning Impact Leadership Institute.

FIGURE 2. LEARNING IMPACT AWARD EVALUATION CRITERIA

In 2017 the broad scope of all the entries demonstrates edtech's growing impact on student success initiatives across the entire educational cycle—from early childhood, through K-16, and into adulthood. Analysis of 2017 LIA entries identified the following six edtech trends:

1 Interoperable Digital Ecosystems Represent the Next Phase of EdTech Adoption Path

School districts' and higher education institutions' predominant focus on transforming teaching and learning is dependent on an interoperable IT foundation

These LIA entries exemplify a growing trend—tying together individual edtech systems and tools into interoperable digital ecosystems, intensifying edtech's impact on learning while facilitating users' ease-of-access and use, thus producing improved user experiences and student success.

itsLearning and Houston Independent School District's (HISD) PowerUp Initiative

[Bronze Medal—Established Projects]

Learning Impact Trend: Evolution to Next Generation Digital Learning Environments

Issue: Closing the digital divide in a major, diverse urban school district by transforming traditional instruction approaches into a blended and personal learning experience.

Solution: PowerUp HUB (HUB) is itsLearning's cloud-based, 24/7 accessible teaching and learning environment; providing a central center of collaboration, personalization, curriculum, instruction, and communication for HISD staff, students, and parents. The HUB includes: 1) a curriculum management system that a) offers lesson planning/sharing linked to HISD's digital content library; b) supports collaborative new content creation; and c) enables the rating and curating of existing content aligned to standards (competencies) in planning guides and lesson plans; 2) a shared digital learning object repository of meta-tagged learning objects; and 3) an LMS with learning, collaboration, productivity, assessment and communication tools also aligned to learning standards. HUB supports the integration of HISD platforms like PeopleSoft and GradeSpeed; and provides single sign-on to all resources. HISD designed HUB to be open, supporting the IMS Learning Tools Interoperability® (LTI®), Common Cartridge® (CC®) and Thin Common Cartridge® (Thin CC®), OneRoster® and Question and Test Interoperability® (QTI®) standards in order to map to Texas Essential Knowledge and Skills (TEKS) and standards' learning objectives, reduce costs stemming from various proprietary formats, and avoid multiple login credentials and passwords. Until HISD and itslearning joined efforts, no other school district or university had ingested this enormous amount of digital materials, tagged for keywords and learning standards to create a customized, highly curated institutional library.

Learning Impact: As a result of HISD's switch to "all digital" at the high school level, English 1 scores among English language instruction, minority, and low-income students rose an average of five points in the HUB's first full year. At the end of the second year, 55 percent of the PowerUp Cohort 1 Schools saw an increase in standardized Math scores, and nearly 90 percent saw an increase in English scores, even as the State of Texas Assessments of Academic Readiness test became more rigorous. HISD redirected HUB-attributed Instructional Materials Allotment savings to purchase literacy materials for elementary as well as middle school levels.

"Not only will the teachers get a chance to use web 2.0 tools and great instructional technology techniques, but they can transfer and transition that to the students in the classroom and really bring 21st century, cutting-edge technology, teaching, and learning to our students. It's a great day for students, and a great day for the district."

—Catherine Smith, Teacher, Austin High School—2017 LIA Video Submission

Saint Leo University created an API-based learning ecosystem to integrate nine commercial platforms into a single immersive learning system consisting of the four main areas—social, courses, whiteboard, and Office 365. A Mulesoft enterprise service bus bridges the non-user facing tools while a D2L Brightspace LMS with Valence

APIs provides the cornerstone of the user-facing tools. Students experience a new teaching context with rich usability, high accessibility, and learning analytics. Real-time behavioral analytics promote new teaching models that boost productivity and collaboration and allow the school's design teams and master faculty to leverage new strategies involving gameful, adaptive, and narrative design. Saint Leo can now better connect the right student to the right program at the right time, and more quickly identify at-risk students. Students say they've never felt more connected to other students outside of their classroom and the university has already experienced a small uptick in retention. Saint Leo's ecosystem aligns with the Evolution to Next Generation Digital Learning Environments Learning Impact Trend.

Many **Colorado Technical University** (CTU) students are adult learners who juggle work, family, and studies; and the University designed its mobile app—CTU Mobile—to weave the student experience into the student's mobile device; helping them to achieve their learning goals efficiently. Students receive CTU Mobile training while on-boarding. The app includes CTU's virtual campus, course content and learning apps, class-related communications, one-touch support to faculty, advisors, and support staff, and time management tools. The free (for students) app works with Apple as well as Android devices. About 80% of active CTU students have the app. CTU's quarterly student web-based surveys show that CTU Mobile users are more satisfied with their University experience. CTU is working to collect data on mobile users vs. non-mobile users regarding course completion, university experience, retention data and more. CTU Mobile aligns with the Digital Resource, eText, and Learning Application Innovations Learning Impact Trend.

2 EdTech Continues to Alleviate Digital Content Creation, Curation, and Management Complexities

Edtech tools help to quickly and easily ensure content alignment with accessibility and state requirements

Effective use of digital resources requires numerous considerations. Not only does content have to meet learning objectives and other academic goals, but also content must be accessible to all individuals and align with state competencies and standards—e.g. Texas Essential Knowledge and Skills (TEKS) standards. These necessary elements further complicate an already involved process. Instructors may be unaware of accessibility standards and may spend extra time locating and selecting state aligned content. These LIA entries help to resolve these issues.

Universal Design Online content Inspection Tool (UDOIT)—University of Central Florida Center for Distributed Learning

[Platinum Medal—Established Projects]

Learning Impact Trend: Educational Accessibility and Personalization

Issue: Helping faculty to quickly and easily self-verify their course content's compliance with Section 508 of the Rehabilitation Act of 1973.

