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Revised Proposal Addressing Questions Raised by the AIR Review Committee

Understanding Multiple Developmental Education Pathways for
Underrepresented Student Populations

Statement of the research problem and national importance

Community colleges are an important point of entry into postsecondary education for students from underrepresented and diverse backgrounds who might not otherwise have the opportunity to enroll in college. Due to the relatively low costs of community colleges compared to four-year public and private colleges, these institutions have become the starting points for an increasing number of low-income students, recent immigrants, students of color, and first-generation college enrollees (Bueschel, 2004; Conway, 2009; Melguizo, Hagedorn & Cypers, 2008). Many of these students, however, arrive at community colleges facing tests that are used to assess academic skills and are often assigned to developmental/remedial course sequences. These courses are designed to provide academic instruction and support for students who do not meet the level of academic proficiency considered appropriate for college-level coursework. While this approach to developmental education is widespread, it has been a core issue in American higher education throughout history from the first Harvard classes (Boylan & White, 1987).

Considerable debate surrounds the use of such assessments and developmental course sequences among policy makers, researchers, college faculty, and administrators (Soliday, 2002). Addressing the academic needs of underprepared students has been a constant in higher

education, but findings from research increasingly call into question the effectiveness of developmental courses, particularly as they relate to equity and access for underrepresented populations (Bailey, Jeong & Cho, 2010; Bailey & Morest, 2006; Bettinger & Long, 2009; Brier, 1984).

Educators increasingly call for alternative approaches to traditional course sequences. Schwartz and Jenkins (2007) maintain that colleges and universities should take a holistic approach to supporting underprepared students, employing a wide variety of structures, teaching and learning strategies, and services to support the variety of educational backgrounds and needs of students. Hunter Boylan, director of the National Center for Developmental Education, argues that using more comprehensive forms of assessment, including cognitive, affective, and personal information, would allow for individually targeted interventions (2009). Others such as Zachry and Schneider (2010) call for more radical and novel approaches to traditional developmental education, as well as a rigorous research agenda to evaluate these innovations.

The purpose of this study is to examine various developmental education pathways available to students—from “traditional” developmental courses to emerging models and interventions—and to compare the outcomes of these pathways across specific underrepresented populations. This study seeks to disentangle the relative efficacy of developmental education approaches, instruction, and operational structures for various subgroups. In order to effectively implement developmental education policies to serve all students, colleges and universities must be able to identify the subgroups of students for whom programs, courses, and instructional models best serve, and then assess the outcomes of those programs for these subgroups.

Additional research on developmental education is necessary to understand how the various approaches and pathways affect students’ success in higher education. Some students

enroll directly into developmental or remedial courses upon matriculation into degree programs, while others delay taking these courses until later in their academic programs. Some students may enroll in accelerated courses or programs prior to enrollment into degree programs to build their academic skills. Other students may bypass developmental or remedial courses entirely as part of “mainstreaming” programs now popular at campuses across the country. While individual programs and approaches have been found to be effective in certain institutions and policy contexts, little is known about the overall picture of these various models and noncredit pathways. Despite the proliferation of developmental education models and approaches, colleges and universities have often developed these models and approaches through a “one size fits all” approach, giving little thought to the differences within and across groups of students.

Beyond remediation, research on higher education continues to point to differences in overall outcomes for various populations of students. Even within subgroups, researchers have found significant differences in college enrollment rates and other postsecondary outcomes (Leinbach & Bailey, 2006). However, research specifically focused on developmental education for subgroups of students—recent immigrants, nontraditional students, first-generation college students, or students of color—is still limited. One reason has to do with limited data availability. Much of the research on developmental education and higher education in general is based on large datasets with sample sizes simply too small for disaggregation across relatively small subgroups (Bailey & Weininger, 2002). Larger national datasets often do not contain detailed information about noncredit instruction and other activities on campuses that make up these developmental course opportunities.

Review the literature and establish a theoretical grounding for the research

The study will be conducted in the context of academic momentum, a perspective developed by Cliff Adelman. Adelman (1999; 2006) used administrative transcript data from several longitudinal datasets to understand students' behavior based on observable characteristics, such as credits attempted, credits earned, courses taken, intensity of course taking, and patterns of continuous enrollment. As students develop skills and reach key points toward their degree, they gain momentum that drives them forward to develop even more skills and reach more key points. Adelman also found that earning credits in college math in the first two years, entering college right after high school, staying continuously enrolled, and exhibiting a rising trend in grades all lead to increased momentum for students. This momentum, especially in the first year of college, explained a large portion of the differences in student persistence (Adelman, 2006; Chen & Carroll, 2005).

Descriptive studies using data from the National Education Longitudinal Study (NELS) have been influential in the current dialogue about developmental. After controlling for academic skills and other student characteristics, researchers found that taking developmental courses had no association with lower chances of college graduation. Students who did not take developmental courses did just as well as comparable students who took them. Much of the difference in graduation rates was driven by differences carried over from high school (Adelman 1998; Attewell, et al., 2006). Bailey (2009) points out that these studies, however, suggest that developmental courses do not necessarily help students, especially since these courses cost students, colleges and tax-payers money. There are also questions about unobserved and unmeasured differences between those who took developmental courses and those who did not, which may be biasing results of these studies.

