

SciTech IDEAS IN ACTION

Dr. Paul Kortenaar

Dr. Paul Kortenaar's topic for the SciTech Lecture Series spoke volumes of his love for the sciences and his dedication to the education of all children. His topic, "*Education for Innovation: Preparing Students and Their Teachers to Work in a World of Technology Change,*" addressed the need for more freedom in the classroom, which allows children to be innovative in their thinking and creative skills. He stressed the importance of children possessing and practicing the skills of creativity, collaboration, risk taking and perseverance to become the innovative individuals they are so capable of becoming.

To define this point, he described and compared two different learning environments in an innovative classroom. In the *proscriptive* example, the environment was one in which the boundaries were defined with a certain amount of freedom, but kept within limits, while still allowing for some creative energy and the emergence of new learning tools. In the *prescriptive* environment, there is much more of the traditional standards with long-standing customs of authoritative rules and directions. This example is one characterized with step-by-step functions in a safe, controlled and simple environment, as evidenced in most classrooms of today, where teachers are trying to teach to the Standardized Tests, leaving little time for students to be creative.

However, he explained that the introduction of new technologies in the classroom has brought a new age of learning to educational institutions. Of course, this creates a learning curve for the teachers as they fear the loss of control in the classroom if they stand back and let the students explore on their own. In this new way of teaching, technology has left them behind while they still "hold on" to the old methods. Dr. Kortenaar's theory promotes an environment of learning where there is no formal control and no levels of hierarchy. Through the use of high-level technologies, children can learn from each other as a group. They become excited about learning, sharing their ideas and new discoveries with their fellow classmates, while also creating an atmosphere of friendly competition. It is an environment whereby text, email and twitter are actually used in the classroom to communicate with each other and the teacher—a whole new wave of education.

As Executive Director of SciWorks and as an innovative educator, Dr. Kortenaar is leading this new philosophy of teaching and learning at Winston-Salem's science center. He strives to bring the citizens of the community into a learning environment which encourages the parents and children to explore their wildest dreams and imagination, try new things and think outside the box. With 25,000 square feet of inside exhibit space, and 15 acres outside the science museum, plus a Planetarium, children and adults are allowed to experience a sense of "discovery." This is realized when visitors are encouraged to experiment with the exhibits and if one solution does not work, try another. In other words, you never give up—just try a different approach and tackle the project with perseverance, which is one of Dr. Kortenaar's goals for innovation. He encouraged the public to join the movement in this collaboration to promote an educational environment that will allow children to be innovative, creative, free thinkers and unafraid to experiment with new ideas and methods. To finalize his lecture, Dr. Kortenaar invited the audience to visit SciWorks, the place where innovation and discovery begin. Video Link: <https://www.youtube.com/watch?v=PAi4xaxnlw0>