UCF | Center for Distributed Learning
UNIVERSITY OF CENTRAL FLORIDA

Solution: Faculty can request assistance from The Center for Distributed Learning (CDL), where staff manually evaluates course content page for 508 compliance, but this requires hours of work for a single course, creating a bottleneck, and limiting CDL to performing immediate need accommodations. To streamline this process, CDL developed Universal Design Online content Inspection Tool, (UDOIT), an open source, self-service, faculty-facing tool that scans online courses in Canvas for possible accessibility issues. UCF faculty can scan their own courses 24/7 and can view an interactive report about why issues exist and learn about Universal Design best practices. Many issues can be fixed from within UDOIT with the included UFIXIT tool. Faculty can scan their courses as many times as they like, and old scan results are saved for later review. UDOIT follows LTI 1.1 for application launching and authentication; uses the Canvas LMS implementation of Oauth2 combined with the Canvas APIs to gather course content for evaluation; and utilizes third-party integrations to access content that is not stored in the LMS—e.g., YouTube videos. To CDL's knowledge, UDOIT is the first open source accessibility checker specially designed for reviewing content within an LMS.

Learning Impact: Prior to UDOIT, it required an average of one hour of work to evaluate a course and generate an accessibility report. Now, the same task only requires 10 minutes per course. As of Spring 2017, approximately 2,193 scans have been made of 839 courses. Approximately 20% of UCF instructors have used UDOIT. UDOIT's source code is hosted and freely available on GitHub. To date, over 30 institutions have adopted UDOIT and five institutions have contributed code back to the project.

"UDOIT operates under three main goals: to be self-service, educational and to provide actionable results...We're extremely proud of UDOIT, and the positive effect it has had on students, faculty, and online education in general."
—Jacob Bates, University of Central Florida—2017 LIA Video Submission

PCG is piloting its OpenSalt tool with the Houston Independent School District (HISD) to optimize and personalize learning through better management of HISD's digital materials and real-time connections of their assessment and instruction functions. OpenSalt aligns the district's diverse, LMS-stored digital teaching content and student learning data to Texas Essential Knowledge and Skills (TEKS) and the state's English Language Proficiency (ELP) standards. Each third-party publisher aligns its content to a different version of TEKS and tags its content's metadata in different ways—making it difficult for teachers to search HISD's learning content for appropriate content. With OpenSalt, which is based on the Competencies & Academic Standards Exchange™ (CASE™) standard, the TEKS standards are converted into a machine-readable version and loaded into the tool. HISD asks all of its content and assessment vendors to use and tag according to the OpenSalt hosted version of the TEKS. OpenSalt aligns with the Digital Resource, eText and Learning App Innovation Learning Impact Trend.

Edtech solutions and tools help to manage the digital content plethora and transform content into meaningful courses and learning experiences

The types and sources of digital content continue to grow—offering instructors, course designers, and administrators numerous options to create engaging and academically rigorous learning experiences. With this plethora of options comes the challenge of selecting and combining the appropriate content into courses and experiences that effectively meet learning objectives. The following group of LIA entries presents tools and solutions to help instructors, schools, and HED institutions develop, manage, and deliver digital content easily and effectively.

Texas Gateway CMDS—Trinity Education Group and Texas Education Agency (TEA)

[Gold Medal—New/Research Projects]

Learning Impact Trend: Scaling Pedagogical Knowledge and Practice

Issue: Managing and delivering useful, easy-to-access, TEA-approved content to teachers while supporting local district learning solutions and platforms in a large and diverse state.

Solution: The TEA adopted the Texas Gateway, a sustainable and efficient content management strategy, in February 2016 to expand access to quality professional development (PD) training and instructional resources for teachers across the state. It's a one-stop shop, with three main components: 1) The Gateway Content Management & Delivery System and Resources: The primary entry point to the Gateway ecosystem, Texas Gateway for Online Resources, is a discovery and learning object repository that allows any teacher in the state of Texas to find, align, share and curate digital and interactive instructional materials. Every resource is aligned to the Texas Essential Knowledge and Skills (TEKS). 2) The Gateway Courses & Partner Portal portion of the TEA's ecosystem is a highly customized Open edX platform that delivers cost-effective asynchronous PD. 3) Lesson Study & User-Generated Content: Texas educators share lists of curated content with each other and their students, upload and align content to TEKS, and create new exemplary "Lesson Study" content packages with derivative frameworks. The Texas Gateway is powered by a highly customized version of Trinity Education Group's CoreTech products, as well as an integrated version of OpenEdX. Parts of the Gateway ecosystem utilize various IMS standards such as LTI, Thin Common Cartridge, QTI and CASE, with plans to incorporate OneRoster authentication across all Gateway applications.

Learning Impact: The Texas Gateway is offered to more than 500,000 educators in 1,200+ different school districts throughout Texas, even to the most rural areas of the state. The Gateway maximizes cost-savings and utility of state-owned content, saving the TEA more than $1 million annually over the previous LMS-based initiative. Gateway Courses have become a primary vehicle for delivering cost-effective asynchronous professional development, saving hundreds of thousands in outsourced delivery costs.

"The Gateway offers a flexible solution that fulfills a variety of local needs while keeping the system and content administration manageable at the agency level. The Gateway uses a 'create once, publish everywhere' content strategy. Content is developed by TEA within the CMDS and seamlessly delivered to statewide platforms as well as district-licensed LMSs…It enables Texas teachers and school districts to consume that content in the way that best suits their needs."

—Trinity Education Group/Texas Education Agency—2017 LIA Video Submission

McGraw-Hill Education's Connect2 Open Learning Platform for Higher Education

[Silver Medal—New/Research Projects]

Learning Impact Trend: Educational Application, Content and Media Infrastructure

Issue: Building, managing, and delivering digital course content that improves student performance and outcomes while reducing overall course development costs.

Solution: McGraw-Hill Education's Connect2 is a fully customizable, open framework with pre-built content and functionality. It provides instructors with a seamless course design and management system and learners with a personalized adaptive learning solution. Its customizable, modular structure allows instructors to add, subtract and reorder course content, as well as change the overall set-up and values of the assignments. Connect2 also includes SmartBook, McGraw-Hill Education's adaptive learning solution, which provides instructors with advanced data analytics on student performance to help them adjust their course delivery and effectiveness. Connect2 is open and standards-based for seamless plug-and-play integration and interoperability between McGraw-Hill Education's platforms and the instructor's own content, third-party and open resource materials. The platform components are IMS certified for LTI v1.1 and 1.2, Thin Common Cartridge v1.3, Caliper Analytics® v1.0, and OneRoster v1.0. Best-of-breed products—like Microsoft OneNote or OER Commons—can easily be configured as internal apps.