Recent studies have provided more rigorous causal evidence of the effects of developmental course taking using quasi-experimental approaches. Bettinger and Long (2009) tracked 28,000 full-time, traditional-age freshmen at Ohio colleges over six years to determine impacts of placement into developmental courses. Results suggested that both math and English developmental course participation were estimated to increase the likelihood of completing a degree within four to six years. Other research has used a regression-discontinuity approach to analyze students just above or below test score cutoffs. Using administrative data on 455,000 students in Texas, Martorell and McFarlin (2011) found negative effects of assignment to developmental courses on credit accumulation and persistence. Calcagno and Long (2008), using a sample of almost 100,000 students in 28 community colleges in Florida, found that remediation increased persistence to the second year and total number of credits completed but did not increase college-level credit accumulation or likelihood of graduating with a degree.

Although recent quasi-experimental research on developmental education has not been without criticism (see Goudas & Boylan, 2012), the overall findings from these studies do not paint a generally positive picture of its postsecondary effects. It must be noted that some research indicates that developmental courses have differential effects based on the students' prior level of preparation or the level of course in which they are assigned (Boatman & Long, 2010; Jenkins, Jaggars & Roksa, 2009).

Given the findings from research on traditional developmental course participation, it is not surprising that new and alternative strategies for developmental education have emerged. Colleges and universities have begun experimenting with multiple approaches to developmental education that challenge the conventional remedial course structure. At the same time, even the "traditional" developmental course pathways have begun to vary significantly across institutions

in terms of both content and organization. This trend underscores a key limitation to much of the research on developmental education—studies examining overall effects of developmental courses at a state or national level can obscure individual institution-level variation. Data on these approaches, which are most commonly classified as noncredit instruction, are also often not available in national datasets. Zachry and Schneider (2010) provide a useful classification of some of the alternative strategies to traditional developmental education:

1.) Helping to Avoid Development Education--Transition Courses and Dual Enrollment:

Colleges have developed collaborations with local secondary school systems to help identify high school students who need additional academic support and to provide programs to help build students' skills and avoid developmental education courses (Rutschow & Schneider, 2011). Some "early assessment" programs allow students in high school to take the colleges' placement tests earlier—typically before students' senior years in high school—to provide information on skills needs before application and entry into college. Initial research on California's Early Assessment Program suggests that participation reduces students' probability of needing remediation by six percentage points in English and four percentage points in math (Howell, Kurlaender & Grodsky, 2010).

2.) Accelerating Students' Progress and Bridging the Transition: Some colleges and universities have focused their attention on condensing the amount of time that students need to complete developmental course sequences. Programs are designed to create and foster academic momentum for students (Rutschow & Schneider, 2011). A recent evaluation of the Accelerated Learning Program (ALP) at the Community College of Baltimore County found that allowing upper-level developmental writing students to enroll directly in college-level English while also

taking a companion course that provided extra support was associated with significantly higher pass rates in English courses (Jenkins, Speroni, Belfield, Jaggars & Edgecombe, 2010).

3.) Learning Communities and Other Contextualized Opportunities: Some community colleges, in an attempt to support underprepared students, have developed learning communities to specifically support students through development education. This approach involves groups of students who enroll together in at least two courses (Bragg, 2001; Visher, Schneider, Wathington & Collado, 2010). Tinto (1997; 1998) found that students who participated in developmental courses organized around a learning community model had better attitudes toward learning and higher completion rates, as well as higher retention.

Describe the research method that will be used

Using data on students within the City University of New York (CUNY) system, I will examine explicitly defined pathways across multiple settings and subgroups. The study builds upon prior research by addressing the following three research questions:

1. How do the characteristics of students who are identified as needing developmental or remedial education at CUNY's community colleges compare across the developmental courses and pathways in which they enroll?
2. What are the impacts of developmental education pathways at CUNY overall and, specifically, for low-income students, immigrant students, nontraditional students, and students of color?
3. Are there specific community college course sequences, alternative approaches, or tailored support services that lead to relatively better academic outcomes for various student populations? After accounting for other variables, are some approaches more

effective than others at supporting students' advancement through developmental courses, credit accumulation, and ultimately graduation?

Seeking to disentangle the relative efficacy of developmental education pathways for various subgroups, this study will employ a mixed methods approach. The proposed project will consist of a quantitative analysis of existing administrative data, followed by a multi-site case study based on a series of interviews designed to provide a rich and strong range of evidence to complement and extend the explanatory power of the quantitative findings.

Phase I.

The first phase will be based on an analysis of an administrative data set on approximately 233,000 undergraduate applicants to the City University of New York (CUNY), the nation's largest urban public university system with a total enrollment of almost half a million students across 24 undergraduate and graduate institutions. This application data set is structured in a way to allow for matching to numerous other data sources with rich student-level and college-level information. The resulting merged data will allow for the construction of a longitudinal data set that will track applicants into various developmental education pathways at six CUNY community colleges and follow them through graduation and/or transfer to CUNY and other postsecondary institutions.

