

# 3 Strategies for Promoting Deep Learning Virtually

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Respond & Reimagine: Moving Schools Forward

December 10, 2020 | Volume 16 | Issue 7

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Learning is learning, whether it occurs in a classroom, at a library, or within a virtual environment. But regardless of the venue, learning can vary from superficial to substantive. Many teachers across the country are looking for ways to make online and hybrid learning more substantive and less superficial. The following three practical strategies and associated tools—adapted from *Teaching for Deeper Learning* (McTighe & Silver, 2020)—promote *deep* learning in virtual and hybrid settings as well as in traditional classrooms.

## What Is Deep Learning?

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Deep learning occurs when students come to *understand* important ideas and processes and are able to *transfer* that learning. Our conception aligns with that of the National Research Council: "While other types of learning may allow an individual to recall facts, concepts, or procedures, deeper learning allows the individual to transfer what was learned to solve new problems" (2012).

While information can be transmitted by telling, understanding must be "earned" by the learner. We can directly teach facts and procedures, but learners must construct an understanding of more abstract and transferrable ideas in their minds through deliberate mental processing of new information. Indeed, the phrases "*coming to understand*" and "*making sense of...*" suggest that deep learning occurs over time and requires the active mental manipulation of content via "higher-order" thinking. We refer to this active construction of meaning by students as *meaning making*—best done by focusing content on fewer, bigger ideas to avoid superficial "coverage" and by engaging students in the active process necessary for understanding and transfer.

## Strategy One: Begin Units with a "Pile of Words"

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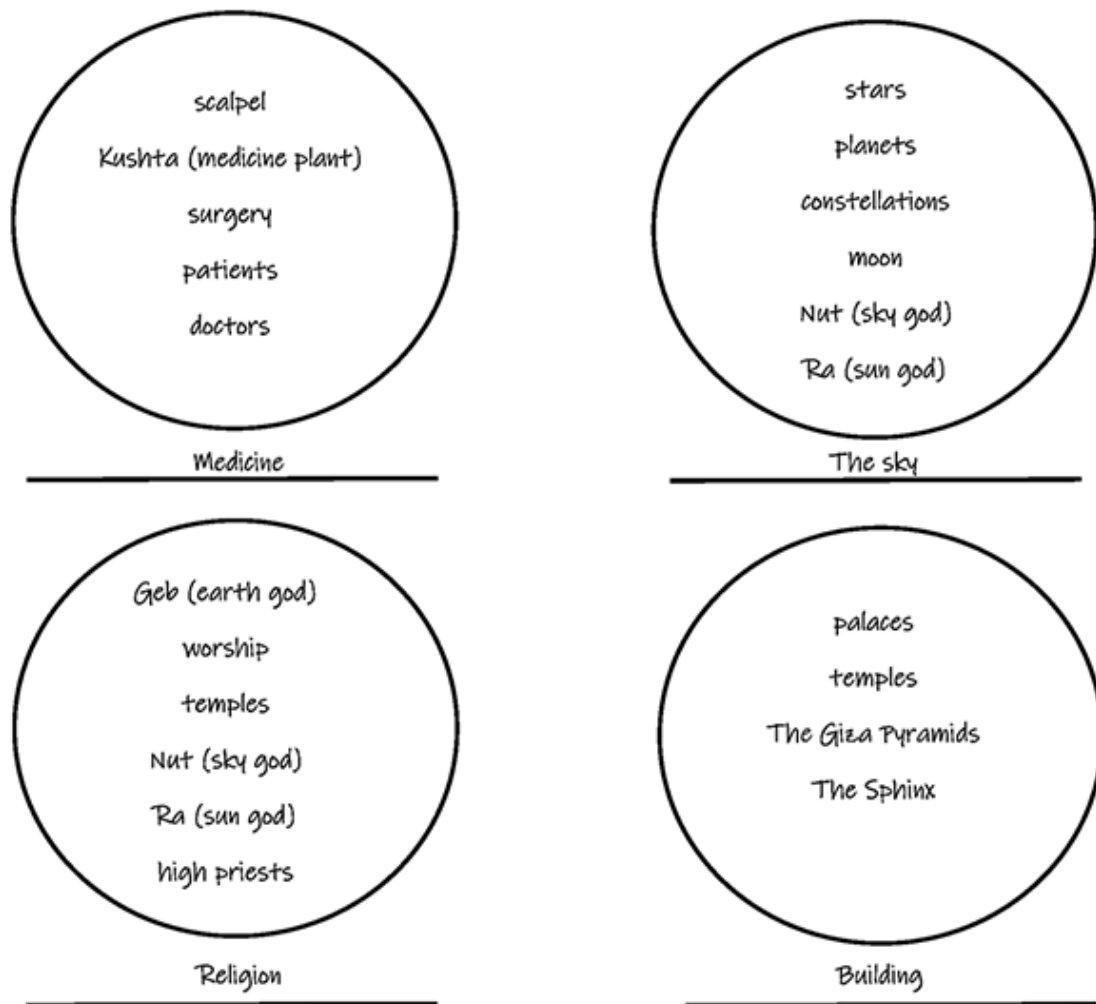
When students actively "construct" meaning of abstract and transferable processes, they are forming concepts and principles derived from specific examples. A powerful strategy for engaging students in this kind of meaning making is *Inductive Learning*, which is based on the pioneering work of Hilda Taba (1971). Here, in a nutshell, is how such learning works:

1. Students are presented with a list of terms related to a reading, lesson, or unit they are about to begin. For example, young students who are about to learn about the Ancient Egyptians might be presented this word pile:

scalpel	Geb (earth god)	surgery
stars	Kushta (medicine plant)	worship
planets	patients	high priests
temples	palaces	doctors
Nut (sky god)	The Sphinx	The Giza Pyramids
constellations	moon	Ra (sun god)

**Figure 1. Grouped and Labeled Terms**

2. Students review the terms, look up the ones they are unfamiliar with, and then group terms together based on common characteristics. Here's how one student team grouped and labeled the above terms:



3. Students use their groups to make predictions about the learning to come. For example, students might make predictions like these: "There were Egyptian doctors who used tools and plants to help sick people" and "The Egyptians believed in many gods."
4. Students test and refine their predictions as they learn more. For example, during the Ancient Egypt unit, students collect evidence as they progress through the unit, looking for any information that confirms or challenges their predictions. This evidence-gathering requirement turns the lesson into searches for information and keeps the learning active, thus helping to address the engagement challenge of online learning.

We can use *inductive learning* in versatile ways to help students activate their prior knowledge, construct an initial conception of the content to come, develop their classification skills, make predictions, and test and refine their predictions in light of new learning. Here are a few tips for using it in your classroom or online learning environment:

- **Model the process.** Work with students to group and label everyday items (things in a sporting goods store, types of food) to help them understand the process.
- **Mix familiar and unfamiliar terms.** Having some familiar terms helps connect new terms to concepts students already know. As students get older, they can handle more terms. Aim for between 15 – 40 terms, depending on students' ages and your objectives. Make sure that the terms you select will help students discover some of the important big ideas you aim to highlight.
- **Use it as a pre-reading strategy.** Giving students important words about the setting, characters, and action of a story helps them make predictions and test them as they read.
- **Think beyond words.** Having students group and label paintings, pictures, or physical objects builds thinking and classification skills. Just make sure that students explain why they put certain items together.

## Strategy Two: Engage Students in Active Reading

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The increase in asynchronous learning that often comes with online and hybrid instruction means that more now depends on students' ability to read and make meaning of texts for themselves. Enter *Reading for Meaning* (Silver, Morris, & Klein, 2010; Silver, Strong, & Perini, 2007), a tool that engages students in active reading and helps teachers accomplish important objectives. *Reading for Meaning* improves reading comprehension, provides direct training in how to find and evaluate relevant textual evidence, and develops the healthy skepticism of critical thinkers ("Let's see what the evidence suggests before we jump to conclusions"). It does all of this by extending the typical reading comprehension paradigm from asking questions about the text to posing statements about the text.