Learning Impact: In the past, instructors and students may have needed to purchase multiple products that were only accessible via multiple logins. With Connect2, instructors benefit from a complete course solution that saves them time and resources when developing, managing, and implementing their course, while having access to external content and tools via IMS Global standards. At the same time, Connect2's adaptive learning technology directly supports students by personalizing the learning experience. Students and instructors access data from instructor-authored assignments, integrated assessments, SmartBook, and other external tools in one place.

"I had a great experience using Connect2. The framework is very straightforward and easy-to-use, and it offers a number of well-developed exercises, tests, and questions that I could easily incorporate into my course. For the first time, I didn't have to spend hours and hours looking around for additional resources."

—Higher Education Instructor, McGraw-Hill Education Connect2—2017 LIA Submission

Follett Discover is a comprehensive set of tools enabling hassle-free access for instructors and students to all course materials. Traditionally, instructors searched multiple publishers' websites, online marketplace websites, or worked with publishers' reps to select their course content. By leveraging LTI within the institution's LMS, Discover users have single sign-on and a personalized experience, providing a consolidated "one-stop shopping" experience, where instructors can add material from Follett's content library, OER materials, and their own created or curated content. Learners purchase and access all their course materials through a single access point, and

can access adopted digital material from previous courses. Discover displays a full price breakout for the course material, so instructors can see the student's total cost of ownership for selected course materials. Follett Discover aligns with the Digital Resource, eText, and Learning Applications Innovation Learning Impact Trend.

University of Phoenix's Dynamic LTI Handler provides seamless access to its content partners' hosted curriculum content and course technology from the University's learning platforms. Before the Dynamic LTI Handler, integration was a lengthy and expensive case-by-case process, involving several different University teams. By supporting LTI 1.0 and LTI 1.1 standards, the Dynamic LTI Handler allows the University to centrally configure and manage all LTI enabled tools, making them available to the resource or course development staff with just a few clicks. Dynamic LTI Handler currently handles integrations to over 70 University content partners with over 300 selectable LTI tools, allowing the University to realize significant savings on technology time and resource costs when integrating third-party courseware and technology into its learning platforms. The Dynamic LTI Handler aligns with the Evolution to Next Generation Digital Learning Environments Learning Impact Trend.

The process of moving student rosters into digital tools can be time consuming and error-prone due to limited tools and complex and divergent formats required by each content partner. **McGraw-Hill's Access Manager** simplifies this process by integrating with source roster data in a district. Access Manager provides an intuitive interface to visualize and remedy errors and an automated means to connect roster data with McGraw-Hill Education applications. Teachers can quickly and seamlessly set up their class rosters and assign learning materials to their students. Access Manager uses OneRoster bulk CSV v1.0 standard, and will soon seek certification for the v1.1 API format. Districts using Access Manager reported a 50% saving in time invested when using this solution to facilitate access for teachers and students. Access Manager aligns with the Educational Application, Content and Media Infrastructure Learning Impact Trend.

Teachers in blended classrooms have to shift from one delivery method to another, from one service to the next. **Florida Virtual School (FLVS) Playbook** is a mobile and web-based app that allows blended classroom teachers to maximize the instructional flow by centralizing content creation and delivery from anywhere in the classroom. Teachers create their daily or weekly lessons using a combination of their own content or by searching the FLVS content database, and drag and drop it to assign their playlists to an individual student or the entire class. As students work through their assigned playlists, teachers see insights on student and classroom performance. FLVS Playbook gives teachers the information they need to make decisions and deliver the right piece of content to the student when she/he feels they need it. FLVS Playbook is a new product just coming out of testing, but FLVS hopes to roll out the app for county, state, and global use. FLVS's Playbook aligns with the Digital Resource, eText, and Learning Applications Innovations Learning Impact Trend.

3 Technology Rich Learning Environments Produces Innovative Course and Tool Solutions to Address Specific Academic Needs

Edtech continues to enhance the class experience through the easy incorporation of new tools and learning modalities

As educators' awareness and understanding of edtech's impact rises, so do their ability to develop resourceful and imaginative ways to address specific learning situations: gamification of study questions, easier discussion board navigation and communication, and adoption of video in courses.

W.W.Norton & Company's InQuizitive Use at State College of Florida

[Silver Medal—Established Projects]

Learning Impact Trend: Adaptive Learning & Online Homework

Issue: Motivating students to complete the formative activities and assessments.

Solution: W. W. Norton & Company's InQuizitive is a formative, adaptive learning tool that employs research-proven, game-like principles to engage students and improve their understanding of important course-specific learning objectives. Students wager points on every question based on their confidence level, gain additional points for hot streaks and bonus questions. InQuizitive's delivers personalized quiz questions to students on the topics with which they need the most help. InQuizitive is device agnostic and learners can access it anywhere. Norton has created over 40 InQuizitive activities for higher education courses in 11 disciplines. Its subject-matter experts map every InQuizitive activity question to the course's learning objectives and where appropriate, maps content to learning outcomes, such as state student learning outcomes. Reports track individual student performance on mastery of objectives and outcomes, and overall classroom metrics. InQuizitive uses LTI 1.1 to integrate course materials with an LMS. At the State College of Florida (SCF), a link to the program is integrated within Canvas and grades are passed back to Canvas's gradebook.

Learning Impact: Over 600,000 students have answered more than 135 million InQuizitive questions at over 1,000 institutions around the world. The average InQuizitive effect is 8.4 points, on a scale from 0 to 100, an improvement of nearly an entire letter grade. The average InQuizitive effect is 13.1 points for classes where InQuizitive was assigned as part of students' overall course grade throughout the semester. In anonymous SCF student surveys, more than 90% said InQuizitive helped them learn the material.

