

I LEARNED FROM A STRUGGLING STUDENT, AND YOU CAN TOO.

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Tags: Learning Architecture, The Learning Leader

Themes:

1. A learner's ability to articulate their own learning struggle is a skill worth developing
2. A learning leader's ability to facilitate the discussion to articulate specific learning obstacles is essential
3. Specificity about "the problem" mitigates the risk of a "poor solution" being implemented

The Story

The report card was not favorable. The instructor left repeated comments about the performance of a specific student in my area of responsibility (I volunteer as a student advocate). Another instructor provided feedback about this student performing at a less than expected level at the end of the Semester.

What's going on here?, I wondered to myself. I know this learner. I met with the student. I know them to be capable, optimistic, motivated, and a good communicator with a strong work ethic.

I'll start with the insights then take you through my analysis of the instructional systems problem.

Insights

1. **A Workplan is not enough.** The student and I had previously met to assess the amount of in-class hours required per week. Additionally, we itemized the number of hours required to prepare for each individual course, based on a) current grades in each course, b) the complexity of the content and c) The pace of change. We produced a marvelous workplan, detailing a specific regimen for the week, including required events such as study groups, tutoring sessions, soliciting teacher feedback and solo project work. The plan even factored in time to eat, sleep and have fun.
2. **Understand the learner.** Engage struggling learners to identify the root cause of lower than required achievement levels. In the recent example, I learned precisely that the issues relate to stages of complexity (specific to mathematics), the pace of change (the time given to master specific content), and prior experience (learner diversity has to be accounted for).
3. **Assess the learner's environment:** Determine the people, processes and resources available surrounding the learner. In the recent example, I learned about resources available (including time, competing work, and academic support such as tutoring).

"If a computer system requires a lot of training to use, it's a poor design" - Overheard in my early career with a global consulting firm. Never underestimate the power of clarity and simplicity.

Observations about learning systems.

I. Consider the impact of Content Complexity vs Pace of Change

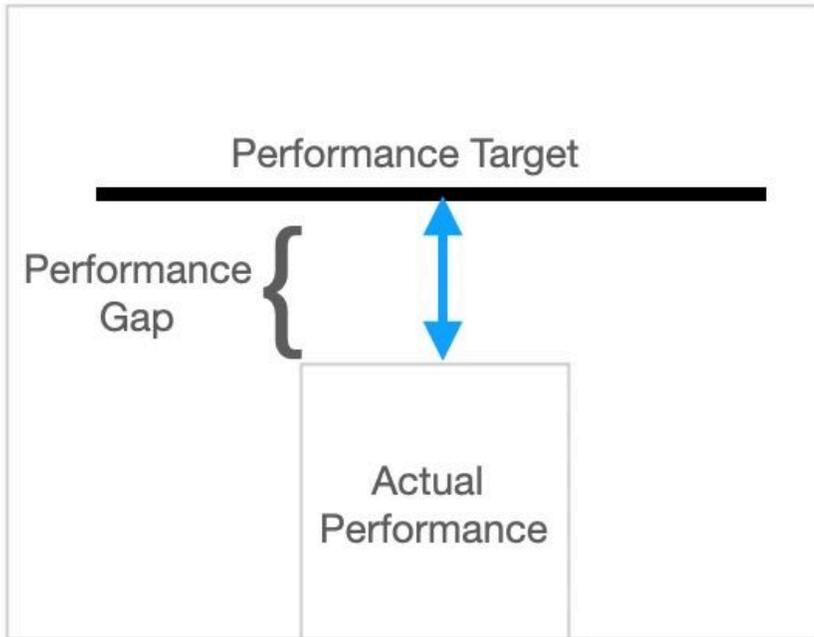
High	Content is complex but doesn't change frequently	Content is complex and changes frequently
Complexity	Content is relatively simple And doesn't change frequently	Content is relatively simple but changes frequently
Low		
	Low	High

Pace of Change

Definitions:

- Complexity: The level of sophisticated knowledge, skills and abilities (KSAs) required to perform given tasks within a content domain. The complexity can range from rote memorization in the "low" end of the spectrum (e.g. memorize multiplication tables, apply a rule), to developing cognitive strategies to solve multi-faceted, open ended, ambiguous problem sets with high risks and low likelihood of recovery (think "Brain surgery").
- Pace of Change: This aspect is a consideration of how quickly the demands change for performance; specifically, in a learning context, how often new content is introduced, with an expectation that prior learning has been mastered to enable the learner to advance with demand. For example: A School Mathematics curriculum builds on prior knowledge as the semester progresses. Students are expected to progress as the school year advances.

