



Data & Dialogue

A Newsletter of the Woodrow Wilson Early College Network

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This issue of *Data & Dialogue* focuses on curriculum issues related to the general education courses that Woodrow Wilson Early College students take during high school.

- **DIALOGUE**
High School vs. College Learning: 4 Areas of Difference



West Sacramento Early College Prep students with UC Davis Dean of Education Harold Levine. Photo from Dateline UC Davis 9/14/2007

WW Early College schools are finding that college and high school courses differ in their breadth vs. depth, amount of student-directed vs. teacher-led learning, expectations for higher levels of thinking, and pedagogy. Early College students and faculty alike are experiencing these differences and creatively adapting.

The next issue of *Data & Dialogue* is scheduled for March 2008.

To share news and highlights with the network, please contact [Kristen Vogt](#).

Past issues of *Data & Dialogue* are available [online](#).

"Taking classes with college students showed me how different college is from high school. I found new ways to understand the material the professors taught in class," commented a 2007 graduate of Manhattan Hunter Science High School about taking Early College courses.

Breadth vs. depth The "mile wide and inch deep" approach is a common description of high school curricula, particularly in mathematics where standards and textbooks tend to emphasize

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A list of partnerships in the Woodrow
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[online](#).

coverage over depth and complexity. Conversely, the curricula of introductory general education courses may cover similar content but in greater depth and often at a faster pace. At the University High School of Science and Engineering (University of Hartford), UHSSE, high school faculty member Laura Coates and college faculty member Mako Haruta worked together to develop the syllabus and curriculum for the M140 Pre-calculus course. Ms. Coates explained Dr. Haruta's most constructive feedback was "that I was expecting the kids to know too much, I was putting too much into the course, and I was going too fast. She suggested slowing the class down and focusing on fewer topics."

Student-directed vs. teacher-led learning The structure of college courses typically involves fewer contact hours in a classroom. Whether a course is designed as a lecture, seminar, recitation, or lab, students usually spend more time learning outside of college class time than they do for high school courses. In order for high school students to be well-prepared for the college learning experience, they need to be outfitted with the skills to work more independently outside the classroom. "I think it's really important for students to have good work habits because that shows that they're going to be willing to teach themselves," explained UHSSE Early College Chemistry instructor Michael Fromerth. "They're going to take the time outside of class to really hone their skills and to reinforce their learning. Especially in chemistry where a lot of it is problem solving, and the best way to do problem solving is to just keep practicing, practicing, practicing."

Expectations for higher levels of thinking Moving students from teacher-led to self-directed learning involves teaching students how to think. Ms. Coates, who has also taught Algebra 1 and 2 at UHSSE, described the transition in the context of mathematical word problems. "When we did word problems last year, I would tell the kids to do these very short answer types where I tell you exactly what to do and you do the operation," she explained. "This year I am attacking them in a logical approach of building a sequence to get them to derive equations on their own. It's basically teaching the kids how to think, which applies to everything, not just math problems."

Pedagogy It is rare that students will encounter the best examples of quality teaching and pedagogy in introductory college courses where lectures prevail. Early College teachers embrace rigor, relevance and relationships in their instruction but wonder whether or not they should also prepare students for lecture environments by modeling it in their high school or Early College courses.

Even though lectures dominate general education, pockets of innovation do exist and general education reform is gaining attention. From small in-class adjustments such as instant feedback on student understanding in lectures, to first year seminars, to problem-based and collaborative learning, and multicultural education, students will encounter a range of teaching in college.

Factors such as greater accountability for college student learning and a changing college student population are pushing colleges to review their general education curriculum. Early College is also beginning to have an influence. For example, when STAR Early College High School students were struggling in Chemistry 1.1 and

Chemistry 1.2, the Brooklyn College chemistry department "worked very closely with Dakota Stewart-Dick, the college's liaison to the school," explained Roberta Matthews, former provost at Brooklyn College. "Eventually, the department revised its criteria, and its curriculum, for ALL students entering the various levels of chemistry."

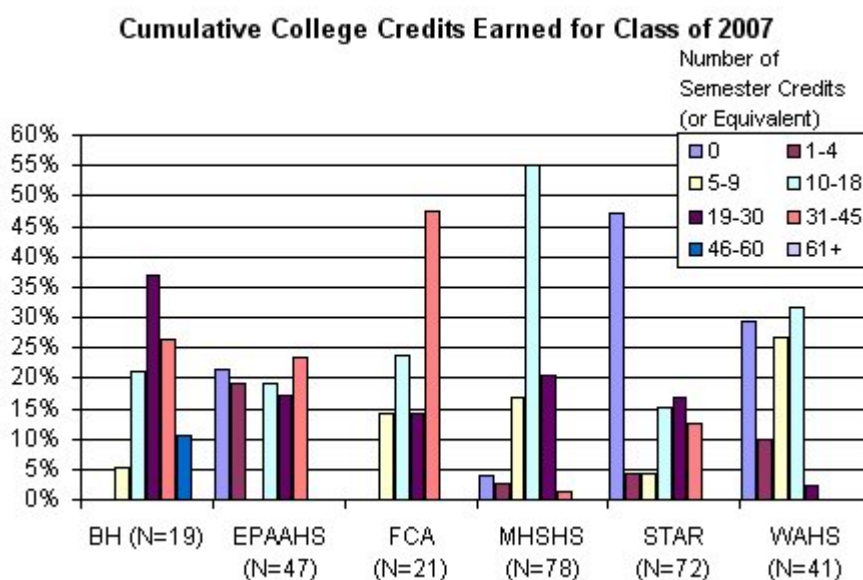
The extent to which the Chemistry 1.1 and 1.2 redesigns were directly related to Early College is unknown but Ms. Stewart-Dick pointed out that "there are significant changes in the newly designed courses that are closely aligned with the way STAR has approached the development of the curriculum, etc., and the fact that the courses now use the same text as is used in Chemistry 1." Dr. Matthews stated, "This is a side effect of the STAR experience about which I am quite proud."

Most likely, simply duplicating the lecture environment in high school will not adequately prepare students for learning in college. Ultimately, preparing students to:

- reach higher levels of learning - application, synthesis, analysis, and evaluation;
- engage in college readiness habits described by David Conley in *College Knowledge* - intellectual openness, inquisitiveness, reasoning, interpretation, and precision; and
- build study and work skills - time management, reading different texts, etc.

can effectively help high school students succeed in any future college course they encounter.

• DATA Students are Earning College Credits



Across the WW Early College network, 79% of seniors graduated in 2007 with some college credit, and 62% earned more than 9 semester credits during high school. Most schools are still adding cohort grade levels each year and all partnerships are moving towards full implementation of the WW Early College design principles, but students are already building their college transcripts through Early College coursework. This chart shows the

distribution of cumulative college credits earned by seniors graduating from WW Early Colleges in 2007.

- **PROMISING PRACTICES**
Flexible and Adaptive Curriculum@
Manhattan Hunter Science High School



Manhattan Hunter Science High School students work together on a chemistry lab.

"This program at Hunter College teaches you how to change your previous work habits, become acquainted with a university setting, and transfer these skills to the college you decide to attend once you graduate." Woodrow Wilson Early College students, like the one from Manhattan Hunter Science High School who made this comment, are finding that the academic content of high school and introductory college courses have many similarities, but that college-level learning requires more independent learning and greater levels of critical thinking, analysis, and reasoning.

Manhattan Hunter Science High School has created a strategy of a four-part curricular program, curriculum mapping and redesign, and habits of mind combined with adult support and guidance to help build all students' abilities to learn at the college level. Read about Manhattan Hunter's flexible and adaptive academic program in the [Woodrow Wilson practice brief](#).

This practice maps to the principle of *increasing curriculum intensity* as outlined in the [Woodrow Wilson Promising Practices Framework](#).

