Democratic Ideals and the Pipeline Problem: An International Dilemma

In industrialized countries, students' pathways through school to work have been described as an academic pipeline. Although democracies hold ideals of access to educational opportunities by choice and advancement through merit, as students move through primary and secondary school towards college, the percentage of ethnic minority and low-income youth in the pipeline shrinks. This "pipeline problem", which makes university enrollments unrepresentative of their broader communities, will intensify in the 21st century. As immigrant and ethnic minority youth make up a growing segment of school enrollments and populations in many nations, the pipeline problem has emerged as immigrants, refugees, and guest workers remain in their host countries and attempt to send their children through school. Of course, a college education is not the only definition of success in life. But for all ethnic groups, education is strongly linked to income, giving clear warning that youth with low skills may be attracted by illegal work if they face few legitimate work options.

The Bridging Multiple Worlds Model

The Bridging Multiple Worlds model links concepts from anthropology, psychology, sociology, economics, and education on how youth navigate their worlds of families, peers, schools, and communities in the process of identity development. This multi-level model maps how individuals, relationships, and institutions each function as bridges across these worlds as students move through school. From a policy perspective, community investment in building all children’s pathways to college defines ethnically diverse children as community assets and cultural capital (Thorsby, 1999). Although most research on the academic pipeline problem focuses on students who drop out of school, new research has begun to ask under what conditions immigrant, low-income, and ethnic minority students persist and succeed in school. Five key elements are highlighted in the model:

- **demographic portraits of children, families, schools, and communities as windows on inclusiveness (tapping national origin, home language, family education, and ethnicity)**,
- **identity pathways that begin in childhood and link across generations**,
- **math and English pathways to college and careers that start in childhood**,  
- **challenges and resources across children's worlds of families, peers, schools, and communities**, and
- **cultural partnerships that reach across generations, disciplines, ethnicity, and nations on behalf of children and families in multicultural democracies**.

How does culture matter for children’s pathways? Capital, alienation, and challenge models

Debates on identity, ethnic diversity, and schooling often center on social capital, identity, alienation, and school engagement by children and families. A "capital" hypothesis, based on social capital models, suggests that students with more capital (such as high levels of parental education and recent immigration) would explore college-based career identities and achieve at higher levels (Coleman, 1988, cited in Cooper & Denner, 1998). An "alienation" hypothesis suggests that children of low-income Mexican immigrants may be vulnerable to oppositional identities and disengagement from school. Ogbu (Fordham & Ogbu, 1987; 1991) argued that in conditions of...
inequitable access to education, ethnic minority families initially hold high hopes for children's school success, but as they encounter barriers, parents develop bleak views of their children's future. Meanwhile, their children develop oppositional identities that affirm their peer group solidarity while defending against failure in school and work. A "challenge" hypothesis, based on the Bridging Multiple Worlds model, suggests that challenges of poverty, racism, and other obstacles can motivate students to succeed on behalf of their families and prove gatekeepers wrong, and that challenges in the context of support may foster career and college identity formation (Cooper, 1999). This model predicts that students who coordinate resources with challenges would be more successful navigating their personal, relational, and institutional pathways to college.

Three Studies: Inclusive, Selective, and Competitive Programs

In collaboration with colleagues and students, we have conducted a set of studies to test, clarify, and apply the Bridging Multiple Worlds model across a range of communities with diverse cultural and ethnic groups, including American youth of African, Chinese, Filipino, Latino, European, Japanese, and Vietnamese descent as well as Japanese youth, to contribute insights for youth, families, schools, and for science, policy, and practice (Cooper, 1998). Based on the importance of math for university eligibility and employment, we traced math pathways from three samples: academically inclusive, selective, and competitive and mapped variation within cultural groups and similarities and differences across groups.

One study involves low-income Mexican American and European American children in an inclusive classroom setting as they moved from elementary to middle school (Azmitia, Cooper, Garcia, & Dunbar, 1996; Azmitia & Cooper, 2001). We traced continuity and change in the aspirations of 100 low-income parents for their children as well as parents' guidance towards attaining these goals. A second study involves African American and Latino youth in competitive university outreach programs designed to bridge across students' families, schooling, and career development (Cooper, Jackson, Azmitia, Lopez, & Dunbar, 1995; Cooper, Cooper, Azmitia, & Chavira, in press). The Partnership Study, part of the California Childhoods Project, involves over 500 youth in the Cabillo Advancement Program (CAP), a selective community college outreach program which awards scholarships to sixth-grade students from low-income families and offers activities to help students stay on track to college (Cooper, Lopez, & Dunbar, 1999). Our cultural research partnership with this program began in 1995. With the program director, we created a longitudinal database for all youth in the program, including program records, application essays, grades, and responses to our annual Bridging Multiple Worlds surveys and program activities, which we named "It's All about Choices". Our work with this project has illuminated the five dimensions of the Bridging Multiple Worlds model.

