AUTHENTICITY FRAMEWORK

Authenticity is a conceptual framework for meaningful student-centered learning. Individuals build on what they already know to create deep knowledge (Bransford, Brown, & Cocking, 2000). The characteristics of authentic intellectual work include "construction of knowledge, through the use of disciplined inquiry, to produce discourse, products, or performances that have value beyond school" (Newmann, Bryk, & Nagaoka, 2001, p. 14). A body of research spanning more than two decades points to the efficacy of authentic learning environments. Newmann and subsequent researchers found that when fidelity to authentic pedagogy is at a high level in the learning environment, student achievement is higher as well, regardless of ethnicity, socio-economic status, or identified disabilities (King, Schroeder, & Chawszczweski, 2001; Kukrai & Spector, 2012; Newmann et al., 2001; Newmann, King, & Carmichael, 2007; Newmann, Marks, & Gamoran, 1996; Saye, 2013; Wirkala & Kuhn, 2011).

CONSTRUCTION OF KNOWLEDGE

Construction of knowledge is a dynamic, active process in which students strive to make sense of new information (Stoll, Fink, & Earle, 2003). To negotiate new knowledge, students first need to cue their prior knowledge. Students then compare their prior knowledge to new information. Students manipulate information and ideas to synthesize, generalize, explain, hypothesize, and arrive at some construction of new meaning or understanding. By manipulating information and ideas through these higher-order thinking processes, students solve problems and discover new meanings and understandings (Newman & Wehlage, 1994).

DISCIPLINED INQUIRY

Substantive Conversation

Substantive conversation is the extent to which students converse to understand the substance of a subject (Newmann & Wehlage, 1994). Conversations revolve around subject matter and include higher-order thinking, such as making distinctions, applying ideas, forming generalizations, or raising questions. Conversation involves sharing ideas and is not necessarily scripted. Sharing is best illustrated when participants explain themselves or ask questions in complete sentences and when they respond directly to comments of previous speakers. This is what some refer to as discourse. Discourse builds coherently on participants' ideas to promote improved collective understanding of a concept or topic through consensus building among a community of learners (Heatherington & Reaves, 2014; Rule, 2006).

Deepening Knowledge Through Meaningful Questions

Knowledge is considered deep when it concerns central ideas of a topic or discipline and when students make clear distinctions, develop arguments, formulate questions, solve problems, construct explanations, and otherwise work with complex understandings. Evidence of deep knowledge is when students can articulate and demonstrate a complex understanding of content to others.

Instruction involving meaningful questions is organized around essential questions that allow students to focus on a significant topic and demonstrate complex understanding by using reasoned and supported explanations (Newmann, Secada, & Wehlage, 1995). Essential questions create opportunities for students to deepen and formatively assess their own understanding. These questions should stimulate thought, provoke inquiry, and spark more questions (McTighe & Wiggins, 2013). Deep knowledge is achieved by investigating connections between topics focusing on depth instead of breadth, as students recognize relationships between ideas (McTighe & Wiggins, 2013; Newman & Wehlage, 1994; Spencer, 2018).

REAL-WORLD CONNECTIONS

Students engage in meaningful work, tasks, and contexts that they see as connected to their personal experiences and contemporary public situations and that mimic work done by professionals (Garrett, Huang, & Charleton, 2016; Harris & Marx, 2009; Lombardi, 2007). Students are involved in an effort to influence a larger audience beyond their classroom by communicating knowledge to others, advocating solutions to social problems, providing assistance to people, or creating performances or products with utilitarian or aesthetic value (Burton, 2011; Center for Global Education, 2017).

Lessons gain in authenticity when there are connections to larger social contexts or communities in which students live. Instruction can exhibit some degree of connectedness when students address real-world public problems or when students use personal experiences or prior knowledge as a context for applying and constructing new knowledge (Newman & Wehlage, 1994).

STUDENT-CENTERED LEARNING

Student-centered learning focuses on shared control of learning environments. Students are actively engaged in multiple aspects of their learning that have traditionally fallen under the teacher's role (Newmann et al., 1995). In learning environments like these, students' voices and choices are central to their learning experiences. Assessments, formative or summative, can increase student-centered learning when students have the opportunity to choose how to demonstrate knowledge and understanding of complex concepts. Additionally, students reflect on their learning and evaluate their own and others' solutions or ideas (Newmann et al., 2007).

School cultures and classroom environments should be considered when creating student-centered learning experiences. According to some scholars, teachers play the critical role in successful implementation of authentic classroom practices (Boaler, 2016; Darling-Hammond, 2000; Dennis & O'Hair, 2010; Sanders & Rivers, 1996). Teachers' relationships both with students and with their content areas contribute to fostering learning environments where students can construct meaning for themselves and teachers guide students in inquiry-based learning and connecting learning outside of classroom settings. Because of the importance placed on relationships, respect, and classroom culture, authentic teaching and learning should not be separated from these factors.

REFERENCES

Boaler, J. (2016). Mathematical mindsets: Unleashing students' potential through creative mathematics, inspiring messages and innovative teaching. John Wiley & Sons.

