COVID-19 and Beyond

Teaching and Learning at the Speed of Light

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Real World Problems

"When the rate of change on the outside exceeds the rate of change on the inside, the end is near." (Jack Welch, Former CEO, General Electric)

COVID-19 Challenge. Today there is a burning issue facing educators and the public and it has disruption written all over it. Consider this: "How will educational leaders apply what they learn from offering remote learning during COVID-19 to improve learning experiences when: a) students return to physical classrooms, b) parents return to workplaces, and c) weather or health crises require extended school closures in the future?"

Back Story. Up to now schools have offered online learning primarily as a district initiative, an optional resource, or an enhancement to teaching and learning in physical classrooms. As a result of COVID-19, school districts are reacting to long-term mandated closings and social distancing with their current digital tools and resources. These range from offering learning activities in systemwide learning management systems to a potpourri of free worksheets, apps, learning toolkits, videos, and webcasts, web conferences, and webinars to provide learning at home. All of these are revealing major disparities across the 50 United States systems of schooling in: a) student access to technology, b) the motivation and ability of teachers to offer effective remote learning experiences, and c) digital support for students with special needs. The disparities are further accentuated in low versus high-income districts.

Moreover, the quality of content and its delivery by educators are under close scrutiny by parents who have never seen nor expected to support K-12 remote learning with their home computers, mobile and tablet devices, and Internet connections. Many are beginning to wonder: *Is this what online learning really looks like for my children?*

Playbook. When COVID-19 caused extended school closings, there was no playbook for educators to open for supporting quality district-wide student learning at home while parents or guardians carried out their jobs alongside their children. Many

pioneering school districts were able to build on previous efforts, but systemic solutions were rare to nonexistent. Educational leaders are now faced with three jobs to create a playbook for **teaching and learning at the speed of light**:

1. Continue and improve remote learning as available digital resources and strategies allow during extended COVID-19 school closings,

2. Design a quality blend of physical classroom and online learning before schools open to reduce the COVID-19 learning gap and return order to schooling, and

3. Create a new learning model for the future that applies what was learned during COVID-19, emerging best practices, and brave new ideas for making quality, equity, and personalization a reality for all students.

Setting the Stage. Teachers and administrators who use technology effectively know it has improved their productivity in current classrooms and schools. Moreover, they recognize the power and potential of technology to advance their roles after COVID-19. Because of this vision they want to evolve with new curricula, digital learning tools, social media, cloud computing, and professional learning communities. On the one hand, these advancements will help today's educators to improve teaching and student achievement. On the other hand, they will help educators to combine people, teaching, and technology for creating new and better ways of learning. **This approach -- combining people, teaching, and technology -- sets the stage for teaching and learning at the speed of light.**

Current Thinking and Practice

"The field cannot be well seen from within the field." (Ralph Waldo Emerson)"

Status Quo. Most educators still think of integrating technology into their current way of teaching and administering. For example, educators, authors, and thought leaders constantly use the phrase: "integrating technology into the classroom." A shorter version is known as "technology integration." This means putting technology into the **current education paradigm** comprised of physical schools and classrooms. In this paradigm, teaching and learning are typically structured around a 180-day school calendar, a one certified teacher per 25-30 students classroom ratio, required subject matter content and media, courses, and credit hours. In this paradigm, instructional time remains constant and achievement varies. The results of this way of thinking and acting about technology results in the status quo because the paradigm co-opts the technology and sustains the structure of one teacher to a class of many learners. For

example, in specified blocks of time, teachers enhance their instruction with slide deck presentations or smart boards, assign online research projects, and support project-based learning tasks within the paradigm. Students engage in teacher-led instruction; use laptops, mobile devices, or computers to write digital papers and develop media projects; access web-based "classrooms" or LMSs to compete assignments; and complete activities on paper worksheets filed in a 3-ring notebook.

Why does this paradigm of schooling for educating all students continue despite decades of educational reforms and innovations costing billions of dollars? What changes and improvements to the paradigm will emerge post COVID-19? The door has opened to answer these questions with creative solutions. Otherwise, the improvement of teaching and learning will remain confined to the addition of technology within the limits of the current structure of schooling.