Student-level data, including demographics and prior academic performance on the sample of CUNY undergraduate college applicants from fall 2006 through fall 2012 will be merged with postsecondary CUNY transcript and noncredit program participation datasets. For all applicants who enter a degree program at one of the University's six community colleges—either immediately or after a delay of up to three years—the dataset will include detailed

transcript information with credits attempted and earned per term, enrollment status (full- or part-time), major/program of study, financial aid received, individual course registration and grades, and credential(s) earned. These transcript data will include information for each term of students' enrollment across the entire CUNY system, allowing for the tracking of entering community college students as they persist through any of CUNY's 18 undergraduate institutions. Thus, transfers within the CUNY system – with and without a degree – will be included in the longitudinal analysis. Matches with the National Student Clearinghouse will identify transfers out of the CUNY system. The full data set will also include information on the demographic characteristics of all applicants, including age, gender, and race/ethnicity, as well as neighborhood of residence (defined by US Census block), native language, country of origin, immigration status, family income, neighborhood median income, and prior academic performance (i.e. a standardized high school GPA, high school type, time since graduation).

At the point of application and acceptance into a CUNY community college, students have the opportunity to enroll in one of several developmental education pathways. For purposes of analysis, I will classify students into five distinct groupings based on their enrollment in one of the following pathways: 1. Traditional degree enrollment, 2. Noncredit summer immersions 3. Noncredit English language immersion, 4. Accelerated developmental education noncredit instruction, and 5. No enrollment after application.

First, I will analyze data descriptively and compare the characteristics and numbers of students who enroll in the various developmental course pathways. The descriptive analysis will illustrate the overall movement of students into these pathways and then into degree programs across all CUNY undergraduate institutions and at other non-CUNY institutions using National Student Clearinghouse matches. Descriptive quantitative analyses will identify various

educations pathways and will provide OLS estimates of postsecondary outcomes (i.e. retention, academic performance, graduation) for various subgroups. More rigorous quantitative strategies will then be employed—propensity score matching and discrete-time hazard models—in order to examine estimates across and within community colleges in the sample. For the purposes of the initial quantitative analysis using propensity scores, I will look at five primary outcomes: credit accumulation by the end of the first year, enrollment in the first college-level math and English course by the fourth semester, one-year retention, transfer to a four-year baccalaureate program (with or without first obtaining a degree) and graduation (any credential). A second type of quantitative analysis will be conducted based on a single-risk discrete-time survival methodology to test for differences in factors that affect community college completion. Primary outcomes are defined as (1) completed all developmental courses required as part of a student’s degree program and (2) receiving a degree or certificate in one of the 10 semesters after initial application (or the “event period” of the analysis). Given the system-wide scope of the longitudinal dataset, a third outcome based on the transfer from a community college to a baccalaureate degree program—with or without a degree—will also be included. The discrete-time survival methodology will attempt to estimate the likelihood of completion of the three milestones described above for every one of the 10 semesters within the event period. The goal of this analysis is to understand how certain milestones and pathways impact the likelihood of graduation for certain subgroups.

Due to the nested nature of the quantitative data --students are nested within institutions and years—statistical models used will account for variation at multiple levels (i.e. the student level and the college level). The quantitative analysis will employ a fixed effects approach to account for bias related to college-level variable (including those not observed). Dummy

variables for each college (as well as each year/term for data aggregated across time) will be included in models. In general, a major weakness in using institution and year/term fixed effects is that the models can only be estimated if sufficient data exists at each of level. The large sample size of this study, however, combined with the fact that each community college at CUNY has every developmental education pathway to students indicates that fixed effects is a viable analytic strategy. While estimation of effects using hierarchical linear modeling (HLM) is appealing, the relatively small number of clusters (between six and 18 colleges) raise concerns about this strategy. In a study using a similar two-level model, Maas and Hox (2005) indicated that at least 50 clusters would be necessary to achieve unbiased standard errors through HLM. In the proposed analysis, I will attempt to use HLM as a strategy in my sensitivity analyses, but this will not be a primary strategy of this study.

Phase II.

The quantitative analyses described above are also designed to allow for the comparison of results across institutions. Each of the colleges in the study has unique student bodies, geographic settings, administrative structures, and histories. All of the alternative developmental course pathways, however, are designed or overseen by the University's Central Office and should represent common models or program elements across these institutions. The structure of the programs and of the data allows for the analysis of outcomes across institutional settings to better understand the results in different contexts.

A second phase of this research will employ a case study approach to address the research questions through a qualitative lens. Using Yin's (2014) cross-case analysis framework as strategy for this second phase, I will conduct interviews with college administrators, program directors, instructors, and institutional research staff at the six CUNY community colleges in this

study. Each college will be treated as a unique case. The primary goal of the qualitative component of the study is to gain insight into explanatory processes and theories that surface as a result of the first quantitative component of the research. Data collected through in-depth interviews at each of the CUNY community colleges will provide a rich and strong array of evidence to complement and extend the explanatory power of the quantitative findings. Often quantitative studies that examine institutional policies and practices rely on the aggregation of data across hundreds of colleges and countless policy contexts. In many cases, it is not possible nor practical to conduct qualitative research into the specific institutional-level factors that lead to findings based off of large-scale data sets. It is often difficult to uncover the explanations for presumed causal links. The proposed quantitative research at CUNY, however, is distinctive in that it consists of an analysis of an extremely large number of students across a diverse university system. The relatively small number of institutions within this geographically concentrated system—six community colleges in total—provide a unique opportunity to conduct a qualitative analysis using a case study approach.

Sets of interviews will be carried out at each college independently and will be structured around college-specific findings from the quantitative phase of this research. The design and analysis of this phase will be underpinned by a multi-case study framework and will focus on developing a rich description each college. Analysis across cases (i.e. institutions) will then be used to build explanations for quantitative findings (Yin 1986; 2014). Interviewees will be asked about his or hers thoughts regarding the results of the quantitative analyses and explanations for why results for the respective college differ from the average results across institutions. Responses will be dissected, coded, and arrayed in the form of word tables. This strategy will

allow the analysis to delve into the similarities and differences between cases that might explain variations in quantitative outcomes.

References

- Adelman, C. (1998). The kiss of death? An alternative view of college remediation. *National Crosswalk*, 6(3), 11. San Jose, CA: National Center for Public Policy and Higher Education.
- Adelman, C. (2004). *Principal indicators of student academic histories in postsecondary education, 1972-2000*. Washington, DC: Institute of Education Sciences, U.S. Department of Education.
- Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. Washington, DC: Institute of Education Sciences, U.S. Department of Education.
- Attewell, P. A., Lavin, D., Domina, T., & Levey, T. (2006). New evidence on college remediation. *Journal of Higher Education*, 77(5), 886-924.
- Bailey, T. (2009). Challenge and opportunity: Rethinking the role and function of developmental education in community college. *New Directions for Community Colleges*, 145, 11-30.
- Bailey, T., & Alfonso, M. (2005). *Paths to persistence: An analysis of research on program effectiveness at community colleges*. New Agenda Series. Indianapolis: Lumina Foundation for Excellence.
- Bailey, T., Jeong, D. W., & Cho, S. W. (2010). Referral, enrollment, and completion in developmental education sequences in community colleges. *Economics of Education Review*, 29(2), 255-270.
- Bailey, T. & Morest, V.S. (2006). The community college equity agenda in the twenty-first century: Moving from access to achievement. In T. Bailey & V. S. Morest (Eds.), *Defending the community college agenda*. Baltimore: The Johns Hopkins University Press.
- Bailey, T., & Weininger, E. (2002). Performance, graduation, and transfer rates of immigrants and natives at City University of New York community colleges. *Educational Evaluation and Policy Analysis*, 24(4), 359-77.
- Bettinger, E., & Long, B. T. (2009). Addressing the needs of underprepared students in higher education: Does college remediation work? *Journal of Human Resources*, 44(3), 736-771.
- Boatman, A., & Long, B. T. (2010). *Does remediation work for all students? How the effects of postsecondary remedial and developmental courses vary by level of academic preparation* (NCPR Working Paper). New York, NY: National Center for Postsecondary Research.

- Boylan, H. R. (2009). Targeted intervention for developmental education students (T.I.D.E.S.). *Journal of Developmental Education*, 32(3), 14-23.
- Boylan, H. R., & White, W. G. (1987). Educating all the nation's people: The historical roots of developmental education. *Research in Developmental Education*, 4(4), 1-4.
- Bragg, D. D. (2001). Community college access, mission, and outcomes: Considering intriguing intersections and challenges. *Peabody Journal of Education*, 76(1), 93-116.
- Brier, E. (1984). Bridging the academic gap: An historical view. *Journal of Developmental Education*, 8(1), 2-5.
- Bueschel, A. C. (2004). The missing link: The role of community colleges in the transition between high school and college. In M. W. Kirst & A. Venezia (Eds.), *From high school to college*. San Francisco: Jossey-Bass.
- Calcagno, J. C., & Long, B. T. (2008). *The impact of postsecondary remediation using a regression discontinuity approach: Addressing endogenous sorting and noncompliance* (NCPR Working Paper). New York, NY: National Center for Postsecondary Research.
- Chen, X. & Carroll, C. D. (2005). *First-generation students in post-secondary education: A look at their college transcripts*. Washington, DC: National Center for Education Statistics.
- Conway, K. (2009). Exploring persistence of immigrant and native students in an urban community college. *Review of Higher Education*, 32(3), 321-352.
- Goudas, A. M., & Boylan, H. R. (2012). Addressing flawed research in developmental education. *Journal of Developmental Education*, 36(1), 2-13.
- Howell, J. S., Kurlaender, M., & Grodsky, E. (2010). Postsecondary preparation and remediation: Examining the effect of the early assessment program at California State University. *Journal of Policy Analysis & Management*, 29(4), 726-748.
- Jenkins, D., & Boswell, K. (2002). *State policies on community college remedial education: Findings from a national survey*. Denver, CO: Education Commission of the States.
- Jenkins, D., Jaggars, S. S., & Roksa, J. (2009). *Promoting gatekeeper course success among community college students needing remediation: Findings and recommendations from a Virginia study*. New York: Community College Research Center, Teachers College, Columbia University.
- Jenkins, D., Speroni, C., Belfield, C., Jaggars, S. S., & Edgecombe, N. (2010). *A model for accelerating academic success of community college remedial English students: Is the Accelerated Learning Program (ALP) effective and affordable?*. CCRC Working Paper No. 21. New York: Community College Research Center, Teachers College, Columbia University.
- Leinbach, T., & Bailey, T. R. (2006). *Access and achievement of Hispanics and Hispanic immigrants in the colleges of the City University of New York*. New York: Community College Research Center Teachers College, Columbia University.
- Maas, C. J. M., & Hox, J. J. (2005). Sufficient sample sizes for multilevel modeling. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences*, 1, 85-91.

