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Right: Teachers in the Career Tech Ed Department participate in a discussion on how to incorporate vocabulary instruction into curriculum maps.

CURRICULUM MAPPING AND RESEARCH-BASED PRACTICE:

helping students find the path to full potential

By Jennifer Herbold

As the person who has overseen the majority of the curriculum development at the New Mexico School for the Deaf (NMSD), I am frequently asked to define our curriculum. I explain that NMSD teachers follow state standards using a wide variety of materials, strategies, activities, and assessment tools. I am often met with a blank face after my explanation and asked a second time, "But what is the NMSD curriculum?" I have come to realize that the questioners simply want to know which company's textbooks are used. This misconception—that curriculum equals a specific textbook resource—ties into a general lack of understanding of what curriculum means.

As Jacobs (2004) puts it: "The root of *curriculum* comes from the Latin *currere*, meaning 'a path or course run in small steps'." Good teachers make decisions every day about what steps to take (e.g., what to teach and how to do so). Over the past two decades, countless research-based instructional materials and educational theories have saturated the field. In addition to keeping abreast of all these developments, teachers of deaf and hard of hearing students need to take into consideration students' individualized education programs, differentiated instruction, strategies, and activities. Is it any wonder that some teachers cling to a specific marketed resource, such as a textbook series, and follow its instructions with little regard for actual evidence of student learning?

Photos courtesy of Jennifer Herbold

Wiggins (2010) writes: "We tend to define teaching by measuring all the things a teacher is supposed to *do* rather than all the things a teacher is supposed to *accomplish*." When teachers think about what they need to do, they need to think about the expected results and how they can best support students in achieving those goals. As they face decisions on the paths of learning in their classrooms, they will find curriculum maps helpful for showing the way. At NMSD, we have immersed ourselves in the process of using curriculum mapping to make sense of teaching.

Curriculum mapping is different from a "curriculum cookbook." It does not consist of daily recipes in which specific instructional ingredients are combined with a goal towards a predictable product. Good teachers create maps that take into consideration various routes in which something may be accomplished. Useful maps are flexible and provide a guide that takes into consideration possible detours and a few sightseeing trips along the way. (See Jacobs & Johnson, 2009, for templates, tools, and resources related to curriculum mapping.)

Curriculum mapping, notes Jacobs (2004), is a way to organize information and data in relation to the school calendar. Supported by independent research (e.g., Kercheval & Newbill, 2004; Division of Accountability, 2002), curriculum mapping not only supports individual teachers but also provides a way for schools to bring together all parts of the whole. In deaf education, one teacher can easily be responsible for educating students in a single class who have a broad range of academic knowledge and ability. As a result, teachers must provide additional support materials for students who benefit and yet, at the same time, they must provide challenging materials for their higher-level students.

At NMSD, we are working towards the goal of creating maps for all subject areas from K-12. This includes a wide variety of domains such as math, career exploration, physical education, and even woodworking. By no means has this been an easy process as it requires time and dedication on the part of teachers, the curriculum staff, and the administrators. I have come to understand that the main benefit reaped from the curriculum mapping process is not the finished product but the process

itself. The process provides an opportunity for teachers who teach across age and ability levels to have in-depth conversations in order to ensure the cohesion of learning in each subject area.

Anatomy of a Curriculum Map

Good curriculum maps include specific elements that vary depending on the subject. Jacobs (2004) mentions much of the following information relating to these elements in *Getting Results with Curriculum Mapping*:

