Chapter 11

Fostering Understanding Outcomes

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Editors' Foreword

Preconditions
Content
- Many subject areas where application of deep understandings in flexible ways is sought
Learners
- All kinds of learners
Learning environments
- Best used in open contexts where full frontal teaching or narrowly defined outcome standards are not required
Instructional development constraints
- Few resources (development time and money) are needed.

Values
about ends (learning goals)
- Deep understandings are important.
- Understanding is a performance capability.
about priorities (criteria for successful instruction)
- Appeal and effectiveness are paramount; efficiency is less important.
about means (instructional methods)
- New technology can support more generative, active learning and community building, but is not necessary.
about power (to make decisions about the previous three)
- Power should ultimately reside with teachers, but they should empower students to some (gradually increasing) extent.

Universal Methods
1. Identify generative topics.
   - They are connected to multiple important ideas within and across academic disciplines, domains, and subject matters.
   - They should be framed in ways that are authentic, accessible and interesting to students.
   - They should be fascinating and compelling to the teacher.
   - They should be approachable from multiple entry points.
   - They should be framed in a way that generates and rewards continuous inquiry.
   - They may be enhanced by using networked, multimedia technologies.
2. Define and publicize understanding goals.
   - They should require students to go beyond the information given to construct their own understanding and apply it flexibly.
   - They may encompass four dimensions of understanding: knowledge, methods for building knowledge, purposes for learning, and forms of expression.
   - They should connect coherently across levels of a curriculum plan.
   - They may be made more accessible and achievable by using networked, multimedia technologies.
3. Promote performances of understanding.
   - They should require active learning and creative thinking.
   - They should constitute a progression of performances that helps students build on what they already know.
   - They should be in a cycle of guided inquiry performances in which teachers explain, demonstrate,

and guide student investigations, followed by students working more independently in culminating performances that are ideally presented to authentic audiences.
- They may utilize networked, multimedia technologies to enrich the range of ways that learners develop and demonstrate their understanding.
4. Track, assess, and improve learning through frequent ongoing assessments.
- They should be based on explicit, public criteria that directly relate to the understanding goals.
- They should generate suggestions for improvement in both the students' work and the teaching.
- They should include informal as well as formal assessment activities.
- They should be conducted by teachers, outsiders, and students themselves (peer and self assessments).
- Assessment rubrics should be developed jointly with students.
- The "Ladder of Feedback" should be used to provide explicit suggestions for four phases of participating in assessments.
- Technologies may support systematic review and revision.
5. Engage learners in reflective, collaborative communities.
- Teachers should engage learners in dialogue and reflection about their understanding.
- Teachers should foster a culture of learning that values respect for diverse perspectives, reciprocity, and collaboration.
- Technologies may be used to support reflection and collaboration.

Situational Principles
for generative topics
- In a thematic instruction context, choose generative topics related to the theme.
- When dealing with inflexible curricular plans, shift gradually toward framing the required topics in ways that are generative for learners.

for understanding goals
- When the context's goals do not align well with understanding goals, begin with areas of alignment.
- Where standards and behavioral objectives are required, teachers may wish to revise current goal statements to support one or more dimensions of understanding.

for performances of understanding
- If learners are unfamiliar with Teaching for Understanding principles, begin with easily accessible performances of understanding and gradually progress to more complex ones.

for ongoing assessment
- Where standards and standardized tests are the primary measure of accomplishment, teachers should attempt to identify understanding-oriented questions on which to focus ongoing assessment.
- When ongoing assessment is unfamiliar, simple forms of feedback aligned with goals may be needed until the culture of analyzing and revising draft work is more familiar and comfortable.

for reflective, collaborative communities
- Where competition is the norm, create conditions for collaboration and involve students in the process of defining goals and assessment criteria.

for use of technology
- Where technology is basic or limited, begin with simple innovations that address priority goals.
- Where technology is available, but teachers are not comfortable with the use of technology, use classroom helpers or guests to model effective practices and assist.
- Where technology is readily available, focus on integrating new communication tools to support target understanding goals.

— CMR & ACC