- Martorell, P., & McFarlin, I. (2011). Help or hindrance? The effects of college remediation on academic and labor market outcomes. *Review of Economics and Statistics*, 93(2), 436-454.
- Melguizo, T., Hagedorn, L. S., & Cypers, S. (2008). Remedial/developmental education and the cost of community transfer: A Los Angeles county sample. *Review of Higher Education*, 31, 401-431.
- Rutschow, E. Z., & Schneider, E. (2011). *Unlocking the gate: What we know about improving developmental education*. New York: MDRC.
- Schwartz, W. & Jenkins, D. (2007). *Promising practices for community college developmental education*. New York: Community College Research Center, Teachers College, Columbia University.
- Soliday, M (2002). *The politics of remediation: Institutional and student needs in higher education*. Pittsburgh, PA: University of Pittsburgh Press.
- Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education*, 68(6), 599-623.
- Tinto, V. (1998). *Learning communities and the reconstruction of remediation in higher education*. Paper presented at the Conference on Replacing Remediation in Higher Education, Stanford University, Palo Alto, CA.
- Visher, M. G., Schneider, E., Wathington, H., & Collado, H. (2010). *Scaling up learning communities: The experience of six community colleges*. New York: MDRC.
- Wathington, H. D., Barnett, E. A., Weissman, E., Teres, J., Pretlow, J., & Nakanishi, A. (with Zeidenberg, M., Weiss, M. J., Black, A., Mitchel, C., & Wachen, J.). (2011). *Getting ready for college: An implementation and early impacts study of eight Texas developmental summer bridge programs*. New York, NY: National Center for Postsecondary Research.
- Yin, R. K. (1986). Community crime prevention: A synthesis of eleven evaluations. In D. P. Rosenbaum (Ed.), *Community crime prevention: Does it work?* (pp. 294-308). Thousand Oaks, CA: Sage.
- Yin, R. K. (2014). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.
- Zachry, E. M., & Dibble, E. (2009). Transitioning from ESL and the GED to post-secondary education: A case study of a college transition program. In Bailey, K. M., & Santos, M. G. (eds.), *Research on ESL in U.S. community colleges: People, programs, and potential*. Ann Arbor: University of Michigan Press.
- Zachry, E. M., & Schneider E. (2010). *Building foundations for student readiness: A review of rigorous research and promising trends in developmental education*. NCPR Working Paper. Presented at the NCPR Developmental Education Conference: What Policies and Practices Work for Students?, September 23-24, 2010.

Appendix

Table 1. Institutional Characteristics of CUNY Community Colleges in Sample

	CUNY Community Colleges					
	BMCC	Bronx	Hostos	Kings- borough	LaGuardia	Queens- borough
NYC Borough	Manhattan	Bronx	Bronx	Brooklyn	Queens	Queens
Year Founded	1963	1957	1968	1963	1971	1959
Fall 2012 Total Undergraduate Enrollment	24,537	11,287	6,455	18,934	19,287	15,711
Total First-time Freshmen	6,056	1,757	927	2,722	3,348	3,335
Total Advanced Standing Transfers	889	949	299	1,465	1,484	734
Total Continuing Undergraduate						
Degree, Non-degree, and Undergraduate Readmits	17,592	8,581	5,229	14,747	14,455	11,642
% Full-time	65.8	57.6	55.3	57.3	51.9	59.7
Fall 2012 Total First-time Freshmen Enrollment	6,056	1,757	927	2,722	3,348	3,335
% American Indian/Native Alaskan	0.3	0.1	0.3	0.2	0.4	1.1
% Asian/Pacific Islander	13.7	2.6	2.7	14.3	14.8	24.7
% Black	30.8	30.2	31.7	32.7	24.7	22.5
% Hispanic	46.3	65.4	63.4	19.3	48.8	32.3
% White	8.8	1.8	1.8	33.7	11.3	19.4
% Female	53.0	53.0	59.8	52.5	56.8	50.1
% Under 20	74.8	61.5	60.3	74.4	71.6	82.3
% 20-22	15.9	21.5	19.8	14.8	15.1	11.2
% 23-24	3.3	5.2	5.3	3.3	3.9	2.3
% 25-29	3.2	5.8	7.4	3.3	4.8	1.9
% 30-44	2.5	4.8	6.1	3.6	3.8	1.9
% 45 & Over	0.4	1.2	1.0	0.5	0.7	0.3
% Received Pell Grant	76.5	85.7	83.9	66.2	67.9	58.9
Remedial Need Upon Entry ¹						
% Math, Reading, and Writing	13.8	22.3	22.6	15.5	14.7	9.7
% Math and Reading	4.4	7.0	5.7	5.6	6.5	4.7
% Math and Writing	9.1	14.5	10.5	10.8	10.1	5.8
% Math Only	43.2	40.8	41.4	41.8	42.6	47.9
% Reading and Writing	2.5	1.7	1.8	3.6	3.2	3.3
% Reading Only	0.8	0.6	1.7	0.5	0.8	0.8
% Writing Only	3.0	1.4	2.7	1.7	2.7	2.0
% None	23.1	11.7	13.5	20.5	19.3	26.0

¹Percentages were calculated only for those students whose remedial status was known.

Sources: CUNY Office of Institutional Research & Assessment; Office of Research, Evaluation and Program Support

Table 2. Applicants to CUNY Community Colleges by Term and Institution

	CUNY Community Colleges						TOTAL
	BMCC	Bronx	Hostos	Kings-borough	LaGuardia	Queens-borough	
Term of Application							
Fall 2006	4,151	2,607	1,183	2,571	2,541	3,315	16,368
Spring 2007	2,234	1,352	606	1,178	1,276	886	7,532
Fall 2007	4,929	2,296	1,184	2,631	3,183	3,663	17,886
Spring 2008	1,488	894	525	947	968	816	5,638
Fall 2008	5,752	2,823	1,323	3,381	3,083	4,156	20,518
Spring 2009	1,443	1,032	812	842	908	1,070	6,107
Fall 2009	6,473	4,208	2,150	4,546	4,543	6,278	28,198
Spring 2010	2,779	1,588	876	1,353	1,264	1,678	9,538
Fall 2010	6,953	4,082	2,233	5,872	5,247	5,749	30,136
Spring 2011	3,077	1,359	1,057	1,117	1,861	1,493	9,964
Fall 2011	8,263	4,211	2,712	5,145	6,209	5,705	32,245
Spring 2012	3,157	1,109	1,091	1,150	1,879	1,095	9,481
Fall 2012	8,284	3,398	2,622	4,247	5,864	4,695	29,110
Spring 2013	3,087	1,153	1,096	1,242	2,129	1,426	10,133
Total	62,070	32,112	19,470	36,222	40,955	42,025	232,854

Sources: CUNY Office of Institutional Research & Assessment; University Application Processing Center (UAPC)

Dear Drew,

Thank you for submitting your proposal. A printable summary is below. Your confirmation number is 5547. A confirmation email will be sent to you within 24 hours.

Applicants will be notified of the status of the proposed project by August 1, 2014.

If you have questions or need assistance regarding your application please contact the AIR Grant staff at 850-385-4155 x200 or grants@airweb.org.

SUMMARY

Personal Information	
Name	Mr. Drew Allen
Informal Name	Drew
Affiliation	New York University / City University of New York
Unit/Department	
Title	Student / Director - Office of Research, Evaluation and Program Support
Year began this position	2009
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Preferred Mailing Address	16 Court Street Suite 1700 Brooklyn, New York 11222 United States Phone: 718-254-7191
Secondary Address	
Demographics	
Highest degree	
Discipline of highest degree	
Position description	
Staff members in IR office	
Campus type	
Years of experience in IR	
IR Roles	
Year of birth	
Race/Ethnicity	
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Grant Type	

I am applying for a:

Dissertation Grant

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Project Description

Project title:

Understanding Multiple Developmental Education Pathways for Underrepresented Student Populations

Statement of the research problem and national importance (limit 750 words):

- What is the research problem this proposal intends to address?
- Why is this topic of national importance?
- Why is it timely to conduct this research at this time?

Community colleges are an important point of entry into postsecondary education for students from underrepresented and diverse backgrounds who might not otherwise have the opportunity to enroll in college. Due to the relatively low costs of community colleges compared to four-year public and private colleges, these institutions have become the starting points for an increasing number of low-income students, recent immigrants, students of color, and first-generation college enrollees (Bueschel, 2004; Conway, 2009; Melguizo, Hagedorn & Cypers, 2008). Many of these students, however, arrive at community colleges facing tests that are used to assess academic skills and are often assigned to developmental/remedial course sequences. These courses are designed to provide academic instruction and support for students who do not meet the level of academic proficiency considered appropriate for college-level coursework. While this approach to developmental education is widespread, it has been a core issue in American higher education throughout history from the first Harvard classes (Boylan & White, 1987).

