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Essential Questions—Inclusive Answers

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At Amherst, New Hampshire's, Souhegan High School, provocative questions that can be answered on many levels are at the heart of the inclusive, interdisciplinary curriculum.

When Cathy Fisher, a 10th grade social studies teacher, taught a unit on slavery and the Civil War, she posed this question: “Can you be free if you aren’t treated equally?” Some students answered by referring to what they had read about the Civil War and by analyzing the progress of civil rights in the United States. Amro, a student whose native language is Egyptian, and who communicates by pointing to letters on an alphabet board, found it easier to use his own experience to relate to Civil War issues. He knows that he is treated differently than others. In this unit, he gained an understanding of what the lives of slaves were like. He compared their loss of freedom to the lack of freedom he experienced when he was in a segregated special education class.

Support for All

At Souhegan High School, all students—including those with mild to severe physical and emotional disabilities—are fully included in non-tracked, heterogeneously grouped classes. There are two math tracks throughout the grades, but in the 9th and 10th grades, all students take the same English, social studies, and science class—there is no honors English or college-prep science.

Souhegan accommodates high-achieving students by offering an honors challenge within each major unit’s final exhibition or class presentation. Any student can accept the challenge for one unit or for every unit that semester and possibly receive designations of “distinction” or “honors” along with his or her grades.

The school takes pride in nurturing each student’s passions and interests and providing each with academic and social support. Small student advisory groups meet with faculty daily. The school is governed by a democratic council of faculty, students, and community leaders. And an innovative wellness program replaces the traditional sports-oriented physical education curriculum.

Outcomes First

Full inclusion is possible at Souhegan High School primarily because of three program components:

1. *Collaborative planning time.* Despite a school’s philosophical commitment to inclusion and heterogeneous grouping, long-

term success is possible only when its structure and schedule support curriculum planning by both special and general education teachers.

2. *Curriculum design characterized by planning backwards* from expected outcomes and a final student exhibition to the details of lesson design.
3. *“Essential questions”*—overarching questions (or statements) used to guide performance-based curriculum development.

Consider first a lesson *without* these components:

The teacher informs the students they will be reading The Autobiography of Malcolm X for Black History Month. A few students who are interested in African-American issues sit up straighter. Others have watched the movie several times and feel they can ace this unit without opening the book. Three girls object to yet another book about a male hero. And the special education teacher in the back of the room appears panic-stricken: this is the first he's heard about this assignment. He must call the Talking Books people to see if they have a copy in stock and if they can send it in time for the students who need it. He worries, too, about Sam. What will this student do during reading time?

At Souhegan High School, in contrast, when a teacher considers a topic for a particular unit, he or she decides on the content by asking the following questions:

- How accommodating will it be for students with different learning styles, interests, talents, and challenges?
- Will it challenge the most well-read student in the class?
- Will it motivate and engage students who are not terribly interested in school?
- Can I find high-interest, low-level reading materials on the topic for students who don't read or who read with great difficulty?
- What about students with extraordinary learning challenges who may not understand the topic regardless of how I present it? How can I fully include them in every class period?
- What do I expect students to remember about this unit? What should they be able to do a year from now when they have forgotten all the details?
- Can all my students achieve some of these outcomes?

Throughout the learning process, teachers must build in the following components:

- an opportunity for students to follow their own areas of interest within a broad, common topic;
- a variety of learning materials and sources;
- a requirement that students interact with one another;
- coaching from teachers and support staff;
- options for different performance-based exhibitions;
- personalization of some learning outcomes; and
- personalization of standards by which students are evaluated.

The Right Questions

Essential questions is a term used by Souhegan and other members of the Coalition of Essential Schools, which was formed by TheodoreSizer at Brown University (Sizer 1992). The questions (or statements) are designed to create a unified curriculum in which all students can learn.

Consider the question a 10th grade science teacher wrote on the board: “If we can, should we?”

The teacher asked the students to get into groups of four and gave each group a large sheet of newsprint paper and some markers. She then asked them to divide the paper into two columns, listing in the first column all the dilemmas or issues to which this quotation might refer, and in the second, their answer to her question for that issue. One group thought the question might refer to the atomic bomb—“If we have the atomic bomb, should we use it to stop another country from invading an innocent neighbor?” They wrote “No. Atomic energy is too dangerous. You should use diplomacy or conventional weapons instead.”

Finally, the teacher told the students they would in fact be studying human genetics for the next several weeks. Every student would have to answer an essential question through a performance-based exhibition: “If we can influence the incidence of birth defects through genetic selection and prenatal diagnosis, should we?”

Note that these questions and the ones in the Civil War unit share certain characteristics:

- They have no one right answer.
- All students can answer them.
- They enable all students to learn.

- They involve thinking, not just answering.
- They make students investigators.
- They are provocative—they hook students into wanting to learn.
- They offer a sense of adventure, are fun to explore and try to answer.
- They require students to connect learning from several disciplines.
- They challenge students to demonstrate that they understand the relationship between what they are learning and larger world issues.
- They enable students to begin the unit from their own past experience or understanding.
- They build in personalized options for all students.