"[My comprehensive essay-based final exam scores] have really improved. Students seem to be retaining the material throughout the semester and they're much better able to integrate it than they used to. I attribute a lot of that to InQuizitive because they are spending 45 minutes to an hour per week doing these assessment activities that ask them to be more interactive and to draw these connections across concepts. The students enjoy it and look forward to doing it."

—Daniel Fuerstman, Associate Professor of History and Political Science, State College of Florida—2017 LIA Video Submission

Traditional text-based discussion boards typically display posts in a chronological list, using indentation to denote how messages relate to each other. The discussions can be difficult to navigate due to the need for horizontal and vertical scrolling, making it tricky to decide which posts to read and reply to. **Nebula**, a free, LTI app developed by Northwestern University for Instructure's Canvas, is a more visual alternative, presenting the entire discussion history via a single interface. It evolved from a network graphic interface where the posts

resemble networks nodes and the links between them are the connections that connect the posts. Participants can view the entire chain of messages in a thread without the need to scroll, clearly delineating in which discussions they are engaged and how well they have included or impacted their peers. In addition, Nebula's companion LTI application, Nebula Instructor, offers instructors the ability to track, score, and message students based on their participation level. A Northwestern Organizational Behavior course experienced a 25% post activity increase on Nebula. Nebula aligns with the e-Collaborative Learning Impact Trend.

eSyncTraining's Adobe Connect LTI integration enables institutions and schools to easily add Adobe Connect virtual meetings to popular LMS systems. For example, instructors can meet with students synchronously in virtual office hours and students can create their own study groups and host Adobe Connect meetings. Other features include single sign-on support from the LMS; class roster synchronization and role mapping to the LMS ensures students join as participants, and instructors or administrators join as hosts. Instructors can load an LMS test, quiz, or survey into eSyncTraining's Edugame gamification cloud, run it in real time inside Adobe Connect, and save the results back to the LMS gradebook. Adobe Connect Room reports are sent back to the LMS course so the instructor can pull attendance information and post the session recording straight to the course resources. Today, over 100 institutions around the world use the LTI Integration for Adobe Connect. eSyncTraining's solution aligns with the Evolution to Next Generation Digital Learning Environments.

In 2015/16 academic year, University of Cincinnati (UC) faculty and students in 35 courses across three colleges piloted **Echo360**'s academic video platform, which marries lecture capture with engagement tools. With Echo360's platform, students can watch class lectures online and on-demand 24/7, ask questions in an anonymous and risk-free way, take time-synced notes, and engage real-time with faculty and peers from a mobile device, tablet, or computer. Faculty can use Echo360's learning dashboard to understand how students interact with course content to improve instruction, engagement and student understanding. Echo360 leverages LTI and pioneered early work on Caliper, both of which allow seamless sharing of student and teacher data as well as grades with UC's LMS, across university data mines, predictive analytics systems, and other university applications. To date, over 75 UC classrooms have dedicated appliances installed that facilitate the automatic recording of lectures, and since Echo360's initial deployment, UC has seen capture and slide views increase from 1,347 to 103,466 and hours of capture increase from 610 to 6,137. Echo360 aligns with the Student Success and Outcomes-Based Learning Support Services Impact Trend.

Ingram Micro's Flexible Integrated Training (FIT) Framework provides immersive business training via 3D Learning (FIT LIVE), Video-on-Demand (FIT On-Demand) and Game-based Learning (FIT Game-On). Content can be consumed as a stand-alone or integrated into other delivery modalities. FIT simulates a real-world learning experience; once students enter the environment, they bond with other students, access content including videos, game-based learning, white papers, and case studies and can take a break by going to the cafe or meeting friends on a soccer field. The FIT Framework includes automatic metric capture to measure engagement and track scoring on game-based missions and skill assessments. Today, thousands of Ingram Micro business partners and associates use the FIT Framework worldwide. Ingram Micro's FIT Framework aligns with the Gaming, Simulation, and Immersive Learning trend category.

NetLearning's KANTAN (Easy) Series is a user-friendly e-learning course authoring service geared for large, international corporations. It enables any person—including those with minimal IT and educational skills—to create and deploy e-learning courses from original materials. The course designer creates a text-based web page and video courses by uploading self-created digital content—e.g., PowerPoints, PDFs, audio and video files as well as other capabilities like Net Live Lesson (live video classroom via internet) and class attendance administration. The testing function can control the learning process by requiring a specified testing score before a student moves on to the course's next chapter. KANTAN records individual's learning activities, which can be tracked and downloaded in a resume format. NetLearning's system and service platform support Caliper

Analytics. KANTAN (Easy) Series supports Japanese, English and Chinese, and is used today by approximately 660,000 users in 6,700 courses at 260 Japanese and overseas companies and universities. KANTAN aligns with the Education Application, Content, and Media Infrastructure Learning Impact Trend.

Edtech-based courses and programs provide innovative ways to improve student success and overcome educational access issues

These LIA entries presented edtech-based solutions to address specific issues: to prepare students for college-level math courses, to ensure pending high school graduates complete a required course, to enhance student access to affordable English instruction, and to facilitate student internships.

Hawkes Learning partnered with University of Louisville (UofL) to launch two emporium-style intervention math courses for not-college-ready math students—GEN 103 for Non-STEM Majors and GEN 104 for STEM Majors—taught through UofL's REACH academic support unit. Instead of class lectures, students meet in a computer-lab setting and work through their lessons with the assistance of Hawkes Learning courseware, peer tutors, and a course instructor. Hawkes's courseware employs a student-centric, adaptive, competency-based approach to content mastery that is supported by a user-friendly interface. The Hawkes Learning web platform is built in HTML5 and can be accessed from any modern browser. It utilizes open standards for data, content, or services—including LTI—so that it is compatible with major learning management systems. Since UofL implemented Hawkes in summer 2016, student success has increased: in fall 2016, 72.5% of students passed GEN 103 and GEN 104, compared to pre-Hawkes rates of 51.5% in fall 2014. Approximately 70% of students who pass these courses earn a passing grade in their first math course in the UofL Mathematics Department. The Hawkes Learning solution aligns with the Adaptive Learning & Online Homework Learning Impact Trend.

