



Kansas Effective Practices Instructional Toolkit

Implementing Research and Resources Into Action
Research Lesson 1: Daily Challenges

Strategies Specific to Students with Advanced Learning Needs

Teachers must use differentiated instruction and a variety of strategies to meet the diverse needs of learners and allow all students to learn at appropriately challenging levels. According to Roberts and Inman (2007), strategies must address the interests and learning preferences of gifted learners in order to motivate them to perform well. A variety of strategies are provided below: Click on one of the links or simply scroll down.

<u>Bloom's Taxonomy</u>
<u>Creative Problem-Solving</u>
<u>Critical Thinking</u>
<u>Cross Impact Matrix</u>
<u>Delphi Method</u>
<u>Futures Wheel</u>
<u>Inquiry Based Learning</u>
<u>Krathwohl's Taxonomy of Affective Domain</u>
<u>Moral Development and Education</u>
<u>Multiple Intelligences</u>
<u>Scenario Writing</u>
<u>Synectics</u>
<u>Taba's Teaching Strategies</u>
<u>The 4-Mat Cycle of Learning</u>
<u>The Myers-Briggs Type Dynamics</u>
<u>The Williams Cube</u>
<u>Strategy Chart</u> - Represents how the above strategies apply to different areas of giftedness.

Strategy	Content / Additional Links
Bloom's Taxonomy	<p>In 1956, Bloom identified six levels within the cognitive domain: (a) knowledge, (b) comprehension, (c) application, (d) analysis, (e) synthesis, and (f) evaluation. These levels go from simple recall or recognition of facts to increasingly more complex and abstract mental levels. Bloom's Taxonomy is probably the most widely known and applied strategy in use today.</p> <p>Additional information about Bloom's Taxonomy is available at: http://www.officeport.com/edu/blooms.htm and http://www.nwlink.com/~donclark/hrd/bloom.html</p>
Creative Problem-Solving	<p>Creative Problem Solving (CPS) is a process that allows gifted students to apply both creative and critical thinking to find solutions to problems.</p> <p>Additional information about creative problem-solving is available at: http://www.prufrock.com/productdetails.cfm?pc=504</p>
Critical Thinking	<p>Critical thinking is actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information obtained through observation, experience, reflection, reasoning, or communication in order to guide thinking or action.</p> <p>Additional information about critical thinking is available at: http://www.criticalthinking.org/</p>
Cross Impact Matrix	<p>The cross impact matrix represents an effort to extend the forecasting techniques of the Delphi method. In this approach, events are recorded on an orthogonal matrix. At each matrix intersection a question is asked: "If the event in the row were to occur, how would it affect the probability of occurrence of the event in the column?" The judgments are entered into the matrix cells in an attempt to reveal the conditional probability of an event occurring given the occurrence of another event.</p> <p>Additional information about the cross impact matrix is available at: http://www.lampsacus.com/documents/CROSSIMPACT.pdf</p>
Delphi Method	<p>The Delphi Method focuses on reliable and creative exploration of ideas for the production of suitable information for decision making. It is based on the structure process of collecting knowledge from a group of experts by means of questionnaires interspersed with controlled opinion feedback. The Delphi Method represents a useful communication device among a group of experts to facilitate the formation of a group judgment.</p> <p>Additional information about the Delphi Method is available at: http://creatingminds.org/tools/delphi.htm</p>
Futures Wheel	<p>The futures wheel can be used to consider how specific developments or changes to a particular area may affect the future. Students look at an issue from three or more points of view to help them visualize how specific actions may impact the future.</p> <p>Additional information about futures wheel is available at: http://www.globaleducation.edna.edu.au/globaled/go/pid/1835</p>
Inquiry Based Learning	<p>Inquiry based learning is a process where students generate questions from their interests, curiosities, perspectives, and experiences. When students generate their own questions, they are at the center of their own learning, which is intrinsically enjoyable. Inquiry based learning is a cyclical process where after the students generate their questions, they begin to explore and create hypotheses. These hypotheses lead to an investigation, which leads to the creation or construction of new knowledge based on the findings. Students discuss and reflect on the newly acquired knowledge, which leads to more questions and further investigation.</p> <p>Back to top</p> <p>Additional information about inquiry based learning is available at: http://www.inquirylearn.com/Inquirydef.htm</p>