Demographic Portraits: Windows on Inclusion and Exclusion. We traced the experiences of 116 students, 76 girls and 40 boys who entered the program from 1995 to 1997 (typical for college outreach programs, girls outnumbered boys). Students were mostly Latino and almost all of Mexican descent. As part of selection, students were considered low-income by their eligibility for federal lunch programs. Recipients were chosen by teachers and the program director based on application essays as well as their potential, motivation, and grades. Among the students chosen for the program, parents' formal education, usually in Mexico, was typically less than high school and for many at the elementary (primaria) level. They worked long days, picking strawberries or lettuce, on factory lines, or cleaning houses and hotels. These demographic portraits guided parent involvement activities compatible with parents’ educational and language experiences. We view information about families’ national origin, ethnicity, home language, and literacy as critical for research, policy, and practice involving educational equity.

Children's Identity Pathways: Looking Up and Giving Back. When we analyzed the application essays of these children, they described dreams of college-based careers---becoming doctors, lawyers, nurses, and teachers as well as secretaries, police officers, firefighters, and mechanics. Like other studies of low-income Mexican immigrant families (Azmitia et al., 1996, children and parents dreamed of college and college-based careers for them rather than parents’
physical labor. One example of children both looking up to future goals and giving back to their communities is the writing of Soledad Rosas, a student from the CAP program:

(at age 12) I would like to be a writer for children's stories that will teach children many things, like becoming interested in reading. I want to help my community by finding economical resources so that the children don't leave their studies...With my determination and effort I will successfully accomplish my goal to obtain these careers. My obstacles are that I have cerebral palsy. Another obstacle is the English language.

(at age 13) I want to be a writer and a DJ at a radio station. I have decided to go to (the University of California at) Berkeley because it has a program for disabled people and I have problems like that. The college is close but not that close. I want to live on campus. The subjects I want to take are the ones I need for my career...My challenges are my disability, working to pay for college, and having problems in college...My resources are my teachers, college, books, and DJ's of other radio stations.

Young adults--tutors and mentors--bridge across generations and from children’s home to college. In the selective program as well as in competitive and inclusive programs, we found that, like Latino parents, young adult tutors defined success in life in terms of morality and schooling. In guiding youth, staff drew on positive and negative aspects of their experiences. They understood the importance of school, helped children with homework, and offered them a broad view of schools, college, and other institutions that helped children link their family, school, and community with their own dreams and fears for the future. These young adults acted as culture brokers. They played key roles helping children feel confident and safe in their neighborhoods; learn alternatives to violence; gain educational experiences, and acquire cultural skills for success in school. Young adult staff also gave children a chance to talk and write about their dreams for careers, education, families, and their communities (Cooper, Denner, & Lopez, 1999). They valued children's home communities and many shared a common language and sometimes a family history with the children. Yet many had learned to be bicultural and could help children become so as well, passing on their understanding of how to retain community traditions while succeeding in school, college, or local government.

The program director also plays a key role as a cultural broker, bridging from families to schools. The community college program director, Elizabeth Dominguez, described her model of how a Latina godmother or comadre promotes children's pathways to success by describing her own comadre brokering between her family and school:

My parents immigrated from Mexico to Los Angeles (California) in search of a better life for their children. They made sure we did our homework and maintained frequent contact with school, and nine of their thirteen children completed college. Most of my peers dropped out before they reached high school. Their parents also came to the U.S. to give their children a better life, with dreams for their children to obtain a college degree. But like many non-educated immigrant parents, they did not feel comfortable helping their children with school because they did not understand the system. My parents had a comadre (godmother) who took them under her wing, explained how U.S. schools function, and reassured them their participation was demanded for us to be successful (Domínguez, 1995, cited in Cooper et al., 1999).

Thus, in helping children and youth find pathways to success in the eyes of their families, communities, and schools, the program forged links across generations, including senior staff, young adults, and families and children they serve. These intergenerational pathways appeared to foster skills children need to succeed across their increasingly diverse worlds along their pathways to college, careers, and adult family and community roles.