Aligned with the Digital Resource, eText, and Learning App Innovation Learning Impact Trend, the **Berkeley County School District** created a new virtual economics course in 2016 that is required for South Carolina high school graduation for students who could not fit this course into their schedule, those who were trying to graduate early, or those who needed to retake the course due to a failing grade. Pearson worked with the district to provide the economics program via the Thin Common Cartridge standards within Canvas, the district's LMS, enabling teachers and curriculum leaders to pick and choose which units to include in the course. The District estimates that $2,000 per course is saved from reduced administrative costs, and broke even for the project's development costs.

English is an essential part of Korean society, but finding affordable English language instruction can be problematic due to a professional English teacher shortage, especially in rural areas, and expensive private education options—e.g., English kindergartens and private tutoring. **Kumsung Publishing's English Buddy** provides an alternative with its multi-level (Buddy Beginner, Buddy, and Buddy EX) e-learning English-speaking program. English proficiency identification, learning, and evaluation systems are automated, so all students receive a similar-quality educational experience. The program features English textbooks from UK and U.S. publishers; supplemented with ebooks, immersion classes, and games. English Buddy has won several Korean accolades, including the 2012 Korean Digital Content Awards grand prize. Kumsung Publishing plans to globalize English Buddy starting with Japan and China, using an IMS-compliant system to support this goal. English Buddy aligns with the Digital Resource, eText and Learning App Innovation Learning Impact Trend.

Republic Polytechnic's (RP)'s MyInternshipBuddy@WORK (MB@Work) workplace learning pilot facilitates 24/7, on-the-go learning and progress tracking for RP interns. Students access bite-sized work-related and technical content, information, and quizzes contributed by RP lecturers and companies via a mobile app installed on their phones. For example, a pre-internship resource section acquaints students with internship company's guidelines and enables students to record their learning experiences in a weekly log. A survey of approximately 800

students over two semesters found MB@Work to be useful: 75% felt they were better prepared for their internship; 74% felt an increase in efficiency; and 65% felt they had improved their skills. MIB@Work's built-in content management system allows for near-universal content-access via the web, Android or iOS. Other organizations, as for example, Civil Service College and iFlix have adopted MIB@Work to onboard their new officers and employees. MB@Work aligns with the Digital Learning Networks trend category.

Early technology exploration fosters technology awareness, creativity and social skills to prepare today's children for the tech-infused workplace and world

These entries showcase preschool and school-age children's introduction to robots, Internet of Things (IoT), and other cutting-edge technologies, and their impact on students' learning and skills.

Infocomm Media Development Authority of Singapore (IMDA)'s PlayMaker Programme

[Bronze Medal—New/Research Projects]

Learning Impact Trend: e-Collaborative Learning

Issue: Provide physical and social activity edtech experiences as an alternative to inactive, passive screen-based computer activities.

INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Solution: The PlayMaker program explored how age and developmentally appropriate technology can be incorporated into early childhood education without adding excessive screen time. It utilizes child-friendly, technology-enabled toys that promote tactile and more kinesthetic learning experiences—including BeeBot, an easy-to-operate robot for young children and KIBO, a robot kit designed for children ages 4-7 to create programs using KIBO blocks. Guided by adults, children are encouraged to explore and find creative solutions and acquire logical thinking, reasoning, sequencing, estimation and inventive thinking abilities. The children work in small groups to develop social and communication skills through collaboration. The technology-enabled toys curated for the PlayMaker program are widely available and the teaching resources available to the public. The program is structured to encourage integration with existing curriculum, allowing educators to customize lesson plans as needed to align with specific learning outcomes.

Learning Impact: Before PlayMaker, no comprehensive technology integration program existed in Singapore's early childhood education. PlayMaker benefited about 10,000 children aged 4-6 years old during its first year of implementation. A post-implementation survey reports that 93% of teachers agreed that the curriculum helped children develop perseverance, creativity, inventiveness, problem solving, and teamwork skills; 94% of the teachers will continue to use the tech toys in the classroom; and 97% of the preschool centers' leaders believed that it is beneficial to continue the program.

"With so much focus on technology and **Smart Nation** (a Singaporean national effort to support better living using technology), we at the preschool level are always looking for avenues to integrate technology into our curriculum. This year we integrated PlayMaker into the learning corners for every classroom. And skills—such as problem-solving,

critical thinking, sequencing, and even communications together with peers and teachers—have extended vastly in the classroom context."

—Ms. Kalamathy, Centre Principal, PCF Sparkletots Preschool—2017 LIA Video Submission

Robots for Early Childhood Education, a 7-month pilot study by the **Robotics Research University, Nanyang Technological University and SoftBank Telecom Singapore**, explores the use of two social robots—named Pepper and NAO—to complement teaching and learning in the preschool classroom. The pilot involved six lessons in collaborative play and interactive storytelling, and recorded observations for each lesson regarding an individual student's cognitive ability, creativity, social skills, independence, and more. Fifty preschool children aged 5-6 and six preschool teachers at two preschool centers participated, and the results show that the social robots helped to elicit the desired behavior from preschool children and imparted a positive classroom management and atmosphere for the teachers and students alike. The Robots for Early Childhood Education pilot aligns with e-Collaborative Learning trend category.

Singapore's Lab on Wheels program aims to spark children's STEM (Science Technology Engineering and Math) interest. Technology is integrated into each of the program's four buses, including Internet of Things (IoT) devices, social robots, laser cutters, 3D printers, and microcontrollers so students can explore robotics, wearables, electronics, drones, coding, and 3D Design. The curriculum encourages self-directed learning and most activities use free software or websites to allow students to continue learning independently after the workshops. In fact, 74% of students polled have tried the activities by oneself at home. Since its inception in 2014, the Lab on Wheels buses have visited 107 primary schools and 33 secondary schools, involving over 52,000 students. Lab on Wheels program aligns with the Evolution to Next Generation Digital Learning Environments Learning Impact Trend.