<p>Krathwohl's Taxonomy of Affective Domain</p>	<p>Krathwohl's taxonomy is ordered according to the principals of internalization as follows: (a) receiving, (b) responding, c) valuation, (d) organization, and (e) characterization by value or value set. Internalization refers to the process individuals use to pass information from general awareness to an internalized level. Individual behavior is determined based on the level within the taxonomy that new information or ideas have been internalized.</p> <p>Additional information about Krathwohl's Taxonomy of Affective Domain is available at: http://classweb.gmu.edu/ndabbagh/Resources/Resources2/krathstax.htm</p>
<p>Moral Development and Education</p>	<p>Kohlberg, building on Piaget's work, identified six stages of moral reasoning and stated that the goal of moral education was to encourage students to develop to the next stage of moral reasoning. Gilligan suggested that Kohlberg's theories were biased against women. She offered two distinct moralities; the morality of justice and the morality of care. Moral development and education as a strategy emphasize efforts to foster empathy and care responses in students.</p> <p>Additional information about moral development and education are available at: http://tigger.uic.edu/~Inucci/MoralEd/overview.html</p>
<p>Multiple Intelligences</p>	<p>Gardner developed the theory of multiple intelligences in 1983. He proposed eight different intelligences: (a) linguistic, (b) logical-mathematical, (c) spatial, (d) bodily-kinesthetic, (e) musical, (f) interpersonal, (g) intrapersonal, and (h) naturalist. While most schools focus their attention on linguistic and logical-mathematical, it is important to implement strategies that focus on all of the different intelligences.</p> <p>Additional information about multiple intelligences is available at: http://www.thomasarmstrong.com/multiple_intelligences.htm</p>
<p>Scenario Writing</p>	<p>Scenario writing encourages students to develop futuristic ideas. The Future Problem Solving Program (FPSP) has a specific component for scenario 106 writing, which requires students to write futuristic short stories at least 20 years in the future.</p> <p>Additional information about scenario writing is available at: http://www.aea267.k12.ia.us/fpsp/index.php?page=fpsp_components_sw</p>
<p>Synectics</p>	<p>Synectics is an approach to creative thinking that creates relevant connections between what appears to be unrelated information. This strategy can help students develop creative responses to problem solving, retain new information, and assist in writing.</p> <p>Additional information about Synectics is available at: http://www.writedesignonline.com/organizers/synectics.html</p>
<p>Taba's Teaching Strategies</p>	<p>Hilda Taba believed that students had to organize information before they could make generalizations. Through concept development and concept attainment, Taba believed that students could be led toward making generalizations. She developed teaching strategies for concept development and concept attainment.</p> <p>Additional information about the Hilda Taba and her teaching strategies are available at: http://www.csus.edu/indiv/m/mcvickerb/hildataba.htm http://www.csus.edu/indiv/m/mcvickerb/taabastrategies.htm</p>
<p>The 4-Mat Cycle of Learning</p> <p>Back to top</p>	<p>Bernice McCarthy places individual learning behaviors and preferences into the following categories of learning styles: (a)innovative learners, (b) analytic learners, (c) common sense learners, and (d)dynamic Learners. Curriculum must address all of these styles of learning. This can be done through the integration of these styles into the 4-Mat Cycle of Learning.</p> <p>Additional information about the 4-Mat Cycle of Learning is available at: http://www.aboutlearning.com/</p>

The Myers-Briggs Type Dynamics	<p>The Myers-Briggs Type Indicator (MBTI) is a personality inventory that determines the basic differences in the ways individuals prefer to use their perceptions and judgment. Type dynamics is an important part of understanding the MBTI results and provides information for developing appropriate strategies for effectively working with students and meeting their individual needs.</p> <p>Additional information about the Myers-Briggs Type Dynamics is available at: http://www.myersbriggs.org/</p>
The Williams Cube	<p>Frank Williams defines creativity in relation to four cognitive factors and four affective factors. The cognitive factors include: (a) fluency, (b) flexibility, (c) originality, and (d) elaboration. The affective factors include: (a) curiosity, (b) imagination, (c) complexity, and (d) risk-taking. These factors compose the Williams Cube, which is used to generate ideas openly and encourage students to explore ideas by listening to their inner voice.</p> <p>Additional information about the Williams Cube is available at: http://www.creativelearning.com/Assess/test21.htm</p>

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Strategies	Self Understanding	Interpersonal Skills	Thinking Skills	Creativity	Interest Development	Communication Skills	Skills of an Independent Learner	Advanced Knowledge	Future Studies
Bloom's Taxonomy	X		X	X		X	X	X	
Creative Problem Solving		X	X	X		X	X		
Critical Thinking			X			X	X	X	X
Cross Impact Matrix			X			X		X	X
Delphi Method		X	X		X	X	X	X	X
Future Wheel			X	X	X	X		X	X
Inquiry Based Learning		X	X			X	X	X	X
Krathwohl's Taxonomy	X					X			
Moral Development and Education	X	X			X	X	X	X	X
Multiple Intelligences	X	X	X	X	X	X	X	X	X
Scenario Writing	X		X	X	X	X	X	X	X
Synectics	X		X	X		X		X	X
Taba's Teaching Strategies			X			X		X	X
The 4-Mat Cycle of Learning	X	X			X	X	X		
The Meyer-Briggs Type Dynamics	X	X	X		X	X	X		
The Williams Cube	X		X	X		X			