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Education Technology Optimization and Modernization Primer for 2021

By Analysts Robert Yanckello

Initiatives: Education Technology Optimization and Modernization

A changing environment and market disruptions have forced education institutions to evolve their technology strategy and delivery of their administrative and learning systems. Our 2021 research will help education CIOs optimize their systems to improve efficiencies and maximize outcomes.

Scope

This initiative offers strategies to optimize learning environments and administrative systems for student experiences as well as to sustain digital business acceleration in K-12 and higher education.
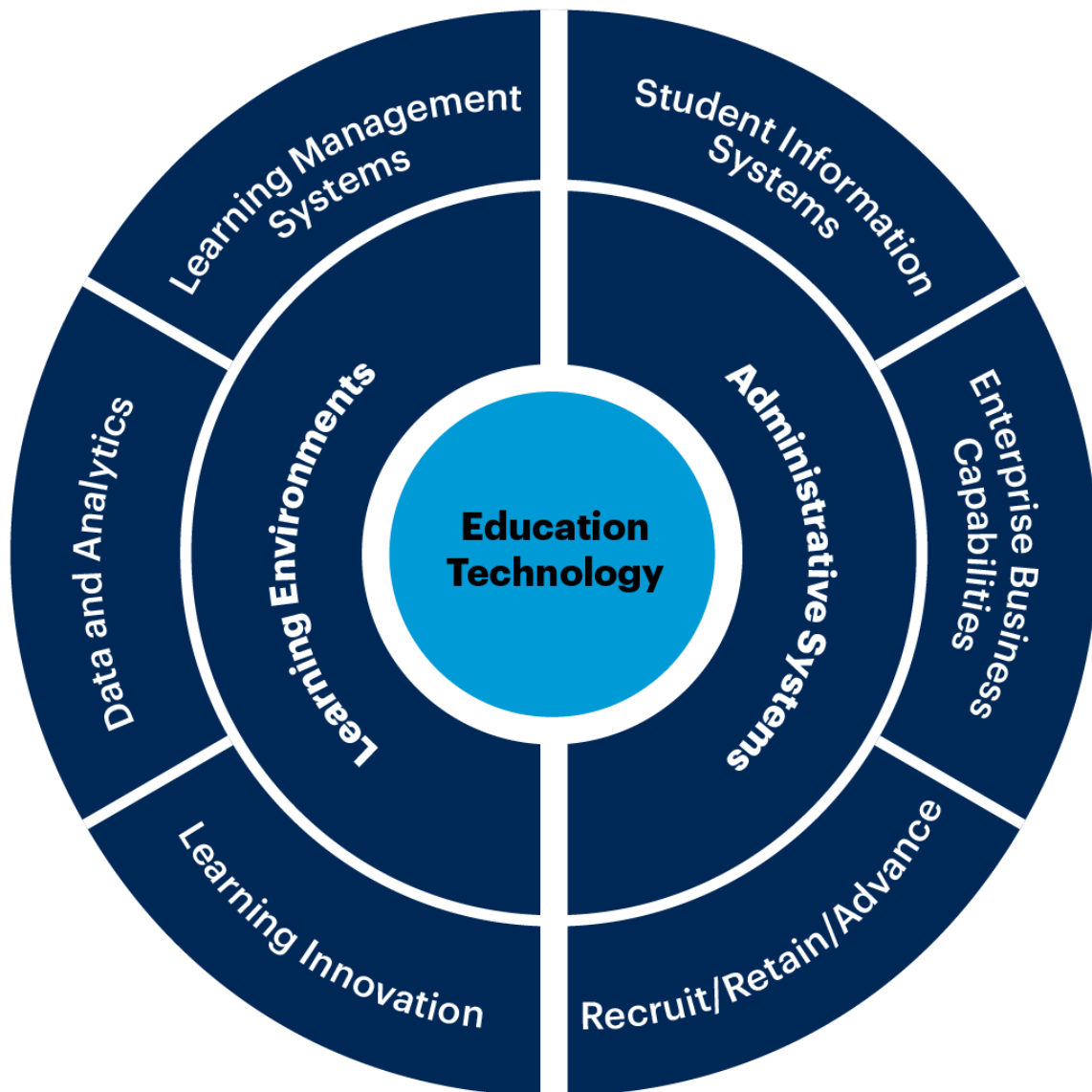
Topics we cover include:

- **Administrative systems**: This topic helps education institutions innovate administrative systems to achieve the modernization and system agility necessary to compose an enterprise education technology platform.

- **Learning environments**: This topic focuses on the strategic and tactical guidance for building innovative personalized and scalable learning frameworks to deliver on the broader institutional achievement objectives.

