Issue Brief

What Could Be Wrong with your Digital Curriculum? The Digital Point of Divergence

Executive Summary

There is a big difference between curriculum that is merely digitized and new digital resources. Telling the difference can lead to better learning results. To digitize is to barely alter the formerly analog object, to make digital is to use the full depth of technology to transform.

The distinct point of divergence is within the design because it is digital. It's the content itself and not just the framework system. Far too many schools are failing to acknowledge this critical point as they select, or have teachers build, digitized learning resources using basic electronic tools which are usually lesson steps and worksheets as electronic documents, some links and maybe video.

What's happened is that many teachers and schools made a lateral move with devices, automating their traditional methods, sometimes from the viewpoint of having to use tried-and-true multi-step instructional design methods like the ADDIES model. Teachers have also been inclined to look to past successful lessons and simply put those into PDFs. Yet digital instructional design has qualities that defy the usual instructional design methods and are definitely

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Discussion of digitized versus digital, leveraging teacher humanity with high quality digital curriculum resources and systems for greater efficiency and effectiveness.

"What's clear today is that there are two starkly different skill areas, digital instructional design, and regular, although both are necessary. Regular instructional designers with many years of experience are typically more steeped in things like age-relevancy and can tell you instantly if a fourth-grader will 'get it' on any visual design or know to create a sequence perfect for teaching fractions. We need these people.

A digital instructional designer starts from a different place than regular instructional designers or teacher lesson planners. A digital designer starts with already knowing how to write the face of an Internet page, how to build correct and easy navigation, the disciplined use of graphics and font sizes, cinematic scripting, integrating sound, simple single-looping (pre-templated motions), full-motion animation, text lengths, user element manipulation, and color choice – all in a careful mix to cause learning on any one topic. Then, what to use next to pull the student forward into yet more content. They may also be a back-end developer aware of the use and types of data tables/fields, the weight of video streaming on networks, and how to build algorithms that auto-recommend students down interesting crumb-paths of knowledge.

Therefore, the move to digital is part tech art, part practical, and pure magic when done together. Digital design skills imbue the entirety of instructional design with a different directionality than someone who is not trained in these discipline areas."

LeiLani Cauthen
the Learning Counsel

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not just digital documents. True digital instructional design can potentially dramatically increase comprehension and actual learning when the full breadth of machine capabilities is used.

While this is not to say that many of the teacher created materials are not effective; the fact is moving to digital instruction is commonly just a lateral move, an automation and digitization of existing instruction. It doesn't really change anything and perhaps the volume of investment should expect a lot more. It should expect a transformation. In addition, as old models are transferred over, they carry with them a certain linearity, missing the digital capacity for non-linear adaptive learning that can access resources at will around the edges of the usual scope and sequence in a course of study. As one example, words can hot-link to definitions, short film clips, even dimensional graphics that show complex concepts that can be manipulated on touch screens. These types of things are the true promise of going digital to improve learning. Going digital is not just to make sure students are able to keyboard and navigate computers before they graduate.

Remaining analog-linear in thinking through lessons may also be what underlies failures in translating teaching fully into the digital realm. By adding digital in a linear fashion, teachers get more of a burden to manage rather than less. Expectations of being able to fully personalize for every student remains difficult because the digitized-not-digital lessons are still fairly manual to administer. For example, answering every social or email message takes more time than live question answering in a classroom, incentivizing teachers to largely remain whole-group learning oriented. In addition, administrators usually expect more data entry and analytics outcomes, and that reporting adds yet another level of burden. It's time to think about the digital point of divergence, the real capacity of digital resources, in helping justify the massive tech investments by delivering better results.

A Digital Assistant for Teachers

The first concept for schools to grab onto is that digital should do something for teachers, not give them a larger amount of work. Curriculum designed for digital offers a liberating canvas that may be more non-linear while also more efficient than traditional instruction if you are a true software developer. When using all aspects of digital curriculum, one can rise to a new level of art like great movies combined with great digital games and the precise electronic routing of UPS packages. In so doing it becomes a full-time teacher's aide. It can carry some of the weight of the teaching and allow more time for teachers to fine-tune learning for specific students, doing the great teaching they are hired to do. In the learning process, digital curriculum allows an individual student a full-immersion, fixing attention and showing concepts interactively. Digital can even screen-jump to other data and live interactions, and back and forth, leveraging the Internet tangentially so each student gets help for individual concepts as needed. Being digital, teachers can "look in" on these activities as students learn, swooping in with learning fixes.

The kicker is, again, the fact that this level of digital requires professional software developers. It requires using research-based and learning science strategies about how students learn and determining how that can be applied to digital resources. It would be hard to expect this of teachers who, in the course of overseeing multiple students and large numbers of

academic standards get covered in limited time, can't easily also be graphic designers, professional film-makers or video editors. It would take away from their human teaching skill to also have to do minor coding changes or write algorithms to cause integrations.

Expectations of Students

Learners now experience such a level of design and sophistication on the Internet in their personal lives that experiencing coursework at a lesser level presents an obvious contrast. This is another incentive for schools and teachers to level-up their expectations of digital content.