The Internet of Things (IoT) is rapidly evolving and **Infocomm Media Development Authority of Singapore and ScienceScope Limited**'s IOT@Schools project explored inquiry-based learning with eight Singapore schools, providing proprietary IoT sensors and data loggers connected to an online portal. The project introduced students to big data, who gathered continuous data from the IoT sensors about their environment, designed investigations around it, and shared their findings with student participants in a similar pilot in the United Kingdom. The pilot showed students developed critical thinking and analytical skills when they tried to understand the collected data. The IOT@School project aligns with the Learning Analytics Learning Impact Trend.

4 EdTech Assessment Solutions Strengthen the Instructor/Student Connection

The realm of student assessment continues to expand, providing instructors with new and effective ways to evaluate student performance and trigger timely improvement interventions

The LIA entries demonstrate how edtech continues to enrich student assessment—with enhanced personal feedback mechanisms, interactive questions, and normalized written essay assessment scores.

Bluepulse2—Integrated—eXplorance

[Bronze Medal—New/Research Projects]

Learning Impact Trend: Assessment Enhancement with Digital Technology

Issue: Fostering timely two-way student/instructor feedback and assessment communication, especially for students who are more reticent to articulate their academic needs.

Solution: eXplorance's Bluepulse 2 is an online social feedback platform that enables confidential two-way communication between instructors and students. Students and instructors can initiate and respond to self-identified improvement cycles in several ways: Instructors check in with students by asking a quick question or by scheduling automatic weekly questions to follow course challenges and progress. Additionally, instructors listen to and respond to confidential student feedback as needed throughout the semester. Lastly, instructors send tailored follow-up questions, take necessary intervention actions, and provide student support when needed. Instructors can confidentially prompt for feedback from an entire class, segments of students with similar needs, or individual students—allowing proactive responses to issues and challenges during the learning experience. Bluepulse 2 is a cloud-based solution that is IMS LTI v1.0 certified, and appears as an LTI tool within courses, and can be used through any web browser, smartphone, laptop, tablet, screen reader, or input device via a downloadable mobile or LMS app. It utilizes JSON, XML, CSV, NOSQL; and its future roadmap includes Caliper Analytics integration to drive events-based data sharing.

Learning Impact: Currently, 500,000+ users in 25 institutions in 7 countries utilize Bluepulse 2. Abertay University states, "79% of students said it had made it easier to communicate with their tutor on the module."

"Student engagement through the formative evaluation is an imperative component to retention and success. Receiving in-time feedback with the freedom of anonymity generates pedagogically meaningful relationships between the faculty and student."

—Peter A. Baccile, Senior Director for Online Learning, Washtenaw Community College—2017 LIA Video Submission

Revision Assistant is a cloud-based algorithm-based writing program that compares and evaluates trait-level writing skills aligned to a rubric. It's originally designed to provide students with immediate, specific, actionable feedback while they write, but Newport-Mesa Unified School District (NMUSD) develop an innovative application for its 10,000 grade 7-12 students. Previously, NMUSD English teams dedicated hours of their professional development time to read and score student essays, and then to norm and calibrate that scoring with each other to produce reliable data. Now NMUSD uses Revision Assistant to conduct periodic district-wide benchmark assessments to generate reliable district-wide data on writing performance and growth. In fall 2016, every student wrote a narrative essay in response to a Revision Assistant prompt. Scores were loaded into the district's Illuminate data storage system, and analyzed using custom Tableau dashboards to create normed and objective scores. Educators identified patterns leading to adjustments in practice, professional development, and curriculum. Revision Assistant aligns with Assessment Enhanced with Digital Technology Learning Impact Trend.

Learnosity offers a B2B SaaS suite of cloud-based APIs that enable an organization to incorporate interactive question types as well as authoring and reporting capabilities into any new or existing digital product. A component-based approach—using all or a particular API—gives clients the flexibility to build a completely custom product. Learnosity provides both student specific and large cohort analysis that enables accountability at all levels and comparison across multiple groups of students. Tagging options facilitate granular reports so that educators and students can immediately see how any individual or group is performing against any set of criteria. All Learnosity APIs are specifically designed to seamlessly integrate into any third-party system with a two-way data transfer model and support open standards like JavaScript Object Notation (JSON), QTI, and LTI. Learnosity currently has 21 million active student users from 207 countries and sees 185 million uses of its APIs in an average month. Learnosity's entry aligns with Assessment Enhancement with Digital Technology Learning Impact Trend.

5 Digital Credentials and Competency-Based Programs Focused on Mapping Learners' Educational Plans and Demonstrating Mastery Gain Momentum

Edtech innovations enable learners to explore career pathways, earn competency-based degrees and credentials, and enhance professional skills

An exciting development in the 2017 LIA competition was the numerous demonstrations of edtech's expanding role in adult learning and professional development. Entries present various edtech-based solutions that help employers and workers develop relevant skills and credentials to meet the needs of today's evolving workplace: digital badging programs, competency-based education degree programs and information resources, and online professional development.

IBM's Open Badging Program

[Platinum Medal—New/Research Projects]

Learning Impact Trend: Digital Credentials and Competency-Based Innovation

Issue: Providing relevant, verifiable, and portable skill development to ensure an adequate supply of appropriately skilled workers for today's evolving work requirements.

Solution: The IBM Open Badging program, powered by Pearson Acclaim, launched in 2016, and today issues 665 different badges across 40 different IBM programs. The badges recognize a wide range of learning outcomes achieved across IBM's global ecosystem including MOOC-delivered learning, authorized training courses, and university partner programs. Learners can share their badges on social media and other online destinations. Each badge's metadata clearly describes exactly what a learner learned/demonstrated to complete the training or

experience that resulted in the badge. Clients can quickly verify badged employees' competencies. Acclaim's built-in "Recommendations" feature connects badge earners to relevant learning pathways such as the next course in a series; and Acclaim's built-in labor market insights connect individuals with job opportunities. All of this information is available at no cost to the badge earner from a desktop computer or mobile device. Acclaim's analytics and reporting tools help IBM refine its badge offerings by comparing performance across its badge-offering programs. "Global heat maps" from badge program data show specific skills across its talent pool and geographies, enabling IBM to develop its talent base strategically and effectively. IBM's badging platform is built on the Open Badges standard while Acclaim provides IBM with the open technology to seamlessly connect badge issuing activities with IBM's partner network of authorized issuers, universities and other like-minded organizations.

