

Solutions for Digital Learner-Centered Classrooms

Evaluating and Assessing Tools in the Digital Swamp



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Table of Contents

About the Authors	vii
Chapter 1: Alive in the Swamp	1
The Push and Pull of Change	2
The Stratosphere Agenda	3
Hidden Dangers	6
What's the Point of All This?	16
Chapter 2: The Digital Swamp Index	19
Pedagogy	21
Clarity and Quality of Intended Outcome	22
Quality of Pedagogy	24
Quality of Assessment Platform	28
System Change	31
Implementation Support	31
Value for Money	35
Whole System Change Potential	37
Technology	40
Quality of User Experience and Model Design	40
Ease of Adaptation	42
Comprehensiveness and Integration	43
Chapter 3: Using the Index	47
The Index	47

Application	48
Conducting a Workshop	51
Chapter 4: The Learning Revolution in Education	57
References	65

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Chapter 1

Alive in the Swamp

The digital swamp is alive and growing—murky, uneven, helter-skelter, dangerous, and exciting, with an ever-changing ecology. The purpose of this book is to provide you with one powerful tool to navigate your way through the swamp. But a fool with a tool is still a fool, so we need to give some context, which we provide in this chapter. We believe that it is accurate to say that the vast majority of the use of digital in schools around the world is either nonexistent or superficial when it comes to learning.

The history of technology (or *digital*) as an educational innovation can be summed up in one word: *acquisition*. That is, the main strategy seems to be “buy and keep on buying” (Laurillard, 2012). One example comes from the Los Angeles Unified School District (LAUSD). In June 2013, with 700,000 students, 1,100 schools, and 46,000 teachers, LAUSD contracted \$1.3 billion for the purchase of iPads. By August 2014, the contract was discontinued. An external evaluation conducted by the American Institutes for Research found that only 1 out of every 245 classrooms was using the curriculum. Other findings included a sample of classrooms in which 26 percent were using the iPads for whole class instruction and 16 percent were using them to access the Internet (Margolin et al., 2014). In short, superficial use or non-use was the norm. This is not surprising. The focus needs to be on pedagogy and implementation into classrooms,

not on fast-tracking to the future through high-profile digital acquisition. The allure of the shiny objects in the swamp seems irresistible—purchase the future, the swamp beckons.

One of us did say in 2011 that technology was a wrong driver for whole system reform (Fullan, 2011). Yet, the tendency continues. The digital train leaves the station time and again with passengers on board who seem to be along just for the ride. In this chapter, we set the context for reversing the trend. If used properly, digital can be an amazing accelerator for deep learning. We set the stage with three concepts: the push and pull of change, the stratosphere agenda, and the hidden dangers in the swamp.

The Push and Pull of Change

The first big push of change is that the vast majority of students are bored with traditional schooling. For example, in one study, the percentage of U.S. students enthused about school across the grade levels declined from a high of 95 percent in kindergarten to 37 percent in grade 9, as seen by teachers (Jenkins, 2013). Similar findings apply to most countries. Ask students themselves, as Russ Quaglia and his colleagues have done, and you find that the percentage of students engaged drops dramatically from grade 6 to grade 11—from 87 percent to 69 percent in terms of “I put forth my best effort in school” and from 60 percent to 32 percent for “teachers make school an exciting place to learn” (Quaglia & Corso, 2014). There is only one thing worse than being bored, and that is having to teach the bored! And, sure enough, one principal told us that the teachers were bored, too, but they didn’t know it (until they experienced something different—which we will get to later in this book). The teaching profession as a whole does not do much better. Policies based on other wrong drivers, such as carrot-and-stick punitive accountability, add alienation to boredom.

So, students and teachers are being pushed away from traditional schooling psychologically and, in many cases, literally. This

Chapter 2

The Digital Swamp Index

For all the reasons discussed in chapter 1, there is a great need for some guidance in how to navigate the swamp. This guidance must help sort out, improve, and integrate the three big forces of Stratosphere: technology, pedagogy, and system change. To this end we have developed an index—the Digital Swamp Index (DSI), or simply the Index (see figure 2.1, page 20). We have made the case that there is a rapidly growing need for such an index as systems waste millions and millions of dollars, time, and energy on dead ends. The good news is that there is a growing and urgent desire to improve learning and deepen its outcomes. Accompanying this is a greater willingness to see digital as an accelerator. By and large there is no longer resistance to digital (if anything, there is too much willingness to jump into the deep end), but more a series of questions about *how* to approach the matter. People are desperate for help on what to do and how to approach the myriad of possibilities. In this chapter, we describe the Index itself. Chapter 3 focuses on its use.