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Analysis

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Figure 1. Education Technology Optimization and Modernization Overview

Education Technology Optimization and Modernization

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COVID-19 continues to present financial and operational challenges for education leaders, and has accelerated the digital transformation initiative and process for many organizations. Organizations adapt with new approaches to engagement and support innovative academic offerings and delivery options.

More than half of higher education CIOs say that COVID-19 accelerated digital service delivery to key stakeholders (see 2021 CIO Agenda: A Higher Education Perspective). Institutions were forced to adapt

quickly to remote and virtual requirements; yet, many of their learning technologies, administrative systems and operating models already lacked the capabilities and capacity to deliver a remote experience. Market competition expands options for students. Changing demographics and economic and social turmoil will impact education resources and budgets. The numbers of mergers, acquisitions and school closures continue to rise in higher education. Each factor influences how education institutions reevaluate current strategies and delivery models to ensure a sustainable future.

CIOs must leverage the disruption to evolve the recent modernization of administrative and academic systems to sustain the optimization and digital transformation that institutions have been seeking for years. Education should not attempt to return to pre-COVID-19 models. In higher education, past practices no longer support changing university business models. In K-12, past practices failed to support new demands for greater digitalization of schools. Education institutions — at both the K-12 and higher education levels — are working through how they develop, implement and deliver on existing and future plans (see 2021 CIO Agenda: A Higher Education Perspective).

Education organizations are introducing and supporting innovative enterprise capabilities enterprisewide. New technologies are emerging:

- Cross-life-cycle CRM

- Digital credentials

- Artificial intelligence (AI)

- Business intelligence and data analytics

- Virtual desktop infrastructure (VDI)

- Hybrid classroom technology

- Virtual proctoring

- Configurable SaaS solutions

Gartner's 2021 research will provide CIOs with actionable advice to determine the institution's path to build and sustain a modern and optimized education technology platform. Our research spotlights how digital business transformation can enable the institution's outcomes and business capabilities.

Topics

With Gartner's guidance, education CIOs can become enablers of student outcomes and help the education organization achieve its broader institutional mission. This evolution requires a shift in administrative and educational technologies to support new and evolving ways of doing business. These systems will no longer focus on enterprise back-office aspects of the organization, but rather will provide the link to improve the organization's enterprise business capabilities and digital engagement.

The introduction and deployment of innovative enterprise business capabilities will change the role of technology, because it will encompass a broader multienvironment framework, focusing on orchestrating environments and applications to support outcome-based objectives that are flexible, data-centric, offer virtual engagement and support hybrid interactions. Our research in this area addresses the following topics:

Administrative Systems

K-12 school districts and higher education institutions must devise a responsive administrative technology strategy to:

- Optimize workflows.

- Enable effective integration.

- Improve engagement.

- Provide a satisfying digital business experience.

CIOs who effectively lead the innovation of administrative systems position their institutions to achieve success by managing and adapting digitalization efforts as the institution accelerates to its next normal. CIOs need to break down seemingly overwhelming initiatives into digestible components, each:

- Delivering business value

- Taking incremental steps toward sustaining the postpandemic landscape for digital education and hybrid engagement

Questions Your Peers Are Asking

- How do we select, modernize or replace the student information system (SIS) and other core systems of record (SORs)?

- COVID-19 has propelled our digital transformation. How can we further leverage the momentum?

- How do we select and deploy technologies to enable student recruitment, enrollment, retention and alumni advancement?

- How do we build a technology environment that supports a full complement of enterprise business capabilities?

- Should we pause or reprioritize our large administrative projects?

Recommended Content

⚷ Some recommended content may not be available as part of your current Gartner subscription.

- [Market Guide for Higher Education Student Information Systems](#)

- [Higher Education CIOs Can Build a Digital Platform to Modernize for the Future](#)

- [How to Overcome Three Higher Education CRM Myths](#)

- [Market Guide for K-12 Student Information Systems](#)

- [Market Guide for Higher Education Catalog and Curriculum Management Solutions](#)

- [Navigate Mandatory K-12 Education Budget Cuts With a Structured Cost Management Approach](#)

Planned Research

- Continuing publication of Gartner research that includes administrative system advice, such as the education Hype Cycle, education Predicts, the top 10 business and technology trends in higher education, and the top five trends in K-12 education

- Research guidance to help the CIO modernize administrative systems for the future

- Innovation in crisis survey analysis, education perspective

- Assessing the SIS market landscape for both higher education and K-12

- Best practices to help the CIO manage enrollment/admission solutions and the ongoing response to the COVID-19 pandemic

- Guiding the CIO on the impact of digital business on the SIS and other core SORs

Learning Environments

Education technology's agenda should always be based in and originate from the institution's mission, before evaluating technological capabilities. Education institutions need strategies and tactics that will work in an education context to digitally optimize, modernize and even transform their learning environments. This includes understanding:

- Context and drivers for change in teaching and learning

- Key technologies, processes and support models required to sustain the post COVID-19 landscape for online learning, remote delivery and virtual engagement

Questions Your Peers Are Asking

- How do I support remote, online and blended courses and programs at my institution?

