LEARNING SYSTEMS IN SCHOOLS AND AT WORK

January 9, 2022

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Tags: |Broadskilling, Instructional Design, Learning Architecture, The Learning Leader

Key Points in this Post:

1. Learning systems in schools differ from learning systems at work
2. The content is different
3. The context is different
4. The complexity is different, specifically about promotion criteria

Question explored: Is it time to assess the current K-12 education system paradigm in order to adapt to the future of work?

When we last spoke…
The January 3, 2022 article entitled "I Learned Something From a Struggling Student, and You Can Too" generated feedback alluding to the conceptual frameworks introduced as applying not only to student learning in schools, but to employee learning in a work context. I agree that some concepts transfer.
The inference seems reasonable to me, given that half of my career has been developing learning solutions in a high profile corporation, and the other 50% has been working in the education field. I can make the connections.
Here are some thoughts about the similarities and differences I see in the two types of learning systems.

My previous article "Thinking in Three Dimensions: Content, Context and Complexity", proposed a "Curriculum Cube" (see image below) to show the connections between each of the three aforementioned dimensions. The framework was populated with representative elements from the education field.

Image 1: School "Curriculum Cube"
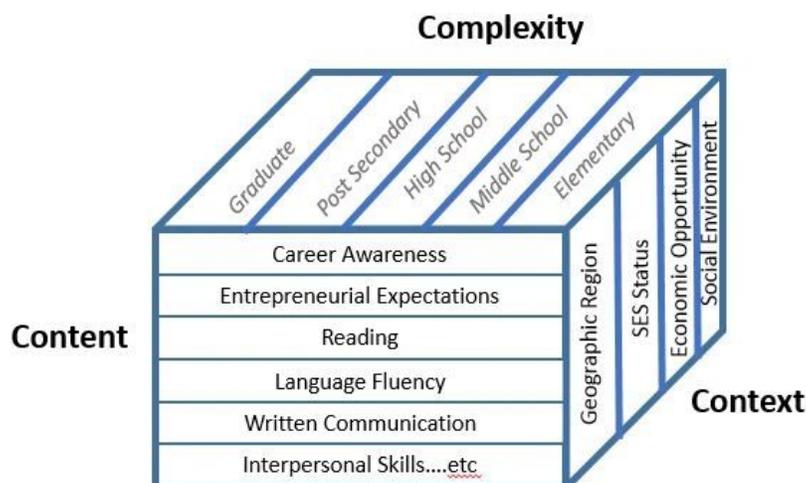
I will use that same Curriculum Cube framework to explore how it might be applied to learning systems in a work setting. Let's take a look.

Image 2: Work Curriculum Cube
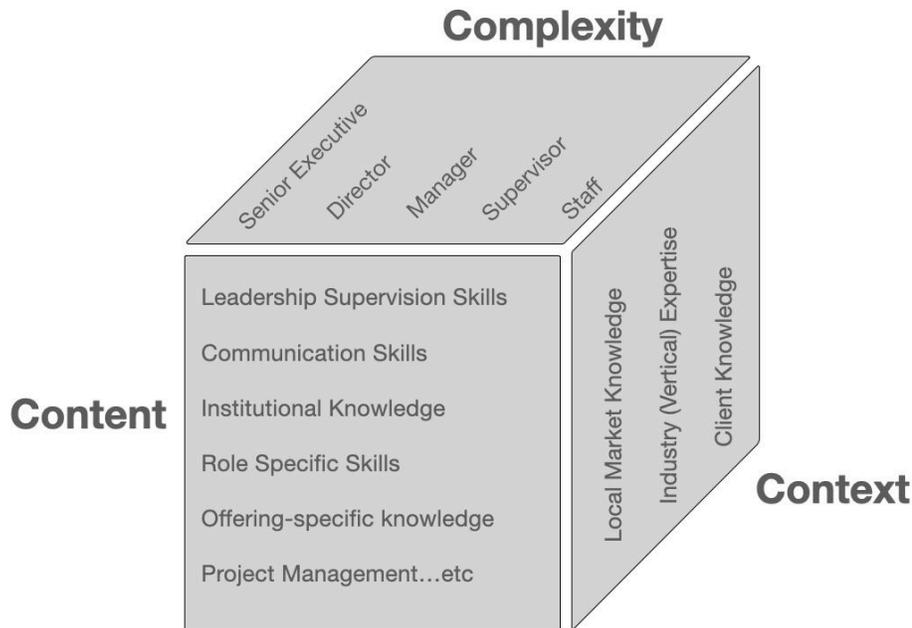
The Work Curriculum Cube uses the same construct with examples of Content, Context and Complexity dimensions that are specific to learning at work.
In a learning system at work, each dimension is defined as follows:

- **Content** refers to the skills and knowledge required to perform in the role for which the person is paid.
- **Context** means the operational location, local culture, industry/business expertise, economic forces and trends and credible knowledge about customers.
- **Complexity** refers to the what advancement means at work; specifically the role progression possible as workers move into roles with greater responsibility as they meet the entry skills required of the next level.