Interdisciplinary Team Teaching

The 11th and 12th grades at Souhegan are organized like a traditional high school. However, in grades 9 and 10, teachers and students are grouped in two teams for each grade, with about 85 students on each team. English, science, social studies, and special education teachers share two blocks of time each day—two and one-half hours in the morning and an hour in the afternoon. They may organize instruction any way they wish. Students often spend about one hour in each class, but teachers may schedule longer blocks for a subject area when the time is needed for interdisciplinary teaching or for a comprehensive project.

This past year, Team 10D implemented several interdisciplinary units. The team's science teacher, Jennifer Mueller, and English teacher, Scott Laliberte, jointly taught a unit called "Lives of a Cell." The essential questions that guided the unit were:

- What is life?
- What are the characteristics that define life?
- Why do we need to know if something is living?

Mueller and Laliberte hoped all students would achieve the following outcomes, in part through their final class exhibitions:

- acquire and integrate critical information in academic and non-academic domains,
- interpret and synthesize information,
- express ideas clearly,
- effectively communicate through a variety of media,
- create quality products,
- work toward group goals, and
- assess and monitor their own behavior within a group.

For the final exhibitions, groups of four to six students were expected to perform a play or produce a video depicting one of the major life processes of a cell—for example, reproduction, energy use, or differentiation. As an interim step, each group designed a 10-minute lesson on the life process. The class had to use many modes of presentation—lectures, demonstrations, visual aids, overhead transparencies, and hands-on group activities—so that every student could be involved.

During some lessons, the teachers taught classes separately. In English class, students read Lewis Thomas's *Lives of a Cell*. In science, they learned about mitosis, meiosis, DNA, energy production, and differentiation.

Toward the end of the unit, English and science sections were combined and both teachers coached students in developing their final group exhibition. Mueller's contribution was in the area of cell structure and function; she provided multi-level reading materials, charts, videos, and filmstrips as information resources for each group. Laliberte coached students in organizational and presentation skills, and helped them view life's biological processes from the unique perspective of a writer.

Tailor-Made Challenges

A school is not truly inclusive unless every student, including those with significant learning, behavioral, and physical disabilities, can participate in learning and strive toward challenging outcomes. The following questions form the basis for curriculum adaptation for students with special needs (Tashie et al. 1993).

1. *Can the student participate in this lesson in the same way as all other students?* When a student with significant disabilities first enters a regular class, teachers often think they will have to modify most every aspect of the lessons. After they get to know the student, however, they usually find that he or she can take part in many activities with no changes.
2. *What supports and/or modifications are necessary for the student's full participation if he or she is unable to participate fully without accommodation?* Students may need support from a classmate or an adult; modified, adapted, or substitute materials; or assistive technology. Or, the teacher may have to modify expectations, perhaps by assigning less work, by changing the priority learning objectives of a particular lesson, or by changing how the student demonstrates what he or she knows.

For example, Brandon has visual impairments. For multiple-choice tests, a teaching assistant reads him the question and the answer choices, and he then points to the letters *a*, *b*, *c*, or *d* written in four quadrants of a portable white board.

Amro, the student described earlier, benefits from sitting next to a student who rephrases questions for him during discussions. In his integrated math class, Amro uses a calculator to solve addition and subtraction problems while the other students are working on two-step equations. He was, however, able to participate in his chef's class with very few modifications, and earned an A.

Jessica's lines in theater class are tape-recorded by a classmate. At the appropriate time in the performance, Jessica leans her head against a pressure switch connected to the tape recorder, which then plays her lines.

Arthur and several other students built picnic tables to be used at the school. Arthur demonstrated his knowledge of mathematics by following a blueprint, using measuring and cutting tools accurately, and assembling the table in the correct pattern.

The Bottom Line

After only two years of operation, the strides made at Souhegan are nothing short of remarkable. Most students with disabilities are doing well socially and academically. Most of their parents are thrilled at the perceptible changes in their children's self-esteem and learning as a result of the confidence expressed in their ability to succeed. And many teachers have expressed a new respect for these students' abilities.

New and veteran teachers are successfully developing teaching strategies for heterogeneous classes. They are also developing respect for one another's experience and perspectives, and are looking forward to working even more effectively on interdisciplinary teams next year.

Teachers and administrators are clear, nonetheless, about challenges that lie ahead:

- Not all students with disabilities who live in the Amherst area are attending Souhegan.
- Many difficult issues surround heterogeneous grouping. For example, can one set of educational outcomes apply to all students? How can differences in talents and interests be accommodated without sacrificing academic rigor?
- The support model and the roles of special education and regular education teachers are still confusing to many teachers.
- Only a few of the teachers have experience working collaboratively with their regular education colleagues, much less those in special education. They all need to improve their group-process and problem-solving skills.

Despite these ongoing challenges, Souhegan is well on its way to becoming a school where all students belong, are valued, can do quality work, and can learn with others who are different from themselves. The result is a richer experience for everyone involved.

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