



DEEP Matters

A Newsletter of the Dover
Education Enrichment
Program (DEEP)

an education enrichment fund of



Preparing for the Demands of College and Career Readiness through DEEP-funded Building 21st Century Skills with WeDo 2.0

What makes today's educational competencies required for college and career-ready millennial students so different from those their parents needed a few decades ago?

If your first response was “the impact of technology,” you’re mostly correct- yet managing the increasingly complex mental demands of modern life appears to go even deeper than that.

In 1994 Dr. Robert Kegan, a Harvard University developmental psychologist, first argued the socio-cultural demands of postmodern life were outpacing our cognitive capacities-- to the point that humankind was literally “in over our heads.” (aptly, the title of his book on the subject).

Kegan proposed that beyond fundamental academic and technology-based competencies, millennials, the generation of children reaching young adulthood in the early 21st Century, need these cognitive competencies to become successful future workers, leaders and entrepreneurs:

- the ability to invent and own their work
- to develop and guide their own visions
- to be self-correcting and self-evaluating.

The DEEP-funded “Building 21st Century Skills with WeDo 2.0” facilitated by DES 4th Grade teacher Summar Razvi is an inspiring example of using technology to build students’ competencies as empowered learners.

The program is an afterschool club that promotes collaborative learning utilizing robotics technology in ways akin to organizational learning communities where knowledge is generated and distributed to all members.

According to philosophers and social scientists, the early 1980’s marked a social, cultural, artistic and intellectual transition to “postmodernity-“ a period of human development when previously held truths are now being openly scrutinized and challenged.



To meet the demands of postmodern life, students need experiential and self-directed learning opportunities to transition to the practical and problem-oriented cognitive strategies of adult learning. The renowned child psychologist Jean Piaget proposed the mental operations of hypothetical-deductive reasoning, mastery of conceptual reversibility, capacity for abstract thought and a lessened predisposition for egocentric thinking were characteristics of “formal operational thought,” the most advanced stage of cognitive development in his theory.

Through the experience of a collaborative robotic technology program, millennial students will learn invaluable STEM competencies for future career and college readiness. Yet even more importantly, they may learn that meeting the demands of postmodern life is much less about being “in over our heads” and much more about using them well.