The table below explores the similarities and differences in each dimension of the curriculum cube to compare school and work learning systems.

A Comparison of Learning Systems in School versus Work

Dimension	School	Work
Learner Profile	The learner is a Student in a K-12 School. For public schools, the learner will be assigned based on where they live. Learners may opt-in to a private school of their choice, if tuition is affordable or financial aid is available.	The learner is an employee in a paid role for an organization. The learner had to apply to be hired. The employer selected the employee based on criteria that identifies the skills required to enter employment with the organization.
Content	Content is based on local, regional*, and national standards**. *Private schools, in particular, also base curriculum content on organizational goals and values. ** Content areas are somewhat standardized. In US Public Schools, many content areas align with Common Core and Next-Generation Science Standards (NGSS), for example. The addition of "Career Awareness" is a persistent focus of Career and Technical Education (CTE), however many CTE programs were defunded due to a perception that CTE is less beneficial to promote than Science, Technology, Engineering and Mathematics.	Content is based on skills specific to selling and delivering the products and services demanded by the customers that buy them. Content areas are focused on job-readiness knowledge and skills required to perform the work for which the employee was hired

Context	Context: Local, District, Economic and Population Demographics. Funding may differ based on the local tax base and the percentage of taxes dedicated to fund education. Context areas focus on attributes of the student and the local Community. The school works within the realities of the local community from which their learners live. Therefore, the school, ideally, will adapt to enable learners to achieve, based on what is known about the learners and the local community the school serves.	Context: Locations of operations, industry competitive forces and trends. Context areas focus on the employees credible knowledge and expertise in the industry vertical(s) in which the employer sells and delivers products and services. Employers prefer to hire people that have, as a pre-requisite skills, the industry expertise. However, corporations tend to support knowledge sharing among industry experts as well as provide introductory training to enable client staff to develop industry knowledge, to improve credibility with clients and customers in targeted industry verticals.
Complexity	Advancement is expected annually In school, learners in a given grade level tend to get promoted to the next grade level, annually. This, despite variance in achievement in each content area.	Advancement is based on mastery At work, promotion to more complex roles is not based on a schedule. Workers must demonstrate mastery of advancing skills to earn promotion to the next level of responsibility. Promotions are based on merit

Is it time to assess the current K-12 education system paradigm in order to adapt to the future of work?
What can we learn from the analysis of learning in schools versus work?
Here are some perspectives.

There are clear differences about advancement between the two systems
In the Complexity dimension, there is a difference in how promotion happens.

The normal curve suggest there will be variation in achievement in a given audience. Is it reasonable to expect 100% of students to achieve learning outcomes required to meet the entry skills required for the next grade level in each content area?

Fast Fact: Did you know?
In the United State, the adjusted cohort graduation rate (ACGR) for public high school students is 86%. Key point: 14% of 9th graders fail to graduate from 12 grade.

Observations about learning systems in school versus work:
The existing education paradigm is designed around an assumption that it is reasonable to expect youth to follow the standard public education K-12 curriculum path at the pace of one grade each year.

What would happen if the public education system focused on a spectrum of future-relevant learning pathways to engage and motivate the 14% that do not progress from 9th to 12th grade completion? Guiding learners to in-demand skilled trade alternatives which can result in a bright employment future for learners that do not choose a pathway to higher education. One point I wish to emphasize is that skilled trades is an amazing pathway for any student, not only students that do not exhibit interest or high achievement at grade level expectations.

If schools do not embrace their role as the early talent development pipeline system, then employers will have a perpetual skill shortage; concurrently, many young adults will enter the workforce without future-relevant skills.

The US public educational system is designed with rigid sequential performance expectations. Diverse learners "enter the pattern" at a young age, with variances in knowledge, language acquisition, prior knowledge, rates of physical and mental maturity, emotional states, cultural expectations and economic backgrounds.

- Do K-12 schools adapt pedagogy and content to meet the realities of the local context?
- Is it reasonable to design grade level curriculum targets based on national standards, if there is variation in prior experience and performance among learners at each grade level?

Complexity: Promotion at Work versus in Schools
Merit drives most promotions to the next level of complexity at work. In most cases this is a great practice, since people who focused on excellence and purposely develop skills, get rewarded for their effort.

In schools, on the other hand, most students advance to the next level of complexity (the next grade level), even the struggling students at the lower percentage of performers in their class (source: https://www.mastersportal.com/articles/2288/5-facts-you-should-know-about-the-us-grading-system.html)

Sidebar: Commentary about Work Culture
Some work cultures are "Up or Out." In this type of culture, workers either get promoted to the next level in a given time frame or they will risk job loss. Human Resources may call this being "counseled out" which may result in employees resigning or being let go. This can be implemented as a high risk (you can lose your job)/high reward (more money at the next level) proposition to employees. It is, however, a difficult environment in which to work, resulting in "burn out" among the workforce.

The author has observed many smart, highly motivated colleagues that were willing to accept the effort required to focus on work at the cost of personal and family time.