- **UNIT TOPIC:** The unit topic should be a simple phrase that summarizes the entire set of lessons being taught (e.g., "important civil war battles," or "taking care of your teeth," or "quadrilaterals").
- **TIME FRAME:** This is much more challenging than it seems. The average school year in New Mexico has approximately 36 weeks. Taking into account time for standardized testing, special events, and field trips, NMSD is left with 32 weeks. On one occasion, an elementary science teacher and I decided to establish a timeline for the units of fifth grade science. We based our work on various recommendations from specific materials, the knowledge of our students, and our own instructional experiences. Much to our surprise, we ended up with units planned for 49 weeks! We had to go back, analyze our time frame, and make decisions on how to reduce specific units.
- **ESSENTIAL QUESTIONS:** Teachers are often concerned with the nuts and bolts of teaching, and taking a broader perspective can be difficult at times. When developing essential questions, we need to take a step back and consider why we are teaching any given material. Why do students need to learn this? What will be relevant to them and help them remember what they've learned? Essential questions should be the cornerstone of each unit and enable students to make meaning and connections.
- **STANDARDS:** State-developed standards, along with the nationwide common core standards, have become an extremely important consideration when deciding what to teach. Mapping provides a way to ensure that all standards are covered. During our mapping sessions, teachers and the curriculum staff match standards to various units and select specific textbook chapters to teach as well as identify related resources. We have consistently found that although some resources claim to meet all the New Mexico state standards for a specific grade level and content area, often standards are missed or insufficiently covered. This necessitates the addition of supporting resources and materials.
- **CONTENT AND SKILLS:** These sections list exactly what is being taught and what skills students are expected to acquire.
- **RESOURCES, ACTIVITIES, AND ASSESSMENTS:** Resources, activities, and assessments are continually updated as new resources (including but not limited to visual aids such as posters, websites, and textbooks) are procured. We have found that it is possible to plan the same standards, essential questions, content, and skills for each class's higher- and lower-level groups. For example, sometimes we have two textbooks or materials geared to different reading groups within the same subject and grade level. Within the resources section, we label those accordingly (e.g., "Group A: Chapter 14; Group B: Chapter 12").
- **REFLECTIONS:** This is a section that we have left blank for teachers to document their thoughts during or after each unit topic. They can review assessment information to determine if the mapped out unit does what it is intended to do. They can make notes of different activities and new ideas that can be added to the map.

Curriculum Mapping for Deaf Students—A Personal Experience

Within the field of deaf education, the mapping process must take into consideration the language and communication needs of the students. At NMSD, we have tried to address those

needs through the compilation of various print and non-print resources and included differentiated activities from which teachers may choose. One of the challenges we have encountered is considering the needs of the deaf students who are able to understand age-appropriate information in ASL yet who cannot understand the same information through printed English. The quality of the information conveyed should not be diminished for lack of textbook resources at their reading levels. For example, one of our high school history teachers has developed a wide body of PowerPoint slides on different time periods in the history of the United States and those slides were incorporated into the American History curriculum maps. Other activities and resources might include field trips, student-friendly websites, and projects. As an ASL-English bilingual school, NMSD includes the development of ASL and literacy in its lesson plans regardless of content area.

I have learned—often the hard way—that it is not enough to have teachers attend training sessions and then create curriculum maps within their own groups. The success of this process is contingent upon having a strong leader within each curricular domain who can provide ongoing support to teachers. Through trial and error, I have found that each domain has its own needs, and some mapping templates fit some content areas better than they do others.

In order to introduce this process, teachers from a specific content area meet for a full day with the curriculum staff (substitute teachers for their classes are provided). We get as much done as possible during this day in terms of separating standards into units, developing essential questions along with an approximate timeline, and we add as many resources as possible. Invariably, we accomplish less throughout the day than we had hoped to, but the event allows teachers and the curriculum staff to have a better understanding of what needs to be done. The curriculum staff meets with teachers from all content areas throughout the year on a rotating basis.

Curriculum maps are living documents. Although we are a couple of years into this process, we are still only at the beginning stages. We know that our teachers will need to consult and perhaps revise the maps as often as possible. Throughout the next two years, our main focus will be creating preliminary maps for each content area at the K-12 grade levels. Opportunities for NMSD's teachers to review their documentation, add activities, and develop the resources sections will be provided. There is a plethora of information on curriculum mapping available online, including workshops and planners. Each school needs to figure out what works best for its program and develop templates in addition to forming short-term and long-range mapping plans.

Marzano (2010) presents evidence of the positive relationship between teacher competence and student achievement. As we are well into the 21st century of research-based instruction, mapping increases teacher competency by enabling teachers to think reflectively, review documentation and assessment data regularly, develop strategies, and consider state standards. All this leads to our ultimate goal of students being provided with the information and skills they need to reach their full potential.

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Resources

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