Considerable debate surrounds the use of such assessments and developmental course sequences among policy makers, researchers, college faculty, and administrators (Soliday, 2002). Addressing the academic needs of underprepared students has been a constant in higher education, but findings from research increasingly call into question the effectiveness of developmental courses, particularly as they relate to equity and access for underrepresented populations (Bailey, Jeong & Cho, 2010; Bailey & Morest, 2006; Bettinger & Long, 2009; Brier, 1984).

Educators increasingly call for alternative approaches to traditional course sequences. Schwartz and Jenkins (2007) maintain that colleges and universities should take a holistic approach to supporting underprepared students, employing a wide variety of structures, teaching and learning strategies, and services to support the variety of educational backgrounds and needs of students. Hunter Boylan, director of the National Center for Developmental Education, argues that using more comprehensive forms of assessment, including cognitive, affective, and personal information, would allow for individually targeted interventions (2009). Others such as Zachry and Schneider (2010) call for more radical and novel approaches to traditional developmental education, as well as a rigorous research agenda to evaluate these innovations.

The purpose of this study is to examine various developmental education pathways available to students—from “traditional” developmental courses to emerging models and interventions—and to compare the outcomes of these pathways across specific underrepresented populations. This study seeks to disentangle the relative efficacy of developmental education approaches, instruction, and operational structures for various subgroups. In order to effectively implement developmental education policies to serve all students, colleges and universities must be able to identify the subgroups of students for whom programs, courses, and instructional models best serve, and then assess the outcomes of those programs for these subgroups.

Additional research on developmental education is necessary to understand how the various approaches and pathways affect students' success in higher education. Some students enroll directly into developmental or remedial courses upon matriculation into degree programs, while others delay taking these courses until later in their academic programs. Some students may enroll in accelerated courses or programs prior to enrollment into degree programs to build their academic skills. Other students may bypass developmental or remedial courses entirely as part of “mainstreaming” programs now popular at campuses across the country. While individual programs and approaches have been found to be effective in certain institutions and policy contexts, little is known about the overall picture of these various models and noncredit pathways. Despite the proliferation of developmental education models and approaches, colleges and universities have often developed these models and approaches through a “one size fits all” approach, giving little thought to the differences within and across groups of students.

Beyond remediation, research on higher education continues to point to differences in overall outcomes for various populations of students. Even within subgroups, researchers have found significant differences in college enrollment rates and other postsecondary outcomes (Leinbach & Bailey, 2006). However, research specifically focused on developmental education for subgroups of students—recent immigrants, nontraditional students, first-generation college students, or students of color—is still limited. One reason has to do with limited data availability. Much of the research on developmental education and higher education in general is based on large datasets with sample sizes simply too small for disaggregation across relatively small subgroups (Bailey & Weininger, 2002). Larger national datasets often do not contain detailed information about noncredit instruction and other activities on campuses that make up these developmental course opportunities.

Review the literature and establish a theoretical grounding for the research (limit 1000 words):

- What has prior research found about this problem?
- What is the theoretical/conceptual grounding for this research?

The study will be conducted in the context of academic momentum, a perspective developed by Cliff Adelman. Adelman (1999; 2006) used administrative transcript data from several longitudinal datasets to understand students' behavior based on observable characteristics, such as credits attempted, credits earned, courses taken, intensity of course taking, and patterns of continuous enrollment. As students develop skills and reach key points toward their degree, they gain momentum that drives them forward to develop even more skills and reach more key points. Adelman also found that earning credits in college math in the first two years, entering college right after high school, staying continuously enrolled, and exhibiting a rising trend in grades all lead to increased momentum for students. This momentum, especially in the first year of college, explains a large portion of the differences in student persistence (Adelman, 2006; Chen & Carroll, 2005).

Descriptive studies using data from the National Education Longitudinal Study (NELS) have been influential in the current dialogue about developmental. After controlling for academic skills and other student characteristics, researchers found that taking developmental courses had no association with lower chances of college graduation. Students who did not take developmental courses did just as well as comparable students who took them. Much of the difference in graduation rates was driven by differences carried over from high school (Adelman 1998; Attewell, et al., 2006). Bailey (2009) points out that these studies, however, suggest that developmental courses do not necessarily help students, especially since these courses cost students, colleges and tax-payers money. There are also questions about unobserved and unmeasured differences between those who took developmental courses and those who did not, which may be biasing results of these studies.

Recent studies have provided more rigorous causal evidence of the effects of developmental course taking using quasi-experimental approaches. Bettinger and Long (2009) tracked 28,000 full-time, traditional-age freshmen at Ohio colleges over six years to determine impacts of placement into developmental courses. Results suggested that both math and English developmental course participation were estimated to increase the likelihood of completing a degree within four to six years. Other research has used a regression-discontinuity approach to analyze students just above or below test score cutoffs. Using administrative data on 455,000 students in Texas, Martorell and McFarlin (2011) found negative effects of assignment to developmental courses on credit accumulation and persistence. Calcagno and Long (2008), using a sample of almost 100,000 students in 28 community colleges in Florida, found that remediation increased persistence to the second year and total number of credits completed but did not increase college-level credit accumulation or likelihood of graduating with a degree.