Math and English pathways to college diverge early but some get back on track. Based on the significance of math and English for university admission, we traced longitudinal pathways in math and English classes and grades of youth from all three studies from elementary to junior high, high...
school, and college from the inclusive, competitive, and selective samples. For example, in both inclusive and competitive samples, we found 5 patterns of math pathways: consistently high, declining, "back on track" (declining then increasing), increasing, and persisting while making low grades. We have seen each pattern in each ethnic group we have studied.

In the Partnership Study selective sample, we found similar math pathways across a broad range of achievement: consistently high, slowly declining, rapidly declining (and dropping out, including youth becoming incarcerated or becoming parents), moving into remedial math, and delaying taking any math. We followed 30 students from the year they entered the program at sixth grade through ninth grade (Azmitia & Cooper, in press). Many were immigrants, learning English during these years. By ninth grade, more than half had taken and passed Algebra, a key step to eligibility for four-year colleges and universities. Of the remaining students, each was eligible for community college, where Algebra 1 is the only math required for an Associate Arts degree. These pathways diverged early: students who passed Algebra 1 at ninth grade had made higher grades in sixth grade than students who failed Algebra or took remedial classes. But some students moved back on track after challenging personal events and others moved up from remedial math to Algebra, sometimes retaking Algebra before more advanced classes. These findings go beyond group differences in school achievement towards understanding variation and change within groups as well as similarities across them. Tracing more than one pathway to more than one college helps build inclusive opportunities for college and college-based careers.

Children’s family, peer, and school worlds as both challenges and resources. In their application essays, the children described challenges—their families' needing them to work, peers pressuring them to take drugs, and experiences being immigrant minorities ("my English", "what worries me is that I was born in Mexico", "people that don't like us people [who are] brown"). Children saw resources in families, friends, teachers, counselors, coaches, and outreach program staff; their own qualities ("never giving up and studying a lot"); and scholarships and loans. And in the yearly Bridging Multiple Worlds activities, the most frequently named resource was consistently children's families; the most controversial (both a resource and a challenge) were peers. Children also named program staff and scholarships as resources.

Children saw peers, families, and teachers as both challenges and resources in reaching their dreams. Both in 1997 (when we heard from 77 children) and 1998 (84 children), students listed peers as challenges and resources at comparable rates (30% vs. 40% of the students in 1997 and 50% vs. 55% in 1998). Students described their challenges by listing boyfriends, girlfriends, peer pressure, “temptation of friends dropping out”, “friends as bad examples”, gangs, “bad friends”, “bigger students”, “illegal friends”, and “enemies”. Many also listed “drugs”, “sex”, “having babies”, or “pregnancies”. As resources, students also listed friends, boyfriends, “bigger students”, girlfriends, and “leave your boyfriend if he takes too much time”. In contrast, students were much more likely to list their families as resources than as challenges (70% vs. 10% in 1997 and 73% vs. 10% in 1998). These findings replicate other research (Ogbu, 1991) on the challenges of peers for students’ school engagement and also point to how central families—many of whom had completed only elementary school—were to children on their pathways to college.

Is the Cultural Research Partnership a Blueprint?: Resources and Challenges to Sustainability. We trained ethnically diverse college students working in programs as researcher-practitioners, enhancing their mentoring skills, educational leadership, and university studies. We build on their roles as front-line staff of programs and as students. They are often ignored in reports of successful programs, yet their personal contact with youth and the realities of their worlds of families, peers, schools, and neighborhoods sustains the programs.

In the Partnership Project, we embedded Bridging Multiple Worlds measures in program activities and interviewed youth, young adults, parents, teachers, program executives, and funders to map factors that create resources for students as they move across their worlds of families, peers, and school and along the academic pipeline. We helped the program monitor indicators of success with research tools and data analysis systems to foster students' progress, gain feedback about program effectiveness, and sustain program funding. We set up databases for children's attendance,
grades and demographic data as well as program essays so staff can ask questions useful to them, such as what "kind of kid" participates and who does not? Who attends particular activities such as tutoring? do students' grades rise and fall or are they stable? How do graduating students view the most valuable program components and what do they suggest for improvement?

These partnerships create intergenerational pathways through which children become tutors, undergraduates become staff, staff return to college, and partners of all ages, including pre- and post-doctoral researchers play key research roles. We include children as members of intergenerational research partnership. For example, when children learned to graph their math pathways towards their career dreams in the community college outreach program, one 12-year-old girl, the daughter of Mexican immigrants, looked up at her peers and exclaimed, "So these are the beginnings of our math roads!"

Coordinating these roles reflect vulnerabilities and institutional fragility of key participants and partnerships, but long-term, sustained engagement---instead of a "project" mentality---fosters ongoing partnerships. We use the term "program analysis" to distinguish our research activities from program evaluation.