We developed the Index in response to the changes in digital technology and a renewed focus from entrepreneurs and educators on improving learning outcomes. The first objective of the Index is to

The Index poses the following questions for guidance under the pedagogy subcomponent:

- How refined is the pedagogical underpinning?
- Does the pedagogy reflect the latest global research including the emphasis on inquiry, constructivism, and real-world examples?
- Are students at least in part encouraged to learn through inquiry?
- How is the learner engaged?
- How is the teacher's role defined? Is the role reflective of the "teacher as activator" relationship?
- Is there a student-teacher partnership?
- Is the pedagogy consistent across the innovation and the system?
- Is there a shared understanding among all the teachers involved?
- Does the model include an emphasis on the necessary psychological and intellectual processes?
- Is there a mechanism in place to ensure that the pedagogy is updated?
- Can teachers and students provide defensible evidence of positive links to learning?

Innovations that aspire to achieve a green rating should take note of Hattie's (2012) meta-analysis work on teaching—that is, we should be able to see signs that the teacher's role is defined as an activator of learning and his or her job is centered on servicing and pushing deeper the thoughts from the learner. Teachers should be viewed as being in partnership with students. Teachers should exhibit a constant behavior of seeking evidence, openness to alternatives, and adaptability and flexibility when new evidence is raised.

Chapter 3

Using the Index

We have designed the Index to be a universal and easy-to-apply tool for evaluating a digital education product or service in the context of achieving outcomes. We recommend a general approach for group discussions around 1:1 initiatives and blended learning implementations. We also provide additional tweaks for system leaders, procurement officers, entrepreneurs or product owners, and investors. We will introduce the general approach first and address the tailored solutions at the end.

The Index

The Index itself is a framework divided into three main components, each with three subcomponents, for evaluation. We recommend starting at the top of the Index with pedagogy and examining each subcomponent individually before synthesizing up. By starting with the detail, one ensures that the rigor and comprehensiveness of the questions remain intact. Once a judgment has been made on each of the individual subcomponents, we recommend arriving at a hypothesis for the overall category. As the next category is examined, the previous category summary can be re-evaluated to ensure consistency of application and judgment.

New Pedagogies for Deep Learning (NPDL), mentioned earlier, is another major initiative in which we are attempting to create the future through the collective action of schools and systems working together to discover, implement, and systemically spread solutions imbued with the DSI elements. The action-learning mechanism involves attracting ten clusters of one hundred schools (on average) from ten different countries (Australia, Canada, Finland, Japan, Netherlands, Uruguay, United States, and others about to join) for a total of one thousand or more schools. These clusters of schools are signing on for at least three years in order to implement the Stratosphere agenda. We have almost completed the recruitment of the countries and the schools. This group represents schools and systems that were already moving in this direction and wanted more help and more learning partners in figuring out the details.

With the clusters, we are developing tools and rubrics to assess and guide the main elements of new learning outcomes, new pedagogies, and new supportive policy, and strategy conditions at the school and system level.

First, to be more specific, the new learning outcomes involve the 6 Cs: character education (sometimes called conscientiousness), citizenship, collaboration, communication, creativity, and critical thinking. Some of these, particularly the latter four, have been around for a while (under the label of 21st century skills), but only recently have they been subjected to in-depth and widespread focus. Our group is focusing on the development, implementation, and assessment of the 6 Cs. We call these the “deep learning” outcomes.

Second, such a focus calls for new pedagogies that would establish the learning environments and experiences that would constitute continuous learning relative to the 6 Cs. This is what we have defined as a learning partnership between and among students, teachers, and families. It represents a radical change in the roles and relationships of all learning partners and involves a deep change in the culture of all

Recommendation 2: Lead with pedagogy. Work on clarifying the relative roles of teachers and students. Define the pedagogical partnership. Work on clarity and precision of the roles and the evidence relative to impact on learning. Put pedagogy in the driver's seat, and use technology to accelerate learning relative to particular learning outcomes.

Recommendation 3: Develop capacity with respect to system support. This includes implementation assistance, leadership (especially at the school level), and assessment and use of evidence on student learning. Ensure that the support is comprehensive, integrated, and relentless.

Recommendation 4: Focus on scaling and embedding. There are plenty of boutique schools, and there are countless learning apps and web-based tutorial videos. Don't get distracted by shiny, seemingly glamorous gadgets. Spend time and resources on innovations that will be truly system transformative. Develop collaborative cultures within and across schools that are sharply focused on deep learning.

Recommendation 5: Be open to surprises. The innovation field is dynamic. We are at the beginning of a stage of disruptive innovations, where new ideas are being spawned almost daily. Therefore, treat the next period as a cycle of continuous improvement where one needs to simultaneously focus on quality implementation and openness to new ideas. Take a portfolio approach to innovation. Allow for failure. As Barber, Donnelly, and Rizvi (2012) point out, whole system reform plus systemic innovation can unleash the whole system revolution (see figure 4.1).