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This chapter explores how teaching in a dual enrollment program can foster new approaches to classroom pedagogy. Researchers from the Community College Research Center use qualitative data from California's Concurrent Courses Initiative to describe how program faculty implemented research-based pedagogical strategies in order to improve student persistence.

Teaching and Learning in the Dual Enrollment Classroom

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Dual enrollment is viewed by many as part of a promising college preparation strategy for a broad range of students (Bailey and Karp 2003). But as participation in dual enrollment has expanded across the country, there has been increasing attention paid to the rigor and authenticity of dual enrollment courses, particularly for those courses held on high school campuses and taught by high school teachers [see "Standards" issued by the National Alliance of Concurrent Enrollment Partnerships (2011)]. Because dual enrollment courses are actual college courses that appear on a transcript the same way as other college courses, as opposed to college-level courses or curriculum such as Advanced Placement and International Baccalaureate programs, instructors are expected to maintain the standards, texts, and assessments of the sponsoring college or university.

The potential tension between broader access to dual enrollment courses and rigorous standards leads to interesting possibilities for innovative pedagogical practices. How can dual enrollment instructors uphold rigor *and* provide instruction and supports so that a broad range of students can be successful? Pedagogy in the dual enrollment classroom has been studied little, but answers to this question have implications for pedagogy in general at open-access postsecondary institutions such as community colleges, where some have argued that the quality of instruction has long been neglected as an area of study (Grubb 1999).

In this chapter, we draw on data from the Concurrent Courses Initiative, a multisite project that provided dual enrollment opportunities to disadvantaged California high school students within career-focused education pathways. As part of the project, a small number of dual enrollment instructors participated in an action research project in which they identified the

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particular ways their students were struggling and then devised classroom strategies to address them. A number of insights and practices emerged that are relevant not only to dual enrollment instruction but to instruction at postsecondary institutions that provide broad access to students of varied academic abilities.

Background

In 2008, the James Irvine Foundation funded the Concurrent Courses Initiative (CCI), which provided support to eight secondary–postsecondary (mostly community college) partnerships in California as they developed, enhanced, and expanded dual enrollment programs that are rigorous, supportive, and career focused. The Community College Research Center at Teachers College, Columbia University oversaw and evaluated the initiative, which included a technical assistance component led by the Career Ladders Project, a California nonprofit that aims to improve postsecondary career pathway access and completion for underserved populations. The CCI specifically targeted low-income youth who are struggling academically or who come from populations historically underrepresented in higher education.

CCI sites varied considerably in terms of dual enrollment course location (on the college campus or at the high school) and type of instructor (high school teachers certified as adjuncts or college faculty), which was mostly due to local logistical considerations. This variation generated lessons about the challenges faced by high school and college instructors and the strategies they can employ to nurture student success. High school dual enrollment instructors often face challenges of how to define "college-level," how to find the appropriate level of rigor for their courses, and how to create a college environment. College faculty, on the other hand, who may be unfamiliar with teaching high school students, are faced with how best to engage them and what level of support to provide in order to ensure student success. As we observed CCI instructors grapple with these issues during the first year of the initiative, we found that many students were struggling academically and not persisting in their dual enrollment courses.

In response to these challenges, the technical assistance team devised a collaborative action research project for the sites. Instructors and others were invited to participate and work toward improving instructional practice for better student outcomes. The intent of the action research project was both to provide technical assistance to the sites and generate lessons on dual enrollment pedagogical strategies.

Action research methodology relies on the self-reflective practitioner as researcher, with the goal of improving practice (Kemmis and McTaggart 2005). This approach seemed particularly suited for the CCI because it provides a forum for instructors and other school staff to reflect critically on the needs of the students and change their practices in order to meet those needs. The collaborative nature of this approach provided the opportunity

for sites to share challenges, successes, and lessons learned throughout the process.

The project was guided by a set of questions that helped participants identify a challenge they observed as it relates to struggling students. Each participant then chose a strategy to address this challenge, examined outcomes, and reflected on the impact of the intervention using an action research log. Each action research log was updated periodically and posted on an internal project Website that was accessible to all project participants. All participants were convened twice over the course of the school year (once in the fall, once in the spring) to discuss lessons and challenges and to brainstorm solutions with colleagues.

Challenges and Strategies

The challenges that emerged were of two general types: students' lack of academic skills and issues of students' affective adjustment to the college environment. These challenges are certainly familiar to those who work with or study community college populations; persistence and completion rates for these institutions are low for both academic and nonacademic reasons. For example, evidence shows that many students do poorly on placement exams, become mired in noncredit developmental coursework, and never progress to college courses (Bailey, Jeong, and Cho 2010). Some students are presumed to leave because of lack of involvement or integration in the college community (Tinto 1993), or because they do not feel sufficiently supported or validated (Rendón 1994; Barnett 2011). Action research participants addressed one or the other of these challenges or sometimes both.

