Creating Transformative Units: Teaching to Foster Self-Determination and Learning

By Pamela Luft, Charlotte Brochu, Ashley Rasizzi, and Courtney Tanner

When Charlotte Brochu, Ashley Rasizzi, and Courtney Tanner taught deaf and hard of hearing students in public schools to complete their course assignments at Kent State University, they wanted to incorporate transformative strategies and their state's standards into their instruction. All they needed was a plan.

Brochu worked daily with three high school seniors in a deaf education resource room. Two students used cochlear implants and Sign Supported Speech, and one student used American Sign Language (ASL). Her supervising teacher provided support in inclusive classrooms but also worked with small groups of deaf and hard of hearing students on content.

Rasizzi worked with a fifth grader who used amplification and oral skills in inclusive classrooms with sign support during her daily resource room work in the deaf education classroom. Her supervising teacher worked with a wide range of elementary and middle school deaf and hard of hearing students primarily in the deaf education classroom.

Tanner worked with a 17-year-old deaf student with additional disabilities who used bilateral cochlear implants and Sign Supported Speech. They worked together in a resource room twice a week. The rest of the week, the student used an interpreter in a special education classroom for students with multiple disabilities. Like her supervising teacher, Tanner saw her student for 45 minutes twice a week.

All of the students except for Rasizzi's used interpreters when they were in inclusive classrooms.

To become transformative teachers, Brochu, Rasizzi, and Tanner needed to incorporate best practices, target their students' academic needs, and foster their students' self-determination (i.e., ability to make their own life choices) within their instructional practice. Their coursework and practicum would help them do this.

Photos and illustrations courtesy of Pamela Luft

Pamela Luft, PhD, Professor Emerita, taught for 25 years at Kent State University in areas of deaf education and special education in the School of Lifespan Development and Educational Sciences. She earned her doctoral degree from the University of Illinois at Urbana-Champaign. Her teaching experience includes 15 years of working with deaf and hard of hearing students of all ages and ability levels.

Charlotte Brochu, MEd, a May 2021 graduate from Kent State University's Deaf Education program, teaches deaf and hard of hearing students in Canterbury Woods, Fairfax County, Va. Prior to this, she worked as an educational interpreter in Loudoun County, Va. She was selected New Teacher of the Year in 2022.

Right: Ashley Rasizzi, Courtney Tanner, and Charlotte Brochu worked with professor Pamela Luft to complete their Deaf Education program course assignments for Kent State University.

Research-Based Interdisciplinary Instruction

Quality instruction can convert reluctant and struggling students into excited and engaged learners. Quality instruction incorporates states' curriculum standards and is based on outcomes data. Yet creating instruction from isolated standards is rarely successful for long-term student retention (Bransford et al., 2000; Wiggins & McTighe, 2018). Brain-based research indicates that students need clearly organized instruction with multiple exposures to critical constructs to deepen learning (Bransford et al., 2000).

Learning and retention are increased even further with lessons that are personally relevant. Student motivation and long-term memory improve when learning is useful and can be applied to challenges they are likely to face (Bransford et al., 2000; Wiggins & McTighe, 2018). Multidisciplinary unit topics that focus on a student-centered issue, stated as a problem or as an inquiry to investigate, increase student participation and engagement (Wiggins & McTighe, 2018). "Authentic" student-centered instructional activities result in high-quality learning that supports writing, mathematics, and science achievement; these kinds of activities have been identified as "best practice" in deaf education (Marschark & Spencer, 2009).

Best Practice in Unit Design

Student-centered, multidisciplinary instructional units are transformative because they combine student learning needs, standards, and effective instructional practice into an organizational structure that students can more effectively understand and use (Bransford et al., 2000). This can be effectively accomplished through a well-designed multidisciplinary instructional unit. Here is how:

1. **Identify student needs**—Planning for the transformative classroom begins with identifying the needs of students. This means not only their academic needs, but also their psycho-social needs, especially those that support the development of self-determination. Many deaf and hard of

Ashley Rasizzi, BSE, a May 2020 graduate from Kent State University's Deaf Education program, teaches deaf and hard of hearing students for the Pasadena Independent School District in Houston, Tex. She was selected New Teacher of the Year in 2021.

Courtney Tanner, MEd, a May 2021 graduate from Kent State University's Deaf Education program, teaches deaf and hard of hearing students in Pasco County Schools, Fla. Prior to this, she was a behavior therapist and then served in the Peace Corps for two years teaching English to students in the country of Georgia.

The authors welcome questions and comments about this article at *pluft@kent.edu.*

hearing students have fewer opportunities to develop self-determination than their hearing peers (National Deaf Center on Postsecondary Outcomes, 2018) despite this skill being a strong predictor of positive outcomes after high school (Cobb et al., 2009; Luft, 2016; Landmark & Zhang, 2010; Shogren et al., 2013). Standards for developing self-determination are found in most transition curricula, such as that developed by the Laurent Clerc National Deaf Education Center (2006).