Learning Impact: IBM's Open Badging program provided increased access to pathways and career opportunities to 168,000 individuals from over 150 countries, and issued 269,296 badges at a rate of 15-20,000 per week. Over half of IBM badge earners earn more than one badge; and 92% of surveyed badge earners indicate that their IBM badge is essential for verifying their skills. IBM digital badge earners report receiving job offers and promotions after their badges were verified.

"Open Badges have been gaining traction for a few years now, but it was the launch of IBM's program that really propelled the technology forward on a professional level. Suddenly, what has seemed to be an intangible "flashy" technology is now a crucial element to a major technology organization's strategy for driving workforce and skills development forward."

—IBM Open Badging Program—2017 LIA Submission

Lord Fairfax Community College (LFCC) developed HigherEd.org, a learning ecosystem and portal, as part of a U.S. Department of Labor TAACCCT grant called "Knowledge to Work" (K2W) awarded in 2014. K2W offers personalized learning plans tied to competencies using Open Educational Resources (OER) in several career pathways, including information technology and health information management, and offers competency-based education (CBE) associate degree, certificate, and adult basic education programs. As part of its TAACCCT grant, LFCC took K2W's competencies, personalized learning plans, and OERs, and made them freely available to everyone via HigherEd.org. HigherEd.org uses IMS metadata standards to organize resources. Learners study on their own terms: accessing the portal anytime/anywhere; creating a personalized learning plan via the MyHigherEd custom dashboard; and setting their own due dates toward goal achievement. Learners identify and track new educational activities to gain competencies and work toward nationally-recognized occupational credentials. HigherEd.org stores notes, saved searches, and preferred resources and highlights new materials of interest. Learners can also contribute their own resources from social media, YouTube, MOOCs, and other sources. HigherEd.org aligns with the Digital Resource, eText and Learning Applications Innovations Learning Impact Trend.

Aligned with the Digital Credentials and Competency-Based Innovation Learning Impact Trend, **Southern (SNHU)'s College for America (CfA)** provides a pathway for working adults to earn a competency-based college degree. Each flexibly paced, fully online program is based on students' demonstrated mastery of 120 competencies by completing authentic, workplace-relevant, scenario-based projects. CfA's LMS is a custom solution based on the Salesforce Customer Relationship Management (CRM) platform, and whenever possible, SNHU integrates new learning systems and content into the curriculum via LTI to make them seamlessly accessible by students within the LMS, and to allow for the transmission of student data between systems. LTI is also used to integrate with external services, such as plagiarism detection software. Since its inception in 2013, CfA's student population has doubled every year, and is projected to almost double again in 2017. CfA has graduated a total of 849 students to date, and on average, students graduate in 2.1 years.

The University of Texas at Austin (UT Austin) developed the **OnCourse Online Professional Development Program** for middle and high school counselors in support of the State of Texas's 60x30TX higher education strategic plan to double the number of Texans aged 25-34 who hold an associates or bachelors degree. UT Austin, in partnership with Learning Objects and Extension Engine, developed OnCourse to help counselors advise students, parents, and educators about post-high school career and college pathways. OnCourse includes a website, a learning objects platform, a customized instance of Open edX, and a message and event layer. All of these components are integrated through LTI, Caliper Analytics, and the Open Badges standards, as well as Extended Transcript. Learners can access and complete Texas OnCourse training, receive verifying micro-credentials of badges and extended transcripts, and review key concepts and skills at their discretion. OnCourse has been rolled out in stages to increasingly larger groups of learners, and feedback from the first 400 users is overwhelmingly positive. OnCourse aligns with the Digital Credentials and Competency Based Innovation and the Scaling Pedagogical Knowledge & Practice Learning Impact Trends.

Pennsylvania State University's (PSU) University Libraries created a digital badge system to streamline the educational content delivery process and to facilitate individual learning evaluation at scale. Each badge entails a series of steps for the learners to work through and demonstrate concept mastery. In each step, instructors can provide background information, give instruction, and/or embed custom learning content from platforms like YouTube. The application uses the Open Badges technical specification, and allows learners to share their completed badges to a variety of platforms, such as the Mozilla Backpack and social media, and link them directly to resumes and other documents. All learners can access the badge program either via PSU-specific authentication or social media platforms. The digital badge system's largest user is PSU's University Libraries to teach essential information literacy skills. Pilot program feedback indicated that the digital literacy digital badge earners showed vastly improved source quality and citation accuracy compared to other students. PSU's digital badge system aligns with the Digital Credentials and Competency Based Innovation Learning Impact Trend.

6 EdTech Decision and Learning Analytics Solutions Continue to Thrive in today's Data-Informed Educational Environment

The expanding range of analytics tools utilize data in new ways—especially in the classroom—to impact student success

Educators harness data's power to enhance educational effectiveness—whether for on-the-fly instructional adjustments in the classroom or for institutional or district strategic planning—as these LIA entries show.

Houston Independent School District's Analytics for Education (A4E) and PowerUser Reporting Environment (PWR)

[Gold Medal—Established Projects]

Learning Impact Trend: Learning Analytics

Issue: Support data-driven decision making with a robust, easy-to-use analytics environment.