Academic Challenges. Nearly all of the action research participants identified a lack of academic preparation as the primary barrier to student success in college coursework. For many students, a gap exists between their academic skills and the academic level in an authentic college course. This disconnect is partly a result of structural, cultural, and functional differences between high school and college institutions—where "the ways of knowing and intellectual norms" may be different (Conley 2007). These gaps make it challenging for high school students to grasp the material and be successful in college courses.

As many CCI action researchers indicated, the misalignment of skills is further exacerbated by students' lack of academic success skills, which makes it challenging to narrow this gap. These critical academic behaviors include out-of-class study, class participation, time management, stress management, and note-taking. Low basic skills combined with lack of academic behaviors negatively affect students' grasp of academic content as well as their confidence and persistence in their college course. Action research participants approached these challenges in a variety of ways: some focused their efforts on modifying their strategies within the

classroom and others chose to add support structures beyond class time.

Affective Challenges. For comprehensive college preparation and subsequent adjustment, affective considerations—those relating to feelings and attitudes—can be just as important as academic ones. These considerations can be particularly important for students who come from families who have little experience with or understanding of higher education. Indeed, many of the students participating in the CCI had little emotional support from their families for their college aspirations, which made such support from college instructors and staff, as well as from fellow students, all the more essential.

Strategies for Student-Centered Learning. Many traditional college classroom practices operate via the model of active instructor and passive student (that is, teacher as lecturer and student as listener). Increasingly, however, practitioners and administrators are recognizing the potential of more active student learning for student success and pedagogy that takes into account students' history and needs—particularly for underrepresented groups (Kuh et al. 2006). Likewise, CCI action research participants sought to use these strategies to engage struggling students.

A multimedia course adjunct faculty member, for example, offered an extra credit project in which students were able to develop an individual project according to their interests. The instructor was impressed with the work these students produced when offered the chance to direct their own learning. Following this student-centered assignment, the instructor also observed increased motivation on a subsequent assignment. The instructor shared the vast improvement of one of his most challenging students:

> [The student] took initiative on the second film project, transposing his own scene from his favorite movie and organizing its shoot, finally editing it well—I'm not worried about his comprehension of curriculum currently. Listening to and validating [this student's] desire to shoot a particular scene yielded a terrific second production project.

In a similar vein, action research participants recognize the individual challenges students bring with them to the classroom and the need to be flexible and to customize their pedagogical strategies based on students' needs. As one instructor told us:

> I adapt the material using different examples . . . to tie it in to where they are right now in their lives. So that was the biggest adaptation, just trying to break down the concepts into language they understand . . . really the adaptation was about breaking down the terminology so they could get it. But the concepts were intact.

Multiple Means of Assessment. Although the literature on learning styles is vast and at times contradictory, researchers commonly agree that

there are variations in student experience, traits, and preferences to a learning task that might necessitate the need to consider different ways students learn and process knowledge (Svinicki 2004). Multiple means of *assessing* that learning is an important consideration as well. The CCI multimedia instructor realized this after comparing outcomes from exams versus skills demonstrated on project-based assignments. In some cases, students who did poorly on exams excelled in their projects, thus leading him to believe that exams were not a sufficient means of assessing student mastery of content. He realized that "testing skills and production intuition are two separate things."

Instructional Scaffolding. Unlike pedagogical strategies, which may be implemented over the course of a semester, instructional scaffolds are more temporary supports used to help students achieve academic success. The intent is to decrease gradually the level of support provided as students demonstrate mastery. Action research participants used several different scaffolding strategies to promote achievement among their struggling student populations, including offering extra credit opportunities to increase grades, providing students with checklists to keep track of responsibilities, and presenting the information in smaller, more manageable pieces. Again, these strategies did not lower the expectations of the course but provided students with extra support to help them meet those expectations.

Academic Supports beyond Class Time. A crucial aspect of providing dual enrollment opportunities—particularly to struggling and underrepresented students—is the availability of a broad range of out-of-class supports that foster success. Indeed there is strong evidence to suggest a relationship between the provision of academic support services and persistence (Muraskin 1997; Brown Lerner and Brand 2006). However, such services can be a challenge to organize and are uncertain to attract student participation.

Among the action research participants, the most common means of providing out-of-class academic support was individualized tutoring. Tutoring was most successful when integrated into the program design or when used as part of a larger case management strategy. For example, as part of an introductory engineering course, college student tutors provided extra support to students during a mandatory supplemental instruction lab that immediately followed the class. At another site, staff integrated tutoring into a tailored case management plan for participating students and their families.