Burton, K. (2011). A framework for determining the authenticity of assessment tasks: Applied to an example in law. *Journal of Learning Design, 4*(2), 20–28.

Center for Global Education. (2017, September 26). SAGE advice. Retrieved from http://asiasociety.org/education/sage-advice

Darling-Hammond, L. (2000). Teacher quality and student achievement. *Education Policy Analysis Archives, 8*(1), 1-49.

Dennis, J. & O'Hair, M. J. (2010). Overcoming obstacles in using authentic instruction: A comparative case study of high school math & science teachers. *American Secondary Education, 38*(2), 4-22.

Garrett, L., Huang, L., & Charleton, M. C. (2016). A framework for authenticity in the mathematics and statistics classroom. *Mathematics Educator, 25*(1), 32-55.

Harris, C., & Marx, R. (2009). Authentic tasks. Retrieved from http://www.education.com/reference/article/authentic-tasks/

Herrington, J., Reeves, T. C., & Oliver, R. (2014). Authentic learning environments. In J. M. Spector (Ed.), *Handbook of research on educational communications and technology* (pp. 401-412). New York: Springer Science Business Media.

King, M. B., Schroeder, J., & Chawszczweski, D. (2001). Authentic assessment and student performance in inclusive schools. Brief No. 5. Madison, WI: Research Institute on Secondary Education Reform for Youth with Disabilities.

Kukral, N., & Spector, S. (2012). *Authentic to the core. Leadership, 41*(5), 8-10.

Lombardi, M. M. (2007). Authentic learning for the 21st century: An overview (ELI Paper 1: 2007). Retrieved from https://net.educause.edu/ir/library/pdf/eli3009.pdf

McTighe, J., & Wiggins, G. (2013). Essential questions: Opening doors to student understanding. ASCD.

Newmann, F. M., Bryk, A. S., & Nagaoka, J. K. (2001). Authentic intellectual work and standardized tests: Conflict or coexistence? Improving Chicago's schools.

Newmann, F., King, M., & Carmichael, D. (2007). Authentic assessment and instruction: Common standards for rigor and relevance in teaching academic subjects. Des Moines: Iowa Department of Education.

Newmann, F. M., Marks, H. M., & Gamoran, A. (1996). Authentic pedagogy and student performance. *American Journal of Education, 104*(4), 280-312.

Newmann, F. M., Secada, W. G., and Wehlage, G. G. (1995). A guide to authentic instruction and assessment: Vision, standards and scoring. Madison, Wisconsin: Wisconsin Center for Education Research.

Newmann, F. M., & Wehlage, G. G. (1994). Five standards of authentic instruction. *Annual editions: Educational Psychology, 94, 95*.

Rule, A. C. (2006). Editorial: The components of authentic teaching. *Journal of Authentic Learning, 3*(1), 1-10.

Sanders, W. L., & Rivers, J. C. (1996). Cumulative and residual effects of teachers on future student academic achievement. Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center.

Saye, J., & Social Studies Inquiry Research Collaborative (SSIRC). (2013). Authentic pedagogy: Its presence in social studies classrooms and relationship to student performance on state-mandated tests. T*heory & Research in Social Education, 41*(1), 89-132.

Spencer, J. (2018). Making time for learning. Edutopia. Retrieved from http://www.spencerauthor.com/pbl-time/

Stoll, L., Fink, D., & Earl, L. M. (2003). It's all about learning (and it's about time): What's in it for schools.

Wirkala, C., & Kuhn, D. (2011). Problem-based learning in K-12 education: Is it effective and how does it achieve its effects? *American Educational Research Journal, 48*(5), 1157-1186.

Authenticity Component	Reflection Question In what ways does the lesson...
CONSTRUCTION OF KNOWLEDGE (Use of higher-order thinking to convert information into organized knowledge)	• Provide students with opportunities to develop and use higher order thinking (organizing, synthesizing, interpreting, evaluating)? • Link prior knowledge with new knowledge?
DISCIPLINED INQUIRY (Substantive conversation)	• Ask students to share ideas and respond to the ideas of others? • Ask students to negotiate a group understanding of a concept or idea?
DISCIPLINED INQUIRY (Increased depth of knowledge through the use of meaningful questions)	• Use meaningful questions to guide student learning? • Provide appropriate structure to help students work systematically toward a complex solution or explanation? • Ask students to construct a supported explanation or argument? • Ask students to create a product that integrates or represents their learning?
REAL-WORLD CONNECTIONS (Learning linked to real-world issues outside of school)	• Allow students to make personal connections with the learning activities? • Address a topic or problem that has implications beyond the lesson itself? • Encourage students to think about influencing a larger audience beyond the classroom?
STUDENT-CENTERED LEARNING (Learning is active rather than passive and provides students with choices about their learning)	• Place students in the role of active rather than passive learners? • Allow students to make choices about their learning environment (content, process, product)? • Consider student prior knowledge and educational experience? • Allow students to reflect on and evaluate their own work? • Fit within a classroom environment that supports authentic learning?

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