Looking Forward

Digital Transformation Trends in Education for 2021

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With 2020 being defined as the “year of COVID-19”, the pace many organizations—schools and districts included—have taken in adopting a digital transformation has quickly accelerated, in comparison to the reluctance of the past. Schools have now had to suddenly change course and implement contactless interactions, virtual school learning and scenario planning software for the unknowns of the future.

But is the education sector ready for the dramatic change that a Digital Transformation demands? Many believe that it will take IT experts and complex technology to meet the requirements to keep up and stay competitive in this ever-changing world. However, the core requirements are people, organizational culture, and leadership. People who are willing and ready to learn and adopt new ways of thinking, an organizational culture that fosters learning and a digital future and leaders who can lead the way forward.

The journey towards digital transformation in education should lead to a broader vision that enables constant innovation and enhancement of teaching and learning. But it must also improve the operational efficiencies of administrative and management services for students, educators, and the community.

Digital disruption in the industry will force schools, colleges, and universities to transform their learning environments, both physical and virtual, and change the way classes are taught. This change is required to meet the expectations and needs of the students, faculty, and staff of this millennium.

As we look forward to 2021, we realize that the digital transformation is here. It is now and in order to survive and realize success in the future, forward-thinking schools, need to find new and innovative ways to educate students to foster their future success. In this e-book, Edsembli has outlined eight trends in Digital Transformation in 2021 and beyond.
Looking Forward
Here are eight trends to watch out for in 2021

- Increased Investment in Digital Transformation
- Contactless Solutions
- Remote Learning and Virtual Interactions
- Digital Communication Network Upgrades
- Scenario Planning and Investing in the What Ifs
- Artificial Intelligence (AI) Implementation
- Increase in Big Data Tools and Software
- More Investments in Cloud Technologies
Trend #1

Increased Investment in Digital Transformation

IOTNow, a media house, reports that digital transformation has been increased by 5.3 years, while Statista predicts that global spending on digital transformation will double between 2020 and 2023.

What to watch out for in 2021 in K-12 education? Research analysts and tech experts have pontificated this moment for decades, but no one could have predicted COVID-19. With its onset, coupled with Digital Transformation and the need to limit contact, hard copy textbooks of yesteryear will largely disappear from K-12 education. They will be replaced by digital curriculum that will be a mix of activity-based elements and formal instruction. Educators will also be seeking to employ “blended learning” models and mixing learning time between in-school and online—which can be found in many schools now.

In addition, publishers will also need to make changes. To maintain flexible choices on how instruction is delivered, there will need to be a comprehensive collection of digital curriculum content for administration and staff to choose from. Publisher-created digital content is needed to ensure high quality resources and accessible content is available for teacher use.

So, whether your school or district launches a BYOD (bring your own device) program, smart boards, or cloud software platforms, schools and staff need to be ready for what lies ahead.
Trend #2

**Contactless Solutions**

Deloitte reports that there has been a switch to digital technologies that have reduced the need for face-to-face contact

Retail, restaurants, and other businesses across the globe have had to adapt to contactless interactions with their clients to maintain normalcy during this pandemic—and education is not exempt. Schools and districts are quickly finding new ways of managing contactless interactions through the minimization of shared touch points and contactless solutions. Through software platform implementation, schools can utilize payment solutions for fundraising, payments for school necessities, payroll, etc. For example, tailored software platforms can notify parents of missing or upcoming payments. Parents can then easily pay through their accounts online, instead of going to the school’s administration office.

As well, for field trips, special events, community education, or enrichment classes, through an online program management platform, parents can submit registration details, fees, and any additional documentation online without having to mail in or drop paperwork off in person. Some platforms offer contactless check-in/check-out that allows you to check students in on a tablet or computer rather than having a physical sign in sheet.

Particularly for fundraising, parent organizations may not be able to host physical events but finding ways to continue raising money to support school programs is still important. If a school utilizes an online school store, taking donations can be as easy as setting up a donation product to allow community members to contribute online. In place of fundraising events, parent organizations can also get the word out by linking to their donation store product in an email, on their social media pages or on the school website.

Regardless of how 2021 may look in your district, having a plan in place to limit in-person interactions when collecting payments with no contact will help ensure your staff, students and parents stay safe.
63% of respondents to a summer survey by interactive display company Promethean reported that they expect remote learning to experience the biggest growth, followed by virtual learning (54%) and the use of online content and resources (50%).

Due to the COVID outbreak, and schools closing back in March, virtual learning was dropped into the laps of many schools and students. However, the biggest barriers that surfaced for remote instruction, according to teachers specifically, was a lack of access to technology among students and engaging them virtually. At the same time, half of all respondents to Promethean’s survey (49 percent) said the use of technology in the class was “a great way to engage students.”

