The Seven R's of a Quality Curriculum

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To teach for understanding, teachers must be able to identify the big ideas of their subject and know what it is they truly want students to understand. They also must engage students in understanding performances, that is, opportunities for actively building personal understanding, and provide meaningful feedback on learning as it unfolds. It is at this intersection of big ideas, understanding goals, performances, and assessment feedback that curriculum lives, in what I call the enacted curriculum.

Over the past fifteen years I have worked with teachers exploring the enacted curriculum of understanding. During that time I've had the opportunity to reflect on the qualities that make an activity, a unit, a curriculum something that effectively engages students in developing a deeper understanding. Seven common criteria emerge: rigorous, rewarding, real, requires independence, rich in thinking, revealing, and reflective. I present these here as guidelines for the planning, enacting, and evaluating of a curriculum focused on understanding.

Rigorous

What does it mean for a curriculum itself to be rigorous? For a task or a lesson? Rather than think of difficulty, I think in terms of affordances. A rigorous curriculum embodies and affords students opportunities to develop a deeper understanding and not just show what they already know. Too often curricula state carefully defined objectives that put an unintentional cap on students' understanding and obscure the big ideas of the discipline, leading to superficial coverage. A rigorous curriculum must point the direction for learning but be open enough to extend students' understanding beyond a minimal outcome.

When I look at an activity a class is to do, I ask myself, "How can students further their learning of big disciplinary ideas through this task? How does this task launch the learning but avoid truncating it?" I also ask myself if students can do a particular task without understanding, by merely walking through the steps or repeating back information. If so, that performance doesn't offer the rigor of understanding.

Real

Disciplinary learning can be thought of as a process by which individuals gradually increase their participation in communities of practice. As such, a curriculum that builds understanding must look to engage students in authentic disciplinary activities so that students' classroom activities mirror the real work of adults in the field. Rather than learning *about* math, science, writing, history, and so on, students must become mathematicians, scientists, authors, and historians to build true disciplinary understanding. When a topic is assigned to a curriculum, we need to ask: When, where, and how does this topic arise and/or become significant in the lives of those working in the field? What contexts give rise to this topic and can imbue it with meaning? How can this topic intersect with the lives of our students in a meaningful way?

Requires Independence

Educational theorist Jerome Bruner defines understanding as the ability to use and apply one's skills in novel situations to solve problems, make decisions, and advance new understandings. This means that learners must necessarily be able to spot occasions for the use of their skills and knowledge in the moment, make appropriate choices, and follow through with application. Too often schoolwork leaves students with few choices and strips them of opportunities to make the decisions that meaningfully

shape learning and lead to a sense of accomplishment. Rather than engaging in deep learning, students merely complete work.

A quality curriculum must be filled with opportunities for students to make choices and to direct their learning. When students experience difficulty and are at the edge of their competence, support needs to be there, but as educators we need to be more comfortable with the messiness and individuality of building understanding, asking ourselves: Where does the learning become personal? What choices were made and risks taken? Where and how did students learn from their mistakes?

Rich in Thinking

A quality curriculum asks more of students than just memorization and replication. Students must make connections, observe closely, ask questions, form conjectures, identify points of view, consider alternatives, evaluate outcomes, make evidence-based judgments, and so on. One of the most important questions educators can ask is, "What is the thinking students will do as they progress through this activity?" If teachers don't know what and where the thinking is in a lesson, it is unlikely to be little more than an activity. Furthermore, to assess students' developing understanding, educators have to find ways to uncover and make the thinking of students' visible, which leads to the next point.

Revealing

A quality curriculum must constantly seek not only to reveal what it is that students do and do not understand, but *how* they understand it. This is the holy grail of ongoing assessment, which is not a separate piece of the enacted curriculum but part and parcel of it.

Students do lots of work over the course of a unit, but how does it reveal what they do and do not understand? Completion of a worksheet might tell you a student possesses a set of facts or mastered a skill, but it generally reveals little about understanding. Understanding goes beyond the possession of skills and knowledge to the use of that skills and knowledge. For example, solving for x in the equation $y = 3x + 15$ is a simple application of skill, but describing a situation for which that equation could be a possible model requires understanding the mathematics behind the equation.

A curriculum of understanding also should reveal students' naïve conceptions of a topic. In a coverage curriculum, these get glossed over, leading to fragile knowledge and what Howard Gardner has dubbed the "unschooled mind." However, in teaching for understanding, effort must be made to reveal these early so that they can be explored and addressed.

Rewarding

When you walk into a classroom where students are deeply engaged with learning, you know it right away. There is a sense of purpose to the work they are doing. They know what they are on about. Students can articulate what they are learning and why. This goes beyond activity and fun. Their efforts feel directed toward a well-defined learning goal. Talk, discussion, and debate advance progress toward that goal. Building understanding goes beyond working for the grade. It has its own intrinsic rewards through a sense of efficacy, accomplishment, and relevance.

The written curriculum seldom addresses the issue of intrinsic rewards, but the enacted curriculum must if it is to engage students in building understanding. Good teachers know this, but curricula often loses sight of it. Rather than prescribing a list of knowledge and skills that *might* be useful at some later date, in some other place, for some other purpose, the curriculum should do all it can to situate learning in the present, learning for now as David Perkins calls it.

Reflective

As a learner, it can be challenging to know what one really thinks or understands. It is even more difficult to know what others really understand or where they are in their learning. Reflection can help address these challenges. Reflection on one's learning—not one's feelings about an activity or experience but on the actual learning itself—helps to anchor understanding and facilitates connection making.

For example, responses to the prompt "I used to think…. But now I think…." can reveal a lot about students' learning. Such reflections help make one's thinking visible to oneself and others by revealing thought processes and lines of reasoning. Reflection on learning forces us to reconsider the purposes of that learning and situate it within an ongoing process of developing understanding.

In Conclusion

Curriculum work generally focuses on the topics to be covered, skills to be mastered, and facts to be learned in a particular grade level in a given subject. These aspects of the written curriculum are certainly important as they guide teachers' planning, ensure some uniformity across schools, and provide a template for formal assessments. However, as teachers know, the written curriculum is just a shadow of the enacted curriculum. It is the enacted curriculum, what students actually experience and *how* they experience it, which ultimately shapes students' learning.

In using curriculum as a tool to improve education, we need to think beyond the traditional division of curriculum and instruction and focus on the enacted curriculum. The seven criteria outlined here can be a useful tool for that discussion and in the creation of a curriculum of understanding.

The Seven R's of a Quality Curriculum

- **Rigorous** – embody and afford the demonstration of a high level of understanding.

- **Rewarding** – intrinsically motivating to the student and not just "work."

- **Requires Independence** – students make choices that shape the performance and are largely self-directed.

- **Real** – have an authentic quality in that they mirror work of adults working in the discipline.

- **Rich in Thinking** – require more than memorization and replication. The types of thinking required can be identified.

- **Revealing** – uncover students level of understanding as well as any misconceptions.

- **Reflective** – written reflections on the process and learning often enhances the performance