Unlike comprehension questions, which often suggest right-wrong thinking to students, *Reading for Meaning* statements are open-ended and presented before students read the text. Statements are meant to be pondered, interpreted, defended, and discussed. Statements also have the power to stir up controversy—a great way to

engage students. For example, imagine you are an 8th-grade student reading a web article about genetically modified foods (GMOs). Before you begin the text, you read these three statements:

1. When scientists develop a technology that can improve people's lives, that technology should always be pursued.
2. There is conclusive evidence that GMOs are safe.
3. The public's lack of knowledge about the science behind GMOs is being exploited.

Do you agree or disagree with these statements? Maybe you're not sure. Your job would be to collect evidence from one or more articles that either supports or refutes each statement. *Voila!* Inquiry is in the air. Students approach the text with purpose and may collect evidence both for and against the same statement, as controversial and open-ended statements often promote deliberation when the issues are complex and the answers are unclear.

Whether using *Reading for Meaning* in the classroom or online, give students time after reading to work in small groups (or virtual rooms), review the statements, and explain the evidence they collected from the text to support or refute each statement. When students cannot reach consensus on a statement, encourage them to rewrite one they can all agree on. For example, students might not be able to collectively agree (or disagree) with the statement, "When scientists develop a technology that can improve people's lives, that technology should always be pursued." So, they can rewrite it in a way that promotes consensus: "When scientists develop a technology that can improve people's lives, that technology should be tested for risks before it is pursued."

*Reading for Meaning* works just as well when used with data tables, diagrams, videos, and almost information source that we want students to analyze and interpret. Just try to make your statements "juicy" so that students invest in taking a position and hunting down evidence to support it. Here are some juicy *Reading for Meaning* statements:

- Spiders are more helpful than harmful.
- The Declaration of Independence has a "villain."
- The author wants us to feel guilty.
- Everyday life would be very difficult without fractions.

### **Strategy Three: Use Empathy to Make Learning Personal**

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With social isolation and political divisiveness at all-time highs, there has never been a better time to invite empathy into our learning environments. Being able to walk in someone else's shoes engages the distinctly human capacity to step out of ourselves so we can see and experience the world as others do. Note that teaching with empathy does not amount to content-free "fluff." Just the opposite, in fact: Empathy can establish a conceptual lens to help students make meaning of abstract and high-level content and increase personal engagement, which helps make the learning "stick."

*A Day in the Life* asks students to imagine life as a famous figure, a literary character, a person living under very different circumstances, even a concept or object. By "becoming" someone or something else, students develop new insights into what they are learning. The tool also nurtures creative thinking and writing skills, as students can tell their story through personal writing, such as diary entries or a letter to a loved one. Below are two examples from *Teaching for Deeper Learning* (McTighe & Silver, 2020, p. 110):

- You have watched the documentary *Life in the Trenches* about trench warfare during World War I and read the poem "In Flanders Fields." Choose one of the following roles: a frightened new arrival, an officer trying to bolster troop morale, or a nurse in a field hospital. Write a letter back home describing your experiences.
- You are a chrysalis that just can't wait to become a butterfly. Explain what life is like as you await your transformation. Make sure you tell us what excites you most about becoming a butterfly.

*A Day in the Life* can also serve as the basis for an extended research project. For example, a teacher of current events might ask students to explore the "labor behind the label" by learning about child laborers who make clothes. After conducting research on child labor practices in various countries, students "become" a child laborer and tell what life is like on the factory line. In one instance, some students were so engaged by this project that they made direct contact with workers their own age in other countries and conducted interviews to learn about their daily experiences.

The practical tools we offer have proven effective in virtual, hybrid, and in-person settings by enabling teachers to engage learners actively in making meaning. Such active learning is especially important in virtual and hybrid settings where students can easily lose focus when staring at a screen. In sum, deep learning is doable—and it has never been more important.

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