- **NEWS and NOTES**

- The next convening of the Woodrow Wilson Early College Network will be held February 7 & 8 in Princeton, NJ. For more information, contact [Fred Frelow](#).
- Roberta Matthews, former provost at Brooklyn College, and Cecilia Cunningham of the Middle College National Consortium co-authored a chapter in [Minding the Gap: Why Integrating High School with College Makes Sense and How to Do It](#), the 2007 book edited by Nancy Hoffman, Joel Vargas, Andrea Venezia, and Marc S. Miller.
- Fred Frelow, WW's director of Early College, along with Cecilia Cunningham of the Middle College National

Consortium and some Early College students, presented "Increasing Students' College Readiness" at the New York State School Boards Association 88th Annual Convention on October 26. Participants in the session received a copy of [College Access: A New York Story](#) which presents graduation and college-going outcomes for the two WW Early Colleges in New York City.

- Fred Frelow also served as a panelist in the session, *Early College High Schools: What Are the Early Data Telling Us?* at the Double the Numbers 2007 conference in Washington, DC on October 4-5. Materials from this session and other conference resources are available from the [conference website](#).
- Two universities in Woodrow Wilson's Early College network - Stanford University and the University of New Orleans - were identified as part of a small but growing group of universities that are opening and operating charter schools in *Hands-On Learning*, an article published in the October 10, 2007 issue of [Education Week](#).
- College admissions letters have started coming in. Congratulations to the students at Ben Holt, East Palo Alto Academy, Lionel Wilson, Manhattan Hunter Science, and University High School who have been admitted to places like:
 - CSU at Chico, East Bay, Fresno, Los Angeles, Monterey Bay and Sacramento
 - Marymount College
 - Rensselaer Polytechnic Institute
 - San Francisco State University
 - San Jose State University
 - Siena College
 - St. Joseph's College
 - University of Alaska at Anchorage
 - University of California at Davis, Irvine, Merced, San Diego, and Santa Barbara
 - University of Connecticut
 - University of Hartford
 - University of North Carolina at Greensboro
- The Woodrow Wilson Early College Initiative brochure is in print and available to our partners for your outreach needs. For copies, contact [Geri Marchioni](#)

- **RESOURCES**



Brooklyn College provost Roberta Matthews and Early College liaison Decota Stewart-Dick with a graduate of STAR's Class of 2007. Photo by John Ricasoli, Brooklyn College

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- The nomination deadline for the Gates Millennium Scholars Program is January 11, 2008. [more info](#)
 - Results from a new study showed that dual enrollment programs in New York and Florida benefited a range of students regardless of students' income level or high school grades. In Florida, the study found that low-income students seemed to have stronger college outcomes than their peers and students with lower high school GPAs benefited more from dual enrollment on some but not all of the college outcome measures than students with higher GPAs. The study also found that in New York, taking more than one dual enrollment course was positively related to enrolling in a four-year college, persistence in college, and higher college GPA. The National Research Center for Career and Technical Education released the report, [The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States](#) in October 2007.
 - The University of California Commission on General Education released a report, [General Education in the 21st Century](#), in April 2007 with recommendations for reforming general education in any public university system.
 - [General Education Resources](#) are available from AAC&U. Also, AAC&U is hosting "Integrative Designs for General Education and Assessment" in Boston from February 21-23, 2008, and "Discovering, Integrating and Applying Knowledge: Effective Educational Practices for Today's Students and Tomorrow's Innovation" will be held in Austin, Texas from April 10-12, 2008. [more info](#)
 - [The Reinvention Center](#) addresses reform of undergraduate education at research universities as inspired by the 1998 report from The Boyer Commission on Educating Undergraduates in the Research University: [Reinventing Undergraduate Education: A Blueprint for America's](#)

Research Universities

- [The Journal of General Education](#) addresses an audience of faculty, administrators, and policy makers with articles on "innovative methods in teaching and assessment, profiles of exemplary general education programs, case studies of successful curriculum development efforts, and reviews of books and monographs related to general education."

Data & Dialogue Extras