

21st Century Skills: Promoting Creativity and Innovation in the Classroom

The following materials present a range of resources and ideas that complement the *21st Century Skills: Promoting Creativity and Innovation in the Classroom* DVD. The DVD and accompanying PowerPoint slides emphasize the critical importance of creative and innovative reasoning skills for the success of students in our rapidly changing world. Ideally, they will become a starting point for follow-up professional development and strategic planning using the resource materials presented here. The materials can be used in a group professional development setting or for individual self-reflection. A suggested reading list for study groups is also included.

A Think-Pair-Share Warm-Up Activity

1. What is your personal definition of "creativity"?
2. What is your personal definition of "innovation"?
3. How do your definitions compare with those of other members of your training group?
4. Based upon your shared definitions, what do you perceive are the greatest barriers or issues to promoting these 21st century skills in modern classrooms and schools?

Answer the following questions:

5. How would you define "creativity" and "innovation" at this point in the workshop?
6. Which strategies and recommendations from this program seem especially significant to you in relation to your current school or classroom?

B. The Individual and Social Faces of Creativity and Innovation

1. Teachers are like gardeners: They are responsible for creating a learning environment that ensures the maximum growth of every student.
2. The heart of helping students to express creativity and innovation is helping them to assume responsibility for their own growth.
3. Creative and innovative curricula emphasize big ideas, conceptual patterns, and universal connections. Students must be able to see the "big picture."
4. Creative expression involves original and independent communication, insight, and self-expression by the individual learner.
5. Authentic education helps every learner to make personal connections to content and connections to the world beyond the classroom.
6. Creativity can be encouraged by allowing students to use multiple modalities, express themselves in multiple media, and complete open-ended tasks involving problem solving and decision making.
7. Creativity and innovation require social interaction and interdependence among learners. Classrooms cannot be factories in which one size fits all. Collaboration should be the norm, not a special event.

Areas of consensus within the group of participants:

Areas of disagreement:

Insights and observations:

C. Discovering the Unique Gifts and Strengths of Every Learner

1. Helping students to discover their personal voice, strengths, and interests.
2. Allowing for student choice and decision making whenever possible (i.e., relative to content, process, performance, and product).
3. Emphasizing project-based learning to anchor the teaching-learning process, thereby allowing students to engage in authentic, real-world tasks and experiences.
4. Employing play, creativity, and flow activities that promote both nonthreatening challenges and active student engagement.

Areas of consensus within the group of participants:

Areas of disagreement:

Insights and observations:

D. Working Smarter, Not Harder

1. Teaching is a process for guiding and facilitating learning. The instructor must be a coach and support system—not primarily a lecturer or dispenser of information.
2. Teaching should require students to work collaboratively to solve problems, make decisions, and complete authentic investigations.
3. Employing opportunities for play, creativity, and activities requiring self-expression promotes both nonthreatening challenge and active student engagement.
4. Creativity and innovation blossom in classrooms that are sensitive to how human beings really learn, including addressing the “compelling why” (Why are we doing this?), presenting big ideas and reinforcing a holistic view of content, and addressing individual learning profiles and interests.
5. Working smarter and not harder requires that every student understand learning targets and play an active role in monitoring his or her progress toward achieving them.

Therefore, active and on-the-spot feedback as part of formative assessment is crucial.

Areas of consensus within the group of participants:

Areas of disagreement:

Insights and observations:

E. Addressing the Whole Learner

Twenty-first century education requires

1. Teaching the whole child, including his or her cognitive, social, emotional, and physical development and well-being.
2. Working with students to understand that their classroom is a community—"We're all in this together."
3. Understanding the role that emotions play in shaping learning.
4. Teaching students to develop and master key social skills associated with emotional intelligences (e.g., active listening, restraining impulsivity, understanding "hot buttons," and building consensus).
5. Understanding key cognitive components of learning (i.e., the "compelling why," the need to process information holistically, the need to address individual learning profiles and interest, and the power of formative assessment).
6. Actively involving the learner in monitoring his or her own progress toward goal attainment (i.e., relative to mastery of a limited number of power standards) through sustained and authentic diagnostic and formative assessment.

Areas of consensus within the group of participants:

Areas of disagreement:

Insights and observations:

F. Understanding the Organizational Change Process

Directions: Since creativity and innovation are often underemphasized, making them an organizational priority can be both challenging and stressful. Use the following rating scale to evaluate your school, region, or district in relation to each of the change principles identified below. Then, build consensus about what can be done to improve in areas in which improvement is needed.

4 = Highly evident

3 = Evident

2 = Needs improvement

1 = Needs extensive improvement

0 = Totally absent, requiring immediate and extensive improvement

1. We ensure that every stakeholder is actively involved in problem solving and decision making when organizational changes are needed.
2. We reinforce creativity and innovation as part of our organizational development and strategic planning processes, helping all stakeholders to think outside the box.
3. We identify areas in our educational program in which creativity and innovation need improvement or expanded attention, including analysis and evaluation of changes required in our :
 - Instructional delivery system.
 - Curriculum.
 - Assessment and evaluation programs and practices.
 - Professional development.
 - School improvement and strategic planning.
 - Parent and community outreach.
4. We provide time for educators to discuss ways in which they can enhance creativity and innovation in their classrooms and share successful strategies with their colleagues.
5. Our school improvement and strategic planning process reflects an understanding that adults move through a predictable continuum of learning when adapting to change, including (a) potential for initial interest, (b) cognitive dissonance resulting from the

- need to modify existing practices, (c) retrenchment resulting from initial difficulty or failure of strategies, and (d) movement toward acceptance and assimilation.
6. We keep everyone informed in a timely and open manner about changes and modifications in existing programs and practices.
 7. Teachers are empowered to become instructional leaders, with time and resources provided for on-site professional growth, discussion, and development.
 8. We actively inform and work with our students to help them understand changes in programs and practices, including a clear rationale for emphasizing creativity and innovation in our classrooms.
 9. Community stakeholders (including parents, guardians, community and business leaders, etc.) are actively involved in helping us to make needed modifications to improve creativity and innovation in our programs, professionals, and students.
 10. We recognize that the problems and barriers associated with the change process are both inevitable and predictable. Therefore, we work collaboratively to resolve emergent issues and keep all stakeholders informed about our progress.

Conclusions, insights, and observations:

Recommendations for organizational development in our school, region, or district: