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Education Update:Student-Directed Learning:Student-Directed Learning

by Kathy Checkley • 8 min read • original

Balancing Student Choice and Curriculum Goals

For Mary Ellis, the advantages of allowing students to direct their own learning became apparent when, as a student teacher, she visited a 4th grade class to observe an “innovative” teacher. When she walked into the room, she saw students who seemed to be playing with matchbox cars. Ellis says, “I remember thinking, `This looks like fun, but what kind of learning is going on?′”

In fact, the students were experimenting to see who could make their cars travel farthest down wooden ramps they had constructed. Each student had a notebook for logging results and observations. Ellis watched as one student approached his teacher. “I’ve got a problem,” the student said. “My car keeps falling off the ramp.” The teacher answered, “Yes, that is a problem,” but didn’t supply an answer, explains Ellis. Soon after, the student discovered on his own that he could resolve his dilemma by adding side rails to his ramp. Ellis later observed this same student working with a group of his peers. When a new challenge presented itself, they didn’t consider turning immediately to the teacher. Instead, they discussed various ways to solve the problem on their own.

“To watch a group of 10-year-olds taking responsibility for their learning was profound,” she says.

Many teachers are discovering what Ellis, now a 3rd grade teacher at Kent Elementary School in Carmel, N.Y., witnessed—when given an opportunity, students can, and do, take ownership of their learning. Providing such opportunities, however, can prove challenging for

teachers who must also ensure that students meet academic objectives established by their districts or states.

A teacher who promotes student-directed learning will "allow kids choice within a range of potential objectives," says Karen Randall, curriculum director at the Expo for Excellence Elementary School in St. Paul, Minn. "The learning style of the student, coupled with support from a teacher who knows the child, will determine how the student gets to those objectives."

For example, one language arts objective for 2nd graders in the St. Paul public school district stipulates that students be able to speak on a variety of topics, to demonstrate reading comprehension skills, and to write and create. One teacher planned an activity to help students meet the learner outcomes while also providing for choice. Students were required to independently research topics related to the theme, "Piece by Piece We Build Our Community." Through their in-depth study, they became experts on their chosen topics and then taught the class what they'd learned. This activity ensured that students met

district objectives, explains Randall, because, in completing their projects, students learned how to find information, interview experts, and demonstrate that they understood what they had read.

Teachers have to be flexible, adds Ellis. Once students are given a choice, “they don′t always take you where you want to go.” But, as Ellis′ experience has taught her, it′s worth adapting the curriculum to meet students′ interests; in that way, she says, lessons are much more meaningful and students become personally involved in them.

Student interests also help Ellis narrow the focus of her curriculum units. A unit on oceanography, for example, has a long list of objectives for her 3rd grade class. Before beginning the unit, Ellis worked with her class to generate a list of things they already knew about oceans. In brainstorming, Ellis discovered that her students knew quite a bit about sharks. She then planned her unit around this obvious interest area. “The students will still learn about the food chain,

they'll still learn about geography and density in terms of salt water, but they'll learn about it through a topic they've shown me they're interested in," she says.

Teachers as Learners

Giving students opportunities to determine what will be studied in the classroom introduces an element of risk for teachers, observes Judy Famellette, a teacher/coordinator who works with science teachers in the Scarsdale, N.Y., school district.

"Student-directed learning requires a tremendous shift in the way teachers think about how to teach science," says Famellette, who helps show teachers how to put the New York state science benchmarks into practice in the classroom. "Many teachers are starting at ground zero because they don't consider themselves to be scientifically literate," she explains.

While they may be reluctant to admit to students that they don't have all the answers, these teachers do need to change how they view themselves. It's okay not to

know the answers, says Famellette, because then teachers have “an opportunity to model what a learner is.”

Most educators agree that teachers must embrace the role of “colearner” in the classroom because students have such a wide variety of information sources available, literally, at their fingertips—thanks to such technological advances as the Internet. This change in attitude can be intellectually stimulating for teachers, giving them opportunities to explore new concepts.

“New physics standards, for instance, require students to learn about molecular models that are different than those our primary teachers studied in school,” says Randall. “So, in a student-directed environment, teachers are free to say, `Okay, we′re not experts in physics—we need to learn that together.′”

“I would like to instill the idea that we [teachers] are lifelong learners,” adds Mary Ellen Verona, a National Science Foundation principal investigator of the Maryland Virtual High School Project. Students, she maintains, need to see that there are different rhythms

of learning; if they have difficulty with a subject now, it doesn't mean they will never master the subject at a later point in their lives. Verona, who says she was an average student in high school, finds adulthood to be a wonderfully rich phase in a learner's life. "I'm finding that the older I get I am able to learn more and more—and I learn it better!" she says.

The Technological Impact

The Maryland Virtual High School Project puts the new relationship between teachers and students to the test. The ultimate goal of the project is to launch a "computational science server" on the Internet. To reach this goal, Verona, who heads up the project, must rely on the enthusiasm and initiative of students eager to explore this new frontier.

"We looked at what we wanted to accomplish," says Verona, "and asked how students could help us." At Montgomery Blair High School in Silver Spring, Md., where the project is based, students were quick to offer their assistance in the virtual venture.

“A lot of the work I do is setting up the environment that allows students to communicate with other schools,” explains Verona. Blair students conducted much of the research for Verona, helping her determine what kinds of software and hardware are needed to establish such an extensive network. “They′ve learned the `how′ of creating this environment,” says Verona. “They are going to make it work.”