Coursework that incorporates highly skilled pro editing, graphic design and flawless navigation offers an immersive learning experience that matches the high level of user experience for which the learner has become accustomed. Designing for digital creates student agency and heightens achievement. Pro content, available from companies like StrongMind and others, ignites the learning process and expands the boundaries of instruction, allowing learning organizations to provide a content-rich experience for their learners.

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Effectiveness

Utah Senator Howard Stephenson spoke at the Learning Counsel national Gathering in November 2018 about "the power of deliberate practice" using adaptive digital curriculum, and how teachers "can exponentiate their capacity by trusting the machine." He makes a promise to teachers and faculties in his state and nationally that "at least 90 percent of students will achieve grade level proficiency in math and reading in a single academic year if these tools (digital curriculum) are used with fidelity." He cites real-life results with bar graphs and percentages. He is additionally adamant that there are other non-cognitive benefits he's seen including: student self-confidence, the prevented stigma of grouping students because the software does it invisibly, a sense of well being because of continuing achievement personal to the student, positive attitudes towards schools, fewer absences and social-emotional growth.

Senator Howard Stephenson, State of Utah, Nov. 29th, 2018

Senator Stephenson also cited that many students are now arriving to Kindergarten having used digital curriculum, studies of which show they already know everything usually taught for the first year by traditional teachers. American consumers, in fact, are already on to the trend of using digital curriculum at a rate of spending that is almost double what schools spend on professional digital curriculum.[1]

The combination of these two disciplines, instructional design and digital design, requires a new skills list and refined interplay between the two.

The rise of a fantastic number of consumer learning-oriented Apps is itself independent evidence that professionally created digital is effective because a significant portion of App purchase is referral by other pleased users. Between the IOS Play Store and Android's Google Play, there are approximately 4.8 million available Apps, with an estimated 875,000 marked for education. These Apps, created by outside professional content designers, deliver user experience that was unheard of even five years ago to earn their way.

Design Divergence

The traditional role of the instructional designer has typically been related to needs analysis, designing learning outcomes and understanding the psychology and science of learning to develop quality learning with step-by-step methods of execution. But there is a whole other disciplinary area -— those designers who focus on more concrete skills such as digitally building learning objects, graphic design, user-experience design, technical writing and all the other bits that go into content creation. The combination of these two disciplines, instructional design and digital design, requires a new skills list and refined interplay between the two.

- Needs Assessment
- Learning Outcomes
- Learning Objectives
- Research Skills
- Content Curation
- Inspo Divination (a designer word for inspiration, getting creative and aesthetic ideas)
- Inspo Fractional Distillation and Correction
- Technical, Creative and Script Writing
- Graphic Design
- Animation
- Filming/Lighting/Production
- Video Editing
- HTML/CSS/JavaScript/JSON/xAPI (Writing Web Pages)
- Interaction Design
- Audio Engineering
- Project Management
- LMS Integration
- Technical Troubleshooting
- Copyright Law Familiarity
- Interpersonal Communication Skills
- Full-Stack Development Expertise

the LEARNING COUNSEL
Research and Context on the Digital Education Experience

The Learning Counsel helps our subscribing 215,000+ education professionals in the K12 and Higher Ed sector gain research and context on the digital education experience. Our mission is to help districts and schools reach real transformation through strategies for digital content & curriculum. Through consulting services and research, to events, custom publishing and online editorial, the Learning Counsel provides dynamic and diverse opportunities for private and public-sector leaders to collaborate for positive change.

LeiLani Cauthen
CEO & Publisher
the Learning Counsel

Well versed in digital content and curriculum change, the adoption process, successful strategies, and helping schools understand what's available and what will work, LeiLani often writes on the changes and future of the education space. She is a media, research, marketing and sales professional with 26 years of experience in the high tech, government and education sectors.

Charles Sosnik
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Charles has more than 30 years' experience as a journalist and editor, with a diverse background in magazines, newspaper, television, radio and digital media. For the past ten years, he has been immersed in education, helping to bring context to the ongoing narrative.

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As you peruse this list of expertise needed, its easy to see that what could be wrong with digital curriculum in schools is that it is digitized, not digital. The exact point of divergence is the content. Not just the knowledge component of the content, but the professional digital content design.

The best-in-class content also will naturally include settings levels for differentiation for students, data analytics, and reporting customization. It can be crafted in "chunked" modularity so that it can flexibly be used across multiple grades for personalized pacing and transported easily into different framework systems whether a data warehouse, Learning Management System or Learning Object Repository.

Schools choosing more digitally crafted resources can use them across a variety of district programs such as blended learning, textbook replacement, remediation/intervention, alternative education, virtual education, credit recovery, and for students who just want to explore more than what is on their syllabus.

What could be wrong with your digital curriculum is that it has not crossed over the digital point of divergence and arrived in the present with a new level of craft, effectiveness and engagement for students. ❖

Source:

1. National Gathering Video of Utah Senator Howard Stephenson:
https://www.youtube.com/watch?v=kn3FqAXT_xM

Underwriter for this Brief

StrongMind is dedicated to fostering student success and igniting a passion to learn. StrongMind's standards-based, digital courses provide a rigorous, immersive, and future-thinking curriculum with technology-enhanced assessments, scaffolding to support success for all students, data analytics, and dynamic reporting for stake-holders.

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