Brochu, Rasizzi, and Tanner realized that their students, including Rasizzi's already career-focused fifth grader, needed to begin preparing for adulthood. They would incorporate self-determination skills as well as academic skills into their teaching plans. Their units would be based on real-life scenarios that would strengthen their students' development and confidence.

Designing Meaningful Instruction:

CONNECTING STANDARDS AND SKILLS

By Pamela Luft, Charlotte Brochu, Ashley Rasizzi, and Courtney Tanner

One of the challenges of designing effective instruction is making sure the skills taught are taken from state standards. Figures 1-3 show the standards that we—a professor at Kent State University and three teachers in training—chose to fulfill as we created instructional units for our students.

Brain-based research suggests teachers should provide depth and redundancy of content across contexts in order to deepen learning. To ensure this would happen, we created a question—at once overarching across curriculum and personal to each student's interests and needs—for the class to investigate. This allowed students to deepen their learning through multiple exposures across different academic areas and tasks. Key concepts were repeated but presented or used by students in slightly different ways. This is why units that incorporate multiple content areas are important. Too often in standards-based instruction, teaching becomes focused—and even isolated—on a single subject. This results in contextually limited presentations and student use.

The figures on pg. 73 provide a snapshot of each unit.

2. **Incorporate real life**—Brochu's students enjoyed discussing vacations. Their parents did the planning but, as high school seniors, her students would soon be expected to make weekend and vacation plans on their own. Brochu realized she could use the exciting topic of vacation planning to incorporate math, budgeting, and problem-solving skills as well as skills in reading and expressive language. Math and budgeting would be taught through pricing and making a budget; reading and language would be taught through examining information about vacation possibilities and explaining choices.

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Rasizzi's student had one long-term career goal—to become a dance teacher—and she had taken lessons for several years. Rasizzi felt her student should make an informed career decision after she looked at other careers. She developed the unit to help her student evaluate her abilities and career requirements in several areas and calculate costs of tuition and training. English language standards were easily integrated as Rasizzi's student searched for career information; math skills were used to calculate costs and career earnings.

Tanner's student enjoyed shopping; however, his family and teachers noted he was anxious about handling money. In response, Tanner created an in-class store. This allowed her student to incorporate the math skills of adding and counting money, expressive language skills to describe purchasing decisions, and social studies skills to identify prices in shopping ads and on item tags. As her student has significant disabilities, Tanner used extended curriculum standards for this unit.

3. **Focus on inquiry**—Addressing questions that respond to authentic problems enhances student motivation, engagement, and learning (Wiggins & McTighe, 2018); these questions can also be useful in integrating various unit elements. Brochu, Rasizzi, and Tanner used curriculum standards to establish expectations for unit

Figure 1.

Charlotte's Unit Question

CHARLOTTE BROCHU'S UNIT:

Students investigate: *How do I plan a trip or vacation that I can afford?*	
STANDARD With the exception of the transition standard that was formulated by the Laurent Clerc National Deaf Education Center, all standards were determined by the state.	SKILL-BASED ACTIVITY Teachers determined the activity to develop the skills that would meet the standard.
Self-Determination	Plan a trip and determine its cost
Transition	Budget money to fulfill personal needs and desires
English Language Arts	Integrate multiple sources of information presented in different media and formats
Math	Use units of measurement to understand problems and guide solutions
Social Studies	Understand the economic principle that competition among sellers lowers costs and prices
Science	Discuss data regarding self-regulation and the need for vacations

Figure 2.

Ashley's Unit Question

ASHLEY RASIZZI'S UNIT:

Student investigates: *What will it take for me to become a dance teacher?*	
STANDARD With the exception of the transition standard that was formulated by the Laurent Clerc National Deaf Education Center, all standards were determined by the state.	SKILL-BASED ACTIVITY Teachers determined the activity to develop the skills that would meet the standard.
Self-Determination	Cost and having sufficient income to attend college
Transition	Identify education and training requirements and skills
English Language Arts	Determine the meaning of words and phrases as used in a text
Math	Use variables to represent quantities in a real-world mathematical problem (i.e., budget)
Social Studies	Analyze individual and group perspectives for understanding comtemporary issues (i.e., conduct interviews)
Science	Identify questions answered through scientific investigations

Figure 3.

Courtney's Unit Question

COURTNEY TANNER'S UNIT:

Student investigates: *How many things can I buy with $20? How do I make sure I have enough money?*	
STANDARD With the exception of the transition standard that was formulated by the Laurent Clerc National Deaf Education Center, all standards were determined by the state.	SKILL-BASED ACTIVITY Teachers determined the activity to develop the skills that would meet the standard.
Self-Determination	Make purchases up to $20 using a phone calculator
Transition	Make small purchases with assistance
English Language Arts	Communicate using age-appropriate words
Math	Solve real-world problems using coins or bills and addition
Social Studies	Identify the price of goods
Science	Identify work being done (i.e., cashier, shopper)

learning, but they also crafted an overarching unit question that was student-centered. Framing an overarching student-centered question would increase engagement, motivation, and retention; it would also deepen learning and contribute to development of self-determination.