Regardless of the barriers, this is a trend that will continue into 2021 as organizations and software developers expand cloud capabilities and refine video resources and efficiencies.
There are several areas to focus on for 2021 to make remote learning a success. Here are a few:

- **IT and instructor collaboration.** It remains critical that stakeholders work together to ensure remote learning and virtual classrooms are effective and engaging learning spaces. IT and instructional teams will need to collaborate more closely as districts standardize online resources for teachers and remote learning applications for students.

- **Students access to the proper devices.** Not all students have access to a computer or tablet, but internet-connected devices are going to be critical for remote learning and student success. In some places, it will be up to the schools to provide this digital equity.

- **Adequate in-home connectivity.** In the early months of the pandemic — when parents who could work from home would be in Zoom meetings at the same time their children were trying to learn in virtual classrooms — revealed how critical it is to have enough bandwidth at home. With so many people suddenly sharing the same connection for both work and school, fast, reliable networks will become even more imperative.

- **Professional development.** In the same survey from Promethean, four in 10 survey participants (43 percent) said teachers needed training on the technology. A third (34 percent) reported that their schools had no “formal outlined strategy” for using tech. New learning environments will require redesigning professional development courses, so virtual and blended learning can work in parallel with classroom assignments during normal times and can be easily switched when remote learning is the only option. This may require changing curriculum in teacher training programs to include more instruction in online platforms and on how to choose resources.

During the beginning of the pandemic, many schools needed solutions that could help them manage their schools remotely. Whether your school adopts remote, online or a hybrid learning version of both, moving your administration and program solutions to the cloud is the smart way to ensure the safety of everyone on and off campus.
Trend #4

Digital Communication Network Upgrades

In 2020, 87.4 percent of the Canadian population accessed the internet. This share is projected to grow to 88.3 percent in 2025. Canada’s online audience currently measures 33 million internet users.

Demands of this Digital Transformation movement. As the Internet of Things (IoT) explodes and employees and students continue to work and learn from home, so will the need for more widespread network connectivity. Further, continued investment in communication networks is required to ensure that connections and transfers of data between connected devices can occur faster.

The telco industry, like many industries, has been shaken up this year because of the COVID-19 pandemic. Businesses and consumers have relied on connectivity this year more than ever before as employees have now moved from their offices and into their homes, and many students have began or have continued learning from home—that is all enabled by the network.

Many service providers have been steady adding to their already-established infrastructure by expanding their fiber-based networks to reach more businesses and residential customers. The biggest carriers in North America and across the globe will also continue to work aggressively to build out their 5G network footprints in an effort to be more competitive. Rogers, Telus and Bell have already begun implementing 5G networks across Canada. As well, to align with this trend, in 2019, the Government of Canada rolled out High-Speed Access for All: Canada’s Connectivity Strategy, which aims to deliver 50/10 connectivity to 90% of Canadians by 2021, 95% of Canadians by 2026 and the hardest-to reach Canadians by 2030.
Scenario Planning and Investing in the What Ifs

Currently, internet speeds of 50/10 Mbps are available to 84% of Canadian households.

If nothing else, 2020 has been the year of the unexpected. With that said, scenario planning—making assumptions on the future and identifying and planning for a specific set of uncertainties—will be a strong feature of 2021. Scenario planning allows you to gain insight into key factors, embrace and control uncertainty and recognize assumptions you might be making. If you are a teacher or a member of a school district, you have already experienced scenario planning for the 2020-2021 school year, through the various options for coming back to school. There are currently a lot of what-ifs and unknowns that have not been experienced before, and each scenario (remote learning, in-class, or both) presents a different picture.
Scenario planning is an invaluable tool if you are trying to determine what the future might look like for your schools in 2021 and beyond. While the coronavirus has ramped up our understanding of uncertainty, schools and districts may still deal with blind spots and unknowns.

To manage those blind spots, heading into 2021, here are a few tips:

- **Identify the issues.** Identify opportunity areas that regularly affect your school or district, so you can figure out how to manage them.
- **Separate what you know from what you don’t.** By being honest and flushing out the unknowns, and talking to others, you can work on finding answers to what you don’t know.
- **Map it out.** There may be things you are not seeing, so it’s good to map out the issues, so you can prioritize and come up with solutions.
- **Don’t ignore worse-case scenario.** Don’t have your head stuck in the sand. By ignoring worse case scenarios, you are leaving a lot to chance and 2020 has taught us that worse case scenarios are possible, and you want to be prepared.
- **Keep adapting.** Scenario planning requires flexibility. There is always going to be something that comes up, but how you adapt and plan for it, will guide you in the end.
15% of leaders in Higher Education say:

“AI is a game changer to their institution’s competitiveness in the next 3 years.”
Trend #6

Artificial Intelligence (AI) Implementation

Recent research predicts that the use of AI in the education sector will grow 47.5 percent through 2021, eSchool News reports.