Paradigm Shift

"From technology integration to learning integration" (Nicholas Hobar)"

Learning Integration. Educators must begin to"integrate learning into technology." Or "learning integration" for short. That paradigm shift would allow many teachers to help each learner as part of a personal learning community anywhere, anytime with a computer or mobile device connected to the Internet. ***When learning, teaching, assessment, and professional learning get integrated into technology, the status quo is left behind because new roles, strategies, and opportunities are created.***

Pioneers. One of the pioneers of educational technology, Dustin Heuston[1], pointed out many times that "integrating technology into education" is a conventional way of thinking about technology. He points out that it is similar to trying to improve the pony express by integrating a combustion engine into a horse to improve the speed of delivering the mail. As history demonstrated, a visionary competitor worked to invent a new communication process -- the telegraph -- that moved the message at the speed of light. So, no matter how much improvement takes place in the current system, it simply cannot compete with the new system that is driven by advances in technology. What lesson does this teach us? Well, as Heuston points out, the pony express went out of business several days after the telegraph was invented. New learning integration models will require educators to change and to learn and improve the new paradigm over time as the old paradigm becomes obsolete.

The work of Clayton Christensen[2] and his colleagues has opened the path for new and better ways of learning through disruptive innovations and **jobs theory**. Disruptive

innovations don't compete with the current paradigm as they are improved over time. Jobs theory would help educators to analyze the context of learning integration and the jobs needed to be done by students, teachers, and administrators in the new paradigm. This process helps educators to create or select products and services for learning integration that result in student success on valued outcomes.

Visionary Thinking and Practice

"What would teaching look like if students and teachers could learn at the speed of light?" (Nicholas Hobar)

Learning Venues. As a result of COVID-19, students, educators, employees, and parents are thinking more than ever about using technology to learn anywhere and anytime in settings without boundaries. Three learning venues are emerging and offer the opportunities for *shifting to a learning integration paradigm*.

1. **In the current COVID-19 learning venue**, established online schools offer years of experience and best practices, anecdotal efforts abound globally, and pioneering initiatives are underway to provide remote learning. School districts, schools, and individual teachers are implementing a variety of promising, untested, disparate, and loosely coordinated virtual ways to educate all students at home as school closings and business shutdowns continue. Concurrently, school districts are beginning to plan for the re-opening of schools and classrooms with the use of blended learning models that combine in-school and home-based learning in a well coordinated manner.

2. **In the post COVID-19 startup learning venue,** the new blended learning models are implemented to address learning gaps and inequalities caused by the COVID-19 school closings as an integrated component of the regular curriculum. School districts will apply what they learned in the COVID-19 learning venue along with best practices to improve technology integration in the schools and at home. This will include virtual professional learning for teachers and administrators to coordinate the use of technology in the blended learning models. As a result, parents, teachers, students, and the public will begin to recognize and experience better remote learning as a part of the school day and when weather and health crises occur again.

3. **In the disruptive learning venue,** visionary leaders of learning will create **New Rules for Learning** to design, test, and roll out disruptive innovations for making learning integration a reality in school districts, homes, and workplaces.

Let's consider the following scenario. School districts begin to transform into **Dynamic Learning Networks** that offer any academic, technical, social, or professional content to children, youth, and adults. Then, the learning networks become available in **PLACES for Learning©** rather than in conventional school buildings with classrooms and grade levels. These learning networks will be designed to accommodate the developmental levels of learners in homes and these new versions of schools. For example, learners would leave home in the morning to access a seamless integration of personal, virtual, and blended learning in:

- *Core Learning Spirals* for learners ages 4 - 9
- *Exploratory Learning Studios* for learners ages 9 - 14
- *Real-world Learning Spaces* for adolescent learners ages 14 - 18

At the end of the day, learners would return home but still have access to the same learning networks and teachers.

Leaders of learning in our 50 state systems of schooling and their local districts and communities will have the opportunity to create unprecedented models of learning in the disruptive learning venue. In this paradigm, instructional time varies and achievement is dynamic and personal for all learners. And when weather and health crises occur; students, teachers, and parents will have developed habits of mind for exceptional remote learning that will be up and running as a normal part of schooling.

Learning Layouts. Schools as we know them now will begin to disappear as the disruptive learning venue plays out in accessible, affordable, equitable, and quality learning networks. They simply will not be able to compete with the new learning networks and **Learning Layouts**. Digitized and interactive learning technologies will deliver learning layouts through the learning networks to learners regardless of their location. These include Web 2.0 applications that support and facilitate participatory information sharing, user-centered design, and collaboration on the World Wide Web -- and emerging Web 3.0 tools that learn what each learner likes, dislikes, wants, and needs through smart apps and AI. For profit learning companies have already aligned their world wide learning services with information service providers to offer such services through mass collaboration. Also, voice and handwriting recognition, touch technologies, and groundbreaking mobile digital devices that track habits and preferences will become prevalent in personal, public, and corporate settings.