Brochu developed the overarching unit question (i.e., How do I plan a trip or vacation that I can afford?) that tapped into the students' vacation interests. Math and budgeting for the transition and self-determination standard fit easily into skills necessary to answer the question. It was also easy to incorporate reading and integrate information for English language arts. Social studies and science standards were more difficult; however, the broadness of her question led to a social studies standard for competition and cost comparisons, and the science standard allowed the addition of the concept of vacations supporting an individual's overall health.

Rasizzi's unit question (i.e., What will it take for me to become a dance teacher?) addressed her student's intended career. English language arts and math standards clearly fit and were easily addressed, but social studies and science standards were more challenging. Rasizzi's search for a social studies standard led her to propose interviews with dance teachers about their career paths. The science standard meant use of scientific inquiry as a basis for answering the unit question.

Tanner developed two overarching questions (i.e., How many things can I buy with $20? How do I make sure I have enough money?). Initially, all standards but science were easily integrated. Then Tanner discovered a science standard that allowed the incorporation of role play which also helped her student reduce his anxiety with money: he practiced being the consumer as well as the being the cashier.

4. **Create lessons that answer the inquiry**—Teachers should fashion lessons that lead to a culminating activity that answers the overarching unit question through problem solving and inquiry and reinforces the cross-disciplinary content.

Brochu's culminating activity asked students to present their final vacation choices. She had planned to use open-ended choices to guide students' learning; however, she realized that the students needed more structure. Therefore, she developed three options for each vacation element: the beach for $150 per day, an amusement park for $100 per day, and camping for $50 per day. Transportation options included using a bus for $30 per person, a car for $50 person, or a plane for $100 per person. Hotel options were staying at a fancy hotel for $200 per night, a good hotel for $150 per night, or an okay hotel for $100 per night. There were options for activities specific to each vacation choice, with prices listed as well as costs for meals. All was to be planned within a $4,500 budget.

Rasizzi's culminating activity required that her student present a career plan. The unit began with a career survey to confirm the student's interests, skills, and aptitudes that also exposed the student to related alternative career choices if she changed her mind or if her plans did not work out.

Tanner's culminating activity stipulated that her student independently enact a purchase, not to exceed $20, of multiple items in the mock classroom store. Her student learned to identify costs on price tags and to count money across various denominations of bills.

High-Leverage Practices
INCORPORATED INTO UNITS

The table below shows the connections between high-leverage practices—evidence-based practices—selected from Billingsley et al. (2019) and McLeskey (2017) and the teaching units that were devised.

Best Practice	Unit Activity
Use multiple sources of information to develop a comprehensive understanding of students' strengths and needs.	Units addressed multiple curricular areas and self-determination in new contexts.
Use student assessment data, analyze instructional practices, and make necessary adjustments that improve student outcomes.	Units addressed unique student needs, and teachers made adjustments as necessary to achieve unit goals.
Systematically design instruction toward a specific learning goal.	Units systematically integrated content areas to reinforce and deepen learning.
Teach cognitive and metacognitive strategies to support learning and independence.	Problem-solving formats and unit questions supported higher-order learning. Self-determination and transition goals addressed independent learning skills.

5. **Document outcomes**—Brochu's unit resulted in two of the three students' vacations being within the budget. With additional probing, the remaining student explained the meaning of negative numbers in his budget, and he noted that he needed to save more, demonstrating critical unit constructs despite his initial mistake.

   Rasizzi's student concluded by identifying several strategies to achieve her goal of becoming a dance teacher. She reviewed the skills and abilities she needed in order to succeed, and she identified the next steps to improve her skills and obtain feedback from her dance instructor.

   Tanner's student used small steps and repeated practice opportunities to succeed. He added a series of items he chose to purchase by using a phone calculator, noted if the totals were more or less than $20, and demonstrated at least two different combinations of bills when purchasing chosen items.

6. **Transformation through practice**—Inquiry-based units encourage student engagement, participation, and retention. Lessons begin with addressing students' strongest needs and build in a hierarchical spiral as students acquire additional knowledge and skills. Well-designed units include multiple recommended and exemplary practices.

   Brochu, Rasizzi, and Tanner were each able to design such instructional units. In addition, their units included a range of critical practices recommended by the Council for Exceptional Children (Billingsley et al., 2019; McLeskey et al., 2017). As they developed transformational units, they devised lessons that focused on standards, addressed students' academic needs, and supported development of self-determination.

As teachers, it is our role to ensure students become lifelong learners and successfully compete in our global society. Focusing on authentic issues that build self-determination through research-based practices promotes students' abilities to successfully solve problems and develops confidence in their ability to do so. This is critical to developing self-determination, part of the result of transformational teaching and the foundation for each student's journey to becoming a confident and competent adult.

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