- What factors and vendors should I consider when acquiring, reviewing, renovating or replacing my learning management system (LMS)?

- How do I innovate with learning environments?

- How do I implement analytics to improve outcomes and track key performance indicators (KPIs) like student experience, retention, job placement and graduation rates?

- What technologies and/or how do I support blended and co-flex learning?

Recommended Content

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- Higher Education Online Learning Maturity Model

- Use Gartner Reset Scenarios to Move From Survival to Renewal for Higher Education

- Blended Course Playbook

- Market Guide for Remote Proctoring Services for Higher Education

- Develop an Online Learning Strategy Before Launching Online Programs in Higher Education

Planned Research

- Continuing the publication of annual reports that include learning environments advice, such as the education Hype Cycle, education Predicts, and top business and technology trends in higher education and K-12 education.

- Evaluating the marketplace and guiding CIOs looking to optimize or transform learning environments at their institutions.

- Analyzing how higher education institutions are using data to manage student success and how this is likely to evolve and change in the future.

- Assessing the learning environments market landscape for higher education and K-12 solutions for LMS, online learning, assessments, proctoring and online program management (OPM).

- Providing toolkits, case studies and advice for CIOs working with their institutions to begin or expand their online or blended program offerings.

Suggested First Steps

- Higher Education Ecosystem 2030: Planning in the Face of Radical Uncertainty

- The Future of Work Will Demand Changes to Higher Education

- Develop an Online Learning Strategy Before Launching Online Programs in Higher Education

- The Digital University Requires a Fundamental Shift in the Approach to ERP

- How to Overcome Three Higher Education CRM Myths

- 2020 Strategic Roadmap for Higher Education Student Information Systems

Essential Reading

- Top 10 Business Trends Impacting Higher Education in 2020 Top 10 Strategic Technologies Impacting Higher Education in 2020

- Top 5 Trends Impacting K-12 Education in 2020

- Hype Cycle for Education, 2019

- Predicts 2021: Education — Unprecedented Disruption Creates Shifting Landscape

- Putting Higher Education Administrative IT on a Diet

- Higher Education Ecosystem 2030: Planning in the Face of Radical Uncertainty

Tools and Toolkits

- Toolkit: Strategic Roadmap for Higher Education Student Information System

- Toolkit: RFP for Student Information Systems

- Toolkit: Higher Education Online Learning Budget Planning

- Toolkit: Managing Instructional Continuity in Higher Education

- Toolkit: Higher Education Online Learning Budget Planning

Document Revision History

Education Technology Optimization and Modernization Primer for 2020 - 24 January 2020

Related Priorities

Initiative Name	Description
Education Digital Transformation and Innovation	The pandemic has severely impacted education, forcing a shift in instruction continuity and remote learning. With disruptions, enrollment declines and resource impacts, institutions need to adapt.
Application Arch., Dev, Integration and Platforms	Organizations can use this research to build and improve internal competencies to create and scale differentiated and innovative digital products that support digital business demand.

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Initiative Name	Description
HCM Technology Transformation	HCM technologies support enterprise HR processes such as administrative HR, payroll, talent acquisition, posthire talent management, HR service management, workforce management and talent analytics.
ERP	This initiative equips enterprises with the skills and knowledge required to assess, select, deploy and manage ERP in ways that maximize business value.
Analytics, BI and Data Science Solutions	Augmented analytics powered by AI, blurring boundaries between analytics styles, compelling cloud solutions and more collaborative analytics, define the next generation of analytics.
Data and Analytics Strategies	Enterprises need to create a strategy and operating model that maximizes business value while employing proven practices to exploit data and analytics assets internally and externally.
CIO: Leadership, Culture and People	Gartner guidance helps leaders to develop effective leadership skills and competencies, creating adaptive and resilient organizations to accelerate delivering high I&T value across the enterprise.
CRM Strategy and Customer Experience	CRM and CX are critical priorities, but strategies must adapt as the organization, its customers and its environment evolve. Failing to get the fundamentals right puts the organization at risk.