Susan Ragan, a computer science teacher in the magnet program at Montgomery Blair, agrees that teachers need to learn to better tap the abilities of their students. “Teachers must use students as fellow learners who can find new information and help teach the class,” says Ragan. “The teacher becomes valuable as the `experienced guide′ who can help make sense of all the data available via technology.” The result, says Ragan, is that students not only receive information, they share it and, “together, the class generates knowledge.”

Process vs. Content

Teachers need to be guides in the classroom because "we are at a point in our culture where coming to a consensus about what `content' is is very difficult," observes Verona. Rather than helping students develop an ability to memorize facts in a textbook, teachers should teach students metacognitive and self-evaluative skills, so "they can assess what they need to learn in order to solve a problem or complete a project."

"What's hoped," she adds, "is that students will become aware when they need certain skills and they'll go off and learn those skills on their own."

Ellis agrees that students today need to hone research skills, not rote memorization skills. Focusing on content rather than process is "like having a piece of wood and no tools to carve it," she explains. "I'd rather have the tools and learn how to find the wood."

As persuasive as these arguments may be, many educators fear that focusing on process leaves today's students with too many gaps in their knowledge—gaps that make it difficult for them to become productive

members in a democratic society. And, these educators insist, requiring students to meet benchmarks or objectives does not quash student initiative.

“Standards work hand in hand with student-directed learning,” says Elizabeth Stage, codirector for science for the New Standards Project. “A standard is concrete, but there are probably a million ways to meet that standard.”

The New Standards Project, for example, has written an objective requiring that all students in the United States learn about earth science. “Now, there are a number of things to study about earth science, and how you study it is your business,” says Stage.

Joanne Foster, a Texas educator, agrees. “Every school district in Texas is required to teach the state-mandated curriculum,” explains Foster, who is the executive director of program development and support for the El Paso Independent School District. Because the objectives spelled out in the state's Essential Elements, Knowledge, and Skills framework are broad, individual districts, schools, teachers, and

students have some choice in how they meet those standards. For example, in the sciences, students are asked to analyze the use of chemicals in everyday activities. “That's pretty open-ended,” says Foster. “Such requirements give students opportunities to research a topic on their own.”

These approaches work, observes Randall, if standards and objectives remain broad. What worries her is the possible move toward requiring that students meet more content-specific objectives. A strict adherence to such standards, says Randall, fails to recognize that children don't all learn in the same way or at the same pace.

Randall says she understands the concern about gaps in knowledge, especially when it's parents who are anxious. She assures parents that, when Expo students graduate from elementary school, they'll know *how* to find the information they need. Randall admits that her response may sound glib, but contends that what adults are really worried about is giving up control and letting

students take the lead. The real answer, she maintains, is to better educate the public and show how students thrive in a student-directed learning environment.

Giving Students 100% Choice

For some educators, the phrase “student-directed learning” means nothing if students are required to meet educational objectives set by anyone other than themselves.

“We assume that people are naturally curious, yearning to learn how the world works,” explains Mimsy Sadofsky. “People are trying, from birth, to become adults. We don’t have to intervene in that learning process to make sure they learn what they need to.”

Sadofsky is a staff member at Sudbury Valley School, located in Framingham, Mass. Founded in 1968, the school is dedicated to allowing students absolute freedom to determine what they’ll study and how they’ll study it. There is no curriculum at Sudbury Valley; there are no teachers or classes in the traditional sense. According to the school’s philosophy, students will eventually learn what they need to know because they’ll discover, on their own, what skills are essential.

“If skills are basic to survival, then kids will figure out that they need them. Once a student becomes aware that he or she needs particular skills, they acquire those skills—usually at an accelerated pace,” Sadofsky says.

If a student wants to learn about multiplication, for example, that child might make a multiplication table and memorize it. Or, that child could form a class with other students who also want to learn about multiplication. “But it’s more likely,” says Sadofsky, “for that child to learn in ways that can’t be directly observed.”

For example, one 5-year-old student is introduced to mathematical concepts through a computer game. “She’s playing the game because it’s fun,” says Sadofsky, “and she’s learning math at the same time.”

Doesn’t the computer, then, take on the role of surrogate teacher?

“Perhaps,” concedes Sadofsky. “But the little girl is playing the game to please herself and to satisfy her own interests—not to satisfy the interests of others.”

Students have graduated and received diplomas from Sudbury Valley since 1970 (the school is accredited by the New England Association of Schools and Colleges), and Sadofsky points to the success of Sudbury graduates as a measure of the school’s effectiveness. Sadofsky’s own three children are Sudbury graduates. Today, one is a professor of mathematics, another is employed at a communications company, and the third is a graduate student in geology—all successful by traditional

measures. But what pleases Sadofsky most—as an educator and a parent—is the fact that her children don't feel "stuck" with their choices.

"My son is in a very narrow field of mathematics," she explains. "He knows he may not be in mathematics all his life— and he's comfortable with that. He knows there's more out there and that he can do more."

The self-knowledge that Sudbury graduates possess is the most compelling testament to the school's philosophy, Sadofsky maintains. "Our grads do well when they leave because they are awake, aware, lively, and intense," she asserts. "Sudbury grads are flexible, self-reliant problem solvers, and they're happy—everything employers say they want."