While strong performance is a wonderful attribute, this competitive environment often results in a planned attrition culture whereby the emphasis is to motivate performance among current employees to achieve "stretch metrics" (performance levels above and beyond previous metrics). This strategy can also create opportunities among younger staff to pursue opportunities created by the attrition of the prior employees that were counseled out of the workforce due to not achieving their assigned performance metrics. The system can result in strong corporate performance, but there is a dependency: If there is not a strong supply of smart motivated workers willing to enter the system, the organization may suffer from widespread burnout, stress, and mental health issues among the workforce.

Can a culture of high performance and strong work ethic be a good thing? Absolutely! Companies often gain advantages over their competition based how well they deliver high quality, low prices, or

superb levels of customer service. It is rare to do all three equally well. There is a tendency to choose between being:

1. *The highest quality provider (e.g. Mercedes, Starbucks)*
2. *The lowest cost provider (e.g. Walmart)*
3. *The provider with the highest rated customer service (e.g. Zappos)*

A high performing workforce can enable any of the three strategies by executing processes to the standards and expectations defined by leadership at work.

School Systems
Public schools, on the other hand, are not driven to grow revenue by selling goods or services. The focus is on cost containment and / or lobbying the local government for a greater percentage of tax funding allocated to education. Private schools must, however demonstrate value for each dollar of tuition or risk the loss of students. Parents pay tuition, so the school has to meet or exceed expectations the parents have, of the private school learning experience.

Schools are in an unenviable position.
If public schools rigidly required that each grade level master a specific set of objectively measurable skills before advancing to the next grade level, some students would not advance.
In most cases, the only option would be for the students that failed to meet performance criteria (exit skills) for a given grade level, to repeat the grade level. This is unfortunate. Mainly because, *ceteris paribus*, the student would likely fail to meet the exit criteria in the following year, as they repeat the grade level with no new skills. If said students did not meet the entry skills prior to the grade level, and there is no intervention, the students will repeat the cycle with similar results. That is, unless there were to be an independent variable such as a) extraordinary effort to seek tutoring b) attending a remedial class or c) engaging in self-study (e.g. Khan Academy) on their own volition to meet the criteria before entering school in the following academic year.

Overheard…
I heard a former professor state (and I paraphrase), that in some contexts, "schools are encouraged to promote students, regardless of grade level performance, in order to provide a safe place for students to be during the workday." The explanation given was that this was a "social good" provided by schools, to the community. Is this plausible? Does this ring true? I'd like to learn more about this. If it is true, then there are other variables to be addressed in the "context" dimension of school system design. Some variables are out of the scope of the capability of school systems to address (examples may include: stable homes, prior knowledge, early stimulation of cognitive skills, biological/developmental differences).

Progression expectations are built in to annual capacity planning
Without promotion, schools may be unable to manage the number of students that "get stuck" at specific grade levels. Why? Because there is no honorable path for students to progress in a learning path that is different than the paradigm of the sequential K-12 grade progression. Also, to provide the resources needed to remediate, the system would have to have funding to support the tutoring, staffing, and other resources to provide academic support to learners that did not meet the criteria to advance to the next grade.

Incentives are different in work situations
Employers are selective about who they hire. They seek to hire people with the minimum entry skills to contribute to productivity. Employers can fire workers that do not meet expectations. There is no penalty to the employer's system, except for the cost to hire a replacement for fired workers.

Employees can seek employment elsewhere, while nursing the psychic costs incurred (feeling slighted/de-motivated). In the end, the worker can opt-in to another employment system.

Broadskilling's Take on the question: Is it time to assess the current K-12 education system paradigm in order to adapt to the future of work?

Re-assess the K-12 grade curriculum grade level progression. Why? Because students that do not met the exit skills for one grade, are unlikely to meet the entry skills required to successfully complete the target learning objectives in the increased complexity of the next grade level.

Honor all abilities by providing pathways that lead to student success in life. For example, double-down on employability skills pathways starting with

- Career awareness exploration at all grade levels
- Require one or more introductory Career and Technical Education courses to see practical applications of science, technology, engineering and mathematics at middle/high school levels
- Require all high school graduates to complete at least one employment certificate program before graduation. This will enable students to have skills relevant to employment as the embark on their post-secondary life, whether or not they pursue a college degree program.

Break the notion that Career and Technical Education is not compatible with post-secondary education. CTE is STEM, applied. The CTE experience provides concrete applications of STEM concepts. I think it is a net "win" for students to learn at least one employer relevant skill before attending college.

Adapt the system to focus on learner success, rather than executing the instructional process for the sake of completing the process. As Marshall Goldsmith so aptly stated, "What got you **here**, won't get you **there**." It is time to question the education paradigm.

My Take: It is hard to change a system.

It is not hopeless. One actionable step starts with student agency. **Success requires a plan!**

Encourage your student(s) to do their own research to identify skills that are relevant to the future of work, using the Broadskilling research plan and curated content as a start.
My two cents…
As always...

<center>**Think Broadly, Learn Deeply.**</center>

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Source: https://broadskilling.com/learning-blog/f/learning-systems-in-schools-and-at-work