Currently, customization is one of the most critical educational trends. The ability to customize and apply AI solutions that can easily integrate into the education space can save time and improve education efficiency. As well, AI solutions can also identify problems students face while learning. These issues can then be designed to help improve the education system.

Another major AI trend in education is AI-powered educational games. Because games have the potential to engage students while also teaching them challenging education concepts in an engaging manner, vendors are incorporating AI features into games to enhance their interactivity. These can be especially desirable for students who are learning remotely and the educators who are instructing them.

Automation for internal processes will also have a significant impact in the next few years as a result of the development new AI technology. With the development of these technologies increasing, the likelihood of seeing them adopted by educators and schools will also increase.

The following are some everyday tasks where automation can be most impactful:

- **Onboarding.** Whether you’re onboarding a single teacher, a new student, or a temporary employee, automating your onboarding processes can profoundly impact the ease and speed with which you can bring them into the fold and plays an important role in student success.
- **Timesheets.** Make your employees more agile be replacing paper timesheet processes with an automated data input.
- **Absences.** Multiple approval stages can be simplified and ensure that nobody needs to run around chasing down signatures. Automated reminders will reduce bottlenecks.
- **Appraisals.** Automated notifications help to keep users on task, while responsive forms make it easy for supervisors to collaborate on employee development.
As AI initiatives gradually grow and become more sophisticated, it will also become critical to have access to experienced experts who can navigate this new technology and put the right systems in place. To gain a foothold with AI, schools and districts will need the right tools, technologies, and skills.

Looking ahead, the key to AI implementation will be figuring out where to start, ensuring that you are starting out small, and adding to your capabilities over time. The potential applications of AI are so vast, even the most sophisticated organizations can become bogged down by doing too much, too soon and it often comes down to simply having a small goal and building from there.

AI has the potential to transform how schools and districts function, and to empower teachers and learners of all abilities and schools that adopt AI in clever ways are going to show better student success and empower their learners to enter the work force of tomorrow. While we already see this as a trend, AI will increase in 2021 and beyond.
Trend #7

An Increase in Big Data Tools and Software

The education industry worldwide is lagging behind other industries when it comes to adopting big data technology with only 17% implementing it in 2019; however, 74% did indicate that they may use it in the future (Statista, 2019). This is where learning analytics comes in.

There are many tools and software platforms dedicated to automating big data in education. For instance, there are tools used to assess a school’s performance against previously set objectives, such as academic results or discipline levels. They can also help school administration and staff be alerted when a particular student is learning slower than others. In the past, the main clue that a student was failing was in paper test results.

However today, and looking toward 2021, it is possible to provide more personalized learning for everyone and to consider individual interests, personal knowledge, and intellectual abilities. Technology has the potential to enhance students’ learning experiences, improve student outcomes and close achievement gaps, especially when used in the classroom.

These technologies are particularly important today, as they can help districts address potential learning slides caused by the extended school closures of this past spring. For example, data analytics tools can help teachers identify where students are struggling and adapt their instruction to best accommodate them. Additionally, learning analytics can help schools in making better strategic decisions and data-driven initiatives can help schools improve student learning outcomes and accurately measure ROI.

Put simply, big data has the potential to transform the education sector and can ensure that insights are accurate and actionable and can guide teachers in creating personalized learning. When teachers see how students are learning, interventions can be design based on the data, changes can be implemented, and growth can be realized.
Trend #8

More Investments in Cloud Technologies

43 per cent of K–12 and higher education respondents to a CDW and IDG survey cite cloud technologies as essential to modernizing infrastructure, followed by integrating legacy systems with new applications (32 per cent).

Gone are the days when you only rely on information at school or in the office. 2021 will see a renewed interest in cloud platforms. By freeing up schools and districts from relic applications, cloud computing allows worldwide access and is crucial to facilitating virtual learning. The cloud offers unparalleled agility and scalability, allowing organizations to respond to new opportunities and challenges quickly.

Look for web-based platforms that can help you provide superior student experiences, a secure and PCI compliant environment, and above all, safe and healthy environments where students can focus on learning. For K-12, that means school solutions that make it easy to accept payments for school-related fees, simplify administrative tasks, communicate important news to parents and students, and enable them to easily sign-up for school programs.

Supporting and sustaining that kind of innovation requires modernized infrastructure. That’s why many school and districts have migrated to the cloud or embraced hybrid cloud solutions that allow IT teams to easily manage, scale and protect necessary devices and networks. They’re also able to save on infrastructure costs that come with maintaining legacy systems.

K–12 schools were more likely to report they are least well-positioned to meet business goals in modernizing infrastructure (30 per cent), compared with those in higher education (10 percent), which shows that barriers such as limited budget, staff resources and lack of executive support are still very present.