We built on these findings in developing the Bridging Multiple Worlds Tool Kit as a no-cost, multi-user resource that allows families, schools, and community programs to help children map assets across their worlds and pathways through school. For example, it helps them write about their dreams for the future, see if they are off track in math, show them how to get back on track, and find and use resources across their worlds. These activities for elementary, middle, and high school students are being used for teacher training, in school classrooms, and in statewide evaluations of outreach programs. It also helps researchers understand what factors support and impede youth pathways to college.

Conclusions: Intergenerational, Interdisciplinary, and International

Intergenerational Research Partnerships are Assets in Shifting Policy Climates

As policies involving diversity, immigration, and inclusion continuously change, stakeholders value monitoring diverse children’s pathways in both quantitative and qualitative terms. Although few controlled experiments exist, analyses of programs deemed effective appear to sustain parents' and other adults' beliefs that schooling will benefit children (Adger, 2001). We have observed partnerships with students, families, community organizations, schools, districts, and universities at local, regional, state, and national levels. Some partnerships build “vertical teams” to support ethnically diverse children and youth navigating from kindergarten through college. We have seen partners become increasingly interested and sophisticated in thinking about longitudinal analyses of qualitative and quantitative data.

This work has involved building innovative partnerships among youth, families, schools, and community organizations. Children and youth benefited from having their "developmental clocks" incorporated into products. Families, who hold high educational values and goals but--particularly those with less familiarity with the language and practices of schools--need ways to become involved. Community organizations often seek partnerships with families and schools and can provide academic skills, information, high expectations, and a sense of moral goals to achieve on behalf of families and communities, but changes in funding pressure them for program evaluation. School staff seek ways to include families with diverse literacy and linguistic backgrounds. Our work with intergenerational partnerships led to our developing the Bridging Multiple Worlds Tool kit, which includes activities for schools and programs which tap the elements of the model, graphing templates for quantitative work, and materials for longitudinal case studies so partners can link qualitative and quantitative methods.

Reach across Disciplines: Rethinking Capital, Alienation and Challenge Models
This study reveals how a community program can bridge to math classes that are gateways to careers for youth entering university and those going to community college. These patterns indicate the program supported both university-bound and remedial students, whom scholars often find to be increasingly pessimistic, disengaged, and alienated as they move through school (Fordham & Ogbu, 1987; Gibson, 1997). Selective programs may help keep these students engaged in school and continuing through the academic pipeline. These findings indicate that future studies of capital, alienation, and challenge models will benefit from probing the configurations of students’ lives in with families, peers, schools, and community programs.

Children and families new to U.S. schools and with limited formal education in their home countries face similar challenges yet can locate resources. Our studies of Mexican immigrant families (the largest immigrant group in the U.S.) show parents hold high hopes of children moving up from parents’ lives of physical labor picking strawberries or lettuce, standing on factory assembly lines, or cleaning houses and hotels, to technical or professional careers (Azmitia, Cooper, Garcia, & Dunbar, 1996). In essence, we found that they seek to “beat the odds” and disprove theories of social reproduction—that each society’s social class hierarchy tends to be reproduced from generation to generation. We have traced under what conditions ethnic minority youth beat these odds and when ethnic categories either do not matter or even become assets for children’s pathways through school.

Linking International and Local Enhances Inclusion in Multicultural Democracies

With colleagues in several nations, we are working to coordinate concepts of families, peers, schools, programs, and community organizations; link demographic, institutional, relational, and individual levels of analysis; and thereby unify our writings and recommendations. This has engaged local, state, national, and international partners on ethnic diversity and inclusion. For example, the Office for Civil Rights of the U.S. Department of Education monitored equity in access to higher education (in accordance with federal law) by focusing on the transition between secondary school and university. But when California voters and the University of California Regents set aside affirmative action in university admissions in 1996, keeping students in the academic pipeline beginning at an early age became more critical than ever. Our model is being used by Office for Civil Rights staff to monitor equity early in the kindergarten-to-college system.

Our common goal is to enhance access to college and legal employment for children of diverse ethnic, racial, economic, and geographic communities. Our capacity to be nations "where diversity works" rests on customizing programs for communities while staying attuned to common goals and collaborating among diverse stakeholders—students, families, schools, community programs, legislators, the business sector, and media. Achieving these goals is fostered by building clear models of change, testing them with evidence, and sustaining partnerships among stakeholders as intergenerational research partnerships.

References