Validation of Students. Rendón's (1994) well-known work on validation emphasizes the importance of fostering "personal and social adjustment" (42) in students who are not from the traditional, more privileged college-going youth population. She defines validation as an "enabling, confirming, and supportive process" (44) that helps students feel worthy and capable of learning and developing. In the action research project, we saw significant understanding by the instructors that their students were in need of validation.

One instructor devised a way to address students' anxiety about being in college. At the beginning of the semester, she asked students to discuss openly what challenges they expected to face in the course:

> I then defined what internal and external roadblocks were and asked students to identify possible roadblocks that they had coming into the class or roadblocks that they may anticipate encountering during the semester. Once each student identified their respective roadblocks, we then collaboratively came up with lists of possible solutions and resources of whom or where they could go for help if they needed to . . . This strategy not only headed off possible problems, but it quickly showed the students that they were not alone in their struggles and that many other students had very similar challenges . . . They believed that we were going to be successful together.

Making Content Meaningful. A strategy relevant for addressing both academic and affective challenges is making education meaningful to students. As Duncan-Andrade (2009, 6) writes, "The most effective urban educators, in every discipline at every grade level, connect the academic rigor of content areas with their students' lives." Finding ways to make content meaningful and purposeful for students was a strategy many of the CCI action research project participants employed.

In several classrooms, instructors worked on ensuring that the course content was culturally relevant to the students in order to maintain engagement and promote achievement and persistence among the racially and ethnically diverse student population. In classroom activities, students were encouraged to use examples and analogies from their lives, which required a strong rapport between faculty and students, as well as trust among the students themselves. One instructor made a point to relate terminology and concepts such as assimilation and social privilege to the lives of her students. The courses that invoked this strategy had high student retention rates, with students reporting that they liked the opportunity to learn from their classmates as well as their teacher and that they appreciated the supportive and collaborative classroom environment. In implementing these strategies, however, the instructors did not sacrifice rigor. Using different approaches to help students understand the material does not necessitate lowering course standards.

Conclusion

Through the collaborative action research project, participating instructors were able to take a fresh look at the needs of their dual enrollment students, pilot some strategies to meet those needs, and share the results with one another. They were sometimes surprised at what they learned. One instructor said the project brought about an "epiphany" for her in that understanding

the limitations and needs of her dual enrollment students also gave her new insights into the limitations and needs of her matriculated college students. A tenured professor who was teaching a cross-cultural psychology course, this instructor explained that, during the first several classes, students seemed to indicate they understood the material being covered, but she sensed that they really did not. As she shared with us:

> I decided to test their knowledge of vocabulary . . . I picked up the textbook and went through the first two chapters, and highlighted words that I would assume high school students would understand. I made a list . . . and when they came to class the next week, I asked them to take this little vocabulary test for me.

The results shocked her. Few students could define any of the words. For example, the first word was "comprehensive"; not one student gave the correct response.

Out of curiosity, she then gave the vocabulary test to students in her regular college courses, and they did similarly poorly. She realized she would have to change her approach so as not to assume students were familiar with the course vocabulary, and so she began to make a strong effort to define terms and concepts in multiple ways. She reflected on the experience:

> People are running around here [referring to her college] thinking that the students don't care, they're not motivated, it's because they're ESL students. You know what I say? They don't understand because they don't understand vocabulary. So now, because of that, I've incorporated vocabulary in all my classes. Students have to learn certain words, and I test them . . . We have dictionaries in the classes I teach. . . . a combination dictionary/thesaurus. . . . So that's just like an epiphany that I learned through this experience, thank goodness.

Her assumptions about the level of preparation of her matriculated college students were tested by her experience with high school students, and she developed a new strategy to help both student populations. The students attending her open-access community college are really not much different from the dual enrollment students, and, in teaching the latter, she gained a better understanding of the former. This lesson should have lasting benefits for all her students.

High school personnel had similar epiphanies. At one site, a qualified high school teacher taught a college introductory anatomy course at her high school, and, in the process, learned how underprepared her students were for the material. And as increasing numbers of students from that high school went to the college campus to take dual enrollment courses, the college faculty shared their perspectives on those students with their high

school teaching counterparts. This dialogue led to additional cross-sector and schoolwide conversations on how to improve students' skills and facilitate a better transition from high school to college.

Ultimately, most students preparing to leave high school and attempt college need stronger academic skills and behaviors as well as emotional support and confidence in their abilities. Instructors, whether high school teachers or college faculty, are charged with transforming underprepared students into successful college students. The action research project demonstrates that professional development opportunities are instrumental in helping instructors understand the needs of their students and improve their pedagogy to meet those needs. Professional development as part of a dual enrollment program can have benefits beyond the program. Instructors must be encouraged to cross the high school–college divide since we require our students to do so.

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