Dynamic Learning. Individuals and teams of students, teachers, and employees will learn on-demand, just-in-time, and in real time. Teachers as we know them now will become developers, curators, facilitators, and coordinators of learning layouts for a variety of learners. **Teachers in the learning integration paradigm** will not control what and how students learn as they do in today's group-based classrooms. They will help each student to meet their learning goals through the learning networks and learning layouts. Their role will be to combine people, teaching, and technology to support the operation of learning networks and learning layouts. This will lead to unprecedented growth in people and smart skills as technology supports them to work effectively both virtually and in face-to-face situations.

At the frontier of today's focus on **standards-based learning**, "Dynamic Learning" will emerge and become accepted as a new paradigm learning process. In short, Dynamic Learning involves a **benchmarking process** that takes the best of current student work and makes it better continuously. Dynamic Learning will help students, educators, parents, and stakeholders to learn more about what students learn by letting "learning" happen and, then, by analyzing what has been learned, post hoc. This process applies the best of what is learned and shared by students as the current standard of quality with no preconceived limits. And because of smart technology apps, any standard gets "refreshed" by dynamic student learning and not by a drawn out content standards development process.

Using Dynamic Learning means that each time learning activities are completed and shared through technology, a student(s) may establish a better product or performance than the current standard of quality -- on local, state, national, and global levels. This means student performance drives quality improvement of learning networks and learning layouts.

Today's classroom structure and teacher-pupil ratios make this type of learning growth impossible. Newer versions of integrated digital media, learning, and professional learning tools will act as professional devices for accessing, organizing, and offering services to students through learning layouts on the learning networks. The focus will be on how to deliver and adapt learning layouts to meet the needs and interests of learners rather than to offer a standardized curriculum. In all of these cases, learning improvement companies such as LearningFRONT will support this new role of combining people, teaching, and technology to create new and better ways of learning.

Advancing Frontiers. Learning networks and learning layouts will emerge, shape, and continuously advance new knowledge generated by the communities of learners in a

network. Students and teachers will generate data and apply knowledge to real world circumstances. They will change from being recipients of predetermined content to contributors of new knowledge in learning layouts. Success in the use of learning networks and learning layouts will occur initially in disruptive innovation settings as described above. Then, rapid improvements will follow in learning network and learning layout capacities resulting in unprecedented public satisfaction about the way children, youth, and adults learn. The highest level of success will be achieved when learning network learners continuously improve and apply their knowledge and skills to personal and professional growth and real world applications. Furthermore, learning networks and learning layouts will become the benchmarks for the delivery of public, independent, and for-profit education rather than for schools to continue as places that integrate technology into the status quo.

In the Disruptive learning venue, schools will evolve from conventional buildings students attend to places for learning where people turn on digital resources to access learning networks and learning layouts. In short, learning integration will replace school buildings and classrooms as we know them now and become the primary delivery system for education.

> *And people will combine what they do best -- nurture and support learners -- with advanced digital technology to do what it does best -- process data, information, and knowledge at the speed of light.*

Moreover, each student's digital technology resources will extend the learning process to anyplace on earth and beyond because of the learning networks. LearningFRONT is dedicated to become a worldwide leader in professional digital learning products and services that support this vision of learning during COVID-19 and beyond.

Contact

Want to design an interactive webinar to generate visionary thinking in your learning community, school, district, business, or organization about new paradigm Learning Networks, Learning Layouts, and PLACES for Learning©?

We will work collaboratively with you to plan and carry out a "thinking at the speed of light" webinar to support visionary thinking about combining people, teaching, and technology to create new and better ways of learning.

Also, you are cordially invited to join LearningFRONT, become a colleague, contribute your ideas and content, and **create professional learning raves** to improve teaching and learning!

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About Nick Hobar

Contact Nick Hobar

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Author's Notes:

[1] **Dustin Heuston:** I learned about the concept of learning at the speed of light through many personal meetings with Dustin Heuston and by reading many of his professional papers. I dedicate my use of his idea, "learning at the speed of light," in this paper to honor his numerous innovative contributions to education.

[2] **Clayton Christensen:** I read Clayton Christensen's book entitled, *Disrupting Class*, and discovered the power and potential of a "disruptive innovation" for improving teaching and learning. I believe disruptive innovations and Christensen's applications of *Jobs Theory* represent the best pathways for changing and improving schools and other learning organizations during COVID-19 and beyond.