

Did You Know? Pedagogy and Curriculum

Courtesy of NAGC Research and Evaluation Network

Encouraging Inquiry

A focus on learning encourages teachers' development of student inquiry.

In a study on how teachers' response to children's inquiry, Engel and Randall (2009) found when "teachers were directed to focus on completing a worksheet, they were more likely to discourage inquiry-based deviations than those who were directed to help the children learn more about the domain" (p. 184).

Cooperative Learning

Constructive Individualist is an alternative to Cooperative Learning.

Appropriate conditions for constructive individualist rather than cooperative learning include:

- 1) prohibitive cost for cooperation,
- 2) perceived goal importance,
- 3) expectation of achievement,
- 4) completion of simple, unitary tasks,
- 5) clear and specific directions for task completion,
- 6) Subsequent use of individualistic tasks in cooperative efforts which provide meaning to individualistic goals (Johnson & Johnson, 2009).

Curriculum Design

Curriculum can be designed to take into account the personal journeys into the understanding of a discipline

In their review of Pinar's book, *Intellectual Advancement Through Disciplinarity: Verticality and Horizontality in Curriculum Studies*, Henderson & Kesson (2009) applaud Pinar's effort to raise the bar for curriculum scholarship through a "disciplined effort to acquire a historical understanding of curriculum studies" (*verticality*) (p. 132) and intellectual, social and political milieu (*horizontality*) and add a third dimension, *diagonality*, defined as a "disciplined personal journey of understanding" leading to "ethically informed decisions" (p. 133) from the intersection of vertical and horizontal axes. The key curriculum question, "What knowledge is of the most worth?" (p. 134) indicates that thoughtful consideration of factors other than test scores should drive curriculum scholarship.

Constructive Controversy

The use of constructive controversy can result in high achievement.

According to Johnson and Johnson (2009), *constructive controversy* engages incompatible ideas, information, conclusions, theories and opinions of two persons as they seek to reach an agreement by discussing advantages and disadvantages of proposed actions (Aristotle's *deliberate discourse*). The process results in high achievement, relationship quality and psychological health in contrast with debate, concurrence seeking and individualistic processes.

Math Curriculum

Mathematics curriculum that focuses on key mathematical concepts, is challenging and engaging, and guides students to act as if professional mathematicians helps support mathematical achievement.

Gavin, Casa, Adelson, Carroll, & Sheffield (2009) created Project M³: Mentoring Mathematical Minds, which offers advanced curriculum for mathematically promising elementary students. Researchers' evaluation of the curriculum found that the program had a positive effect on the students' mathematical achievement.

Project EXCITE

Project EXCITE students 6 years after participation confirmed positive perceptions and experiences.

Lee, Olszewski-Kubilius, and Peternel's (2009) follow-up study examining Project EXCITE, a program for students of color that enhances interest and performance in math and science, examined 14 students' experiences and perceptions 6-years after beginning the program. Results indicated that students' desire for advanced academic placement and improved preparation for schoolwork contributed to program persistence. Students also perceived that they had expanded social networks with high ability students of color, social support for high achievement, and confidence to compete academically with peers, yet they also reported experiencing difficulty balancing academic work and social interactions with peers outside the EXCITE program.



References

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