Solution: In 2011, HISD began to build an analytics environment comprised of 1) an Enterprise Data Warehouse (EDW), 2) the Analytics for Education (AE4) dashboards and reports, and 3) PowerUser (PWR) reporting/query tools to promote data-driven accountability and decision making. A4E enables quick trend identification of student and school performance and targets key student demographic and performance data to support each school's diverse student body personalized instruction needs. Its dashboards are the district's comprehensive repository of assessment results, widely viewed as an authoritative indicator of overall district performance. PWR provides a dedicated and optimized reporting environment to specially-trained users who create ad hoc queries in answer to very specific questions and build highly-customized reports on demand. The PWR environment also provides all the operational reporting for the district's school offices. Open standards underpin the project, utilizing the OneRoster v1.0 standard. HISD provides OneRoster-based data sets to 16 individual vendors, and is expected to at least double that number by fall 2017.

Learning Impact: High A4E usage by principals, as compared to no usage, was associated with a 3.63 percentage point higher probability of a State of Texas Assessments of Academic Readiness (STAAR) grade 5 reading for previously passing African American students and a 2.67 percentage point greater probability for Hispanics. For African American and Hispanic students who had previously failed STAAR, the difference in STAAR 5th grade reading probabilities seen for high Principal Dashboard usage was 5.88 and 6.78 percentage points higher, respectively.

"The dashboard has really helped us meet our core value of being a data-driven culture because it helps us look at specific student information…and create actions plans as to what we are going to do with the information to impact student achievement and growth. It's a place where all of the data is easily accessible."

—School Official, Houston Independent School District—2017 LIA Video Submission

Kyushu University developed the M2B digital learning analytics platform that operates on top of its Moodle learning management, Mahara e-portfolio, and BookLooper e-book systems. M2B logs all teaching and learning activity, collecting 1.8 million entry records per day, which Kyushu's Center for Learning Analytics manages and analyzes. For example, an active learner dashboard derives students' course activity levels from the logs. The logs feed an analysis tool that visualizes any students and teacher e-book viewing gaps to determine if students are following the subject matter under discussion. Kyushu envisions M2B as an open system to promote adoption by other Japanese universities and K-12 schools. Open source software (Moodle and Mahara) drive two out of the three M2B system components, and Kyushu plans to incorporate an open source e-book system into the system, too. The M2B learning analytics platform aligns with the Learning Analytics Learning Impact Trend.

Aligned with the Learning Analytics Learning Impact Trend, **Kaltura and Blackboard** developed B2, an integrated video analytics tools based on the IMS Caliper Analytics standard. It simplifies the extraction and integration of educational data, using Kaltura's existing LTI integration with Blackboard Learn, the Kaltura framework's existing event telemetry, and Caliper MediaEvent support. Now instructors can see engagement activity via dashboards from Kaltura videos in two sets of reports: one within Kaltura, and another natively within Blackboard Learn. Kaltura B2 aims to increase course quality by providing the information instructors need to increase engagement and optimize content impact, and to make it easier to identify students at risk of poor performance. It will be freely and generally available to mutual clients of Blackboard and Kaltura in 2017.

Purdue's SCOPE in-depth learning analytics tool measures learning activity, provides in-depth analysis of learning tool usage, and allow educators to make data-driven, macro-and micro-level decisions about learning technologies. At SCOPE's heart is the Caliper Analytics standard, so it is designed to work across platforms, integrating and displaying data from both in-house and off-the-shelf commercial products in an easy-to-understand and shared dashboard format. Institutions can determine who is using a particular technology and how they're using it—creating better pathways for establishing best practices and better learning technology

investment decisions. For example, Purdue uses two different classroom engagement tools—one free and one not. SCOPE will enable Purdue to view concrete usage data to help determine which tool should be centrally supported going forward. SCOPE aligns with the Learning Analytics Learning Impact Trend.

University of Maryland, Baltimore County (UMBC)'s Check My Activity (CMA) feedback tool fosters academic success by allowing students to compare their own LMS activity to an anonymous summary of course peers. It's designed to work with UMBC's Blackboard LMS, which is used by 95% of all UMBC students. Students log into the MYUMBC portal, click on an LMS activity's CMA to access a dashboard that shows how active they are in their course, and how active the course is in the discipline. If instructors use the LMS gradebook, students can also compare their own activity with peers earning the same, higher or lower grade on any assignment. Over half (54%) of UMBC students use the CMA. Activity knowledge tends to foster student success; those who use the CMA are about 1.5 times more likely to earn a C or better final grade, or a 2.0 term GPA. CMA aligns with the Learning Analytics Learning Impact Trend.

2017 Learning Impact Awards Program Evaluators

Special thanks to the 2017 Learning Impact Awards program evaluators. This volunteer group serves on an annual basis to evaluate the Learning Impact Award nominations, contribute to the development of the annual Learning Impact Report, and identify priorities needed to evolve the Learning Impact Awards program.

If you are interested in volunteering as an evaluator for the 2017 LIA competition, contact **info@imsglobal.org**.

Nori Barajas-Murphy
Online Learning Consortium
United States

Nynke DeBoer
College voor Examens
IMS Europe

Caitlyn Distler
Volusia County Schools
United States

Gary Driscoll
Educational Testing Services
United States

John Fritz
University of Maryland, Baltimore County
United States

Jeramy Gatza
FLVS (Florida Virtual School)
United States

Melanie Kestory
Volusia County Schools
United States

Jaeho Lee
Sunkyunkwan University
IMS Korea

Lisa Mattson
IMS Global Learning Consortium
United States

Noel Nehrig
Volusia County Schools
United States

Anthony Newman
Purdue University
United States

Megan Raymond
WCET
United States

Colin Smythe
IMS Global Learning Consortium
England

Tsuneo Yamada
Open University of Japan
IMS Japan Society

Tammy Yasrobi
University of British Columbia
Canada

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About IMS Global Learning Consortium

IMS Global is a nonprofit organization that advances technology that can affordably scale and improve educational participation and attainment. IMS members are leading suppliers, institutions and government organizations that are enabling the future of education by collaborating on interoperability and adoption initiatives. IMS sponsors the Learning Impact Leadership Institute, a global program focused on recognizing the impact of innovative technology on educational access, affordability, and quality while developing the people and ideas that are going to help shape the future of educational technology.

801 International Parkway
5th Floor, PMB #112
Lake Mary, FL 32746
Contact us at **info@imsglobal.org** for more information.

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