II. Be precise about assessing and defining the specific gap between expected performance and current performance.



Example:

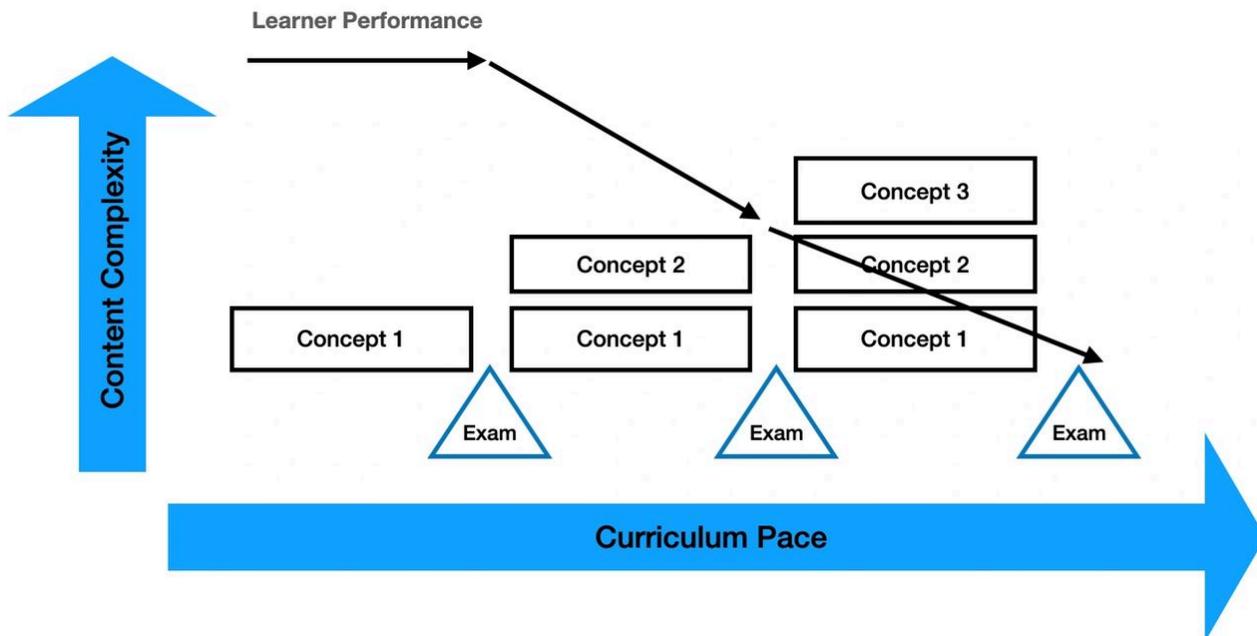
Here is a great example, take directly from the example cited at the start of this post. The student gave me this insight: "There are three levels of problem sets I am dealing with" [note: see the image below for an illustration of the three levels]. "I do well on level 1. I do 'OK' on level 2. I struggle with level 3."

Complexity	Example	Description
Level 3	A ship, at anchor, has drifted 144 meters from the point of anchor. The anchor chain is 225 meters long, extended as far as possible. What is the depth?	Given a complex problem, select the appropriate formula(e), then determine which variable to solve for to resolve the problem. Provide your answer.
Level 2	$b^2 = c^2 - a^2$ $\sqrt{b^2} = \sqrt{c^2 - a^2}$	Given a formula and the value of two variables (c2 and a2) Modify the formula to solve for a specific variable (b) to resolve the problem. Provide your answer.
Level 1	$a^2 + b^2 = c^2$	Given the value of a and c, and a specific formula, demonstrate the use of the formula by solving for c.

This level of specificity enabled me, a student advocate, to have specific discussions with teachers, tutors, and academic leaders about what resources can be employed to support this student. In short, to "close the performance gap."

III. Differentiate Problems "Learning" from Problems with the "Learning Solution"

What if closing the gap is a poor solution? Maybe the current curriculum offerings (learning systems) are merely poor solutions to the underlying "learning problem" that should be resolved. Let's look a bit deeper to illustrate what is happening in the aforementioned case.



- **Curriculum Pace is the time variable.** As the curriculum pace marches on (left to right) new concepts are introduced, and some are dependent on prior concepts.
- **There is a content complexity factor.** The expectation of the learning system is that learners will be able to demonstrate new concepts (knowledge, skills, abilities) as they are added, over time. Is "Content load" a factor evaluated in your learning system?
- **Learner performance is a dependent variable:** Learners are challenged to perform increasingly more complex tasks over time, with little time to review any content that is not-yet-mastered when new content is introduced. Learners progress at different rates. This leaves some learners behind.

