

Evolutionary practices in schools can benefit at-risk students

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Helping at-risk high schoolers succeed in the classroom has always been difficult. Binghamton University Professor David Sloan Wilson thinks that he has a solution: design a school program that draws upon general theories of social behavior.

Wilson, who has studied the evolution of [social behavior](#) throughout his career, recently had an opportunity to advise a new program for at-risk 9th and 10th graders in the upstate community of Binghamton, NY. Known as the Regents Academy, the program initiated in the Binghamton City School District was a huge success during its first year, as described in the current issue of [PLoS ONE](#), the Public Library of Science's open access online publication. Wilson's consulting relationship with the school is part of a more general effort to apply evolution to everyday life, which he describes in his newly published book *The Neighborhood Project: Using Evolution to Improve My City, One Block at a Time* (Little, Brown 2011).

Working with a graduate student, Richard A. Kauffman, the Regents Academy Principal, Miriam S. Purdy, and a dedicated staff of four teachers, Wilson designed a school environment that that is maximally conducive toward cooperation and learning. Some of the ingredients included a positive group identity, an atmosphere of safety and trust, and consensus decision-making. Other elements include the monitoring of [good behavior](#) in a non-threatening fashion, quick resolution of conflicts regarded as fair by the students, and consistent efforts in meeting long-term learning objectives in a way that also engages over the short term.

A key ingredient was for the program to be provided with the authority to govern itself by the Binghamton City School District.

"None of these design features are unusual," said Wilson. "But we brought them together to form an unusual package. A well-functioning group is like an organism. Just as an organism needs all its organs and will die if any one of them is removed, a group needs numerous design features in combination and can become severely compromised if any one of them is missing."

After identifying 117 9th and 10th graders who qualified for the RA by failing three or more courses during the previous year, 56 were randomly chosen to enter the program. The rest were tracked as they experienced the normal routine at Binghamton's high school. By the first marking period, the RA students were performing much better than the comparison group. Fewer of them dropped out during the year. The most outstanding result came at the end of the year when the RA students not only outperformed the comparison group on the state-mandated Regents exams, but performed on a par with the average Binghamton high school student. Boy, girls, blacks, whites, and Hispanics all improved their performance to an equal degree.

"The fact that the RA students started doing better right away illustrates that people are like chameleons," said Wilson. "Just as chameleons can quickly change their colors to match their background, at-risk high school students can quickly respond to a [school environment](#) that favors cooperation as a social strategy, even when the rest of their lives remain harsh. The fact that they performed as well as the average high school student on the state mandated exams, after failing three or more courses during the previous year, demonstrates a surprising degree of resilience in kids that have experienced a lot of hardship in their lives."

Why don't schools automatically adopt the design features of the

Regents Academy if they make so much sense and are so successful? According to Wilson, all educational practices have a surface logic, based on background assumptions.

"If students aren't learning the basics, it makes sense to cut back on play, arts, and sports, which are seen as superfluous," said Wilson. "It seems efficient to create classes where students interact primarily with others of their same age. It makes sense to do things according to the experts without consulting the students. It makes sense to standardize practices and limit the opportunities of teachers to implement their own strategies. The problem is that all of these policies have unintended consequences that weren't anticipated by their rationales."

But as Wilson points out, worse yet are negative effects which are typically indirect and diffuse.

"They can't be traced to their causes without a rigorous assessment, such as the randomized control design that we employed for the Regents Academy," said Wilson.

Unlike most other successful programs for at-risk [high school](#) students, which require expensive measures such as extending the school day and year, the RA is affordable by the average public school district.

"The same principles that inform the RA can improve the social environment of all [students](#) and indeed all groups whose members are attempting to achieve shared goals," said Wilson.

Provided by Binghamton University

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