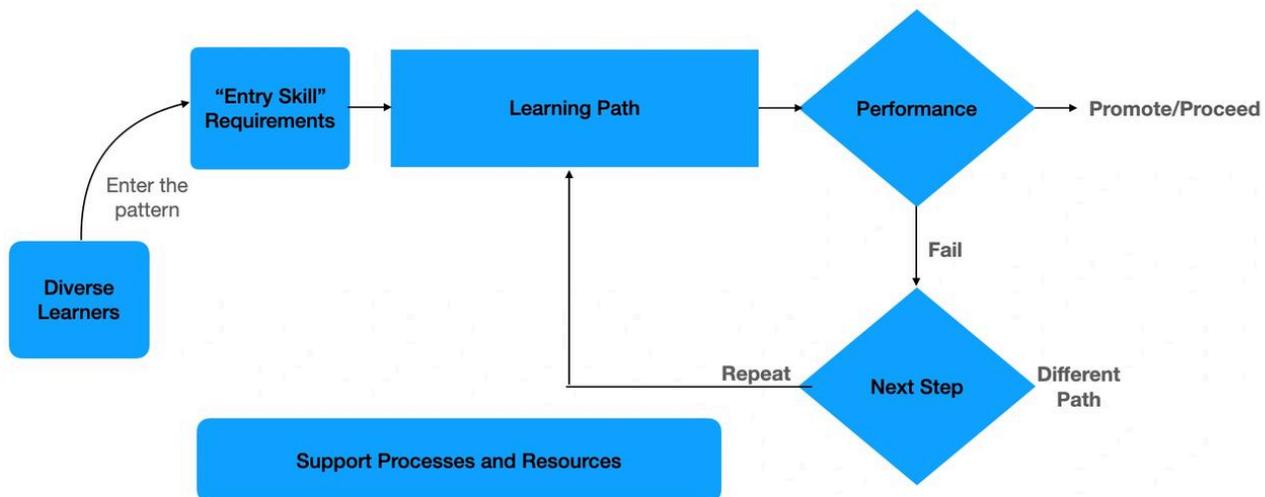
A note about the affective domain: Learner confidence and morale is a factor: Lower segment performers can feel as if they are "dying on the hill" as they repeatedly "show up" for scheduled learning events as the gap grows between expected "on schedule" performance and their own performance levels.

Question to ponder: *Is the normal curve an acceptable assumption to make about learners? Said another way, is it acceptable to move on, with some learners in the lowest 20% of performance, with data to demonstrate that this segment of the audience cannot perform the required tasks in a manner that prepares them for the next level of performance (e.g. next year's mathematics course)?*

Consider whether it makes sense to:

1. Expect the learner to **adapt** to a persistent, static, learning system
2. Accept that a learner may **quit** (drop, go to a different course/school/profession)... or
3. Learning leaders could **change** the learning system, based on what constitutes success for both the sponsoring institution and the learner (e.g. student prepared to be a success in the future of work). At some point, leadership should expect to retire, adapt and to create new learning pathways as well as update learning goals.

IV. Analyze the learning system diagram:



Diverse Learners: The entry point of the system. Expect variance in the types of experiences, abilities, familiarity with language and concepts, expectations, and willingness to engage.

Entry Skill Requirements: Generally the originators of a mature learning system had or have a documented set of abilities that should be mastered in order to be successful in completing a given set of learning challenges within a learning path (e.g. a course). Even this, should be examined, just in case the solution needs to be changed.

Learning path: The path is a series of learning experiences, content, complexity, and a schedule. Broadly speaking, the learning path should be examined with a "full stack" learning architecture lens, to design an experience that enables learners to achieve the defined learning outcomes.

Performance: What's the plan for learners with difference achievement rates? What is the criteria for proceeding in the learning curriculum? What happens to learners that do not achieve the expected performance outcomes? Are they routed to a remedial path? Made to repeat the same learning path (a second chance)? If learners repeat the learning path, what support processes are resources will be added to close the specific performance gaps? Does the effort make sense?

In the end, do not be afraid to challenge the established, mature, paradigm. Ask two critical questions:

1. **What do learners need** to be able to do to succeed in the future of work and life? *For corporate learners: "What do people need to be able to do to sell and / or deliver the work we do?" For academic student learners: "What do students need to be able to do to prepare for the next grade level, secondary/post secondary school, career and technical education experience?"*
2. **What does our organization need to do** to develop the talent required in the future of work and life? *Mature paradigms are resistant to change and emerging "new" ideas. Examine the current "way," engage people that think differently, and experiment with new learning ideas*

Final thought: *Start by spending focused time with learners across the spectrum of performance. Listen to the learners that appear to struggle. Develop your own capability to discern precise challenges the learners are facing. Then assess your own enterprise learning systems top to bottom, end to end. [Tesler's Law](#) posits that complexity is conserved... is it on your learner's side OR the learning solution design side of the equation?*

Do you know where to start? Contact me. I'm glad to help.

Until next time.

Think Broadly. Learn Deeply.

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Source: <https://broadskilling.com/learning-blog/f/i-learned-from-a-struggling-student-and-you-can-too>