Although recent quasi-experimental research on developmental education has not been without criticism (see Goudas & Boylan, 2012), the overall findings from these studies do not paint a generally positive picture of its postsecondary effects. It must be noted that some research indicates that developmental courses have differential effects based on the students' prior level of preparation or the level of course in which they are assigned (Boatman & Long, 2010; Jenkins, Jaggars & Roksa, 2009).

Given the findings from research on traditional developmental course participation, it is not surprising that new and alternative strategies for developmental education have emerged. Colleges and universities have begun experimenting with multiple approaches to developmental education that challenge the conventional remedial course structure. At the same time, even the "traditional" developmental course pathways have begun to vary significantly across institutions in terms of both content and organization. This trend underscores a key limitation to much of the research on developmental education—studies examining overall effects of developmental courses at a state or national level can obscure individual institution-level variation. Data on these approaches, which are most commonly classified as noncredit instruction, are also often not available in national datasets. Zachry and Schneider (2010) provide a useful classification of some of the alternative strategies to traditional developmental education:

- 1.) **Helping to Avoid Development Education: Transition Courses and Dual Enrollment:** Colleges have developed collaborations with local secondary school systems to help identify high school students who need additional academic support and to provide programs to help build students' skills and avoid developmental education courses (Rutschow & Schneider, 2011). Some "early assessment" programs allow students in high school to take the colleges' placement tests earlier—typically before students' senior years in high school—to provide information on skills needs before application and entry into college. Initial research on California's Early Assessment Program suggests that participation reduces students' probability of needing remediation by six percentage points in English and four percentage points in math (Howell, Kurlaender & Grodsky, 2010).
- 2.) **Accelerating Students' Progress and Bridging the Transition:** Some colleges and universities have focused their attention on condensing the amount of time that students need to complete developmental course sequences. Programs are designed to create and foster academic momentum for students (Rutschow & Schneider, 2011). A recent evaluation of the Accelerated Learning Program (ALP) at the Community College of Baltimore County found that allowing upper-level developmental writing students to enroll directly in college-level English while also taking a companion course that provided extra support was associated with significantly higher pass rates in English courses (Jenkins, Speroni, Belfield, Jaggars & Edgecombe, 2010).
- 3.) **Learning Communities and Other Contextualized Opportunities:** Some community colleges, in an attempt to support underprepared students, have developed learning communities to specifically support students through development education. This approach involves groups of students who enroll together in at least two courses (Bragg, 2001; Visher, Schneider, Wathington & Collado, 2010). Tinto (1997; 1998) found that students who participated in developmental courses organized around a learning community model had better attitudes toward learning and higher completion rates, as well as higher retention.

Describe the research method that will be used (limit 1000 words):

- What are the research questions to be addressed?
- What is the proposed research methodology?
- What is the statistical model to be used?

Using community colleges within the City University of New York (CUNY) system, I will examine explicitly defined pathways across multiple settings and subgroups. The study builds upon prior research by addressing the following three research questions:

1. How do the characteristics of students who are identified as needing developmental or remedial education at CUNY's community colleges compare across the developmental courses and pathways in which they enroll?
2. What are the impacts of developmental education pathways at CUNY overall and, specifically, for low-income students, immigrant students, nontraditional students, and students of color?
3. Are there specific community college course sequences, alternative approaches, or tailored support services that lead to relatively better academic outcomes for various student populations? After accounting for other variables, are some approaches more effective than others at supporting students' advancement through developmental courses, credit accumulation, and ultimately graduation?

Seeking to disentangle the relative efficacy of developmental education pathways for various subgroups, this study will employ a mixed methods approach. The proposed project will consist of a quantitative analysis of existing administrative data, followed by a series of follow-up interviews designed to provide additional explanatory power for the quantitative results.

The first phase will be based on an analysis of an administrative data set on approximately 233,000 applicants to the City University of New York (CUNY), the nation's largest urban public university system with a total enrollment of almost half a million students across 24 undergraduate and graduate institutions. This application data set is structured in a way to allow for matching to numerous other data sources with rich student-level and college-level information. The resulting merged data will allow me to construct a longitudinal data set that will track applicants into various developmental education pathways at CUNY community colleges and follow them through graduation and/or transfer to CUNY and other postsecondary institutions.

Student-level data, including demographics and prior academic performance on all CUNY community college applicants from Fall 2006 through Fall 2012 will be merged with postsecondary CUNY transcript and noncredit program participation datasets. For all applicants who enter a degree program at one of the University's community colleges—either immediately or after a delay of up to three years—the dataset will include detailed transcript information with credits attempted and earned per term, enrollment status (full- or part-time), major/program of study, financial aid received, individual course registration and grades, and credential(s) earned. The full data set will include information on the demographic characteristics of all applicants, including age, gender, and race/ethnicity, as well as neighborhood of residence (defined by US Census block), native language, country of origin, immigration status, family income, neighborhood median income, and prior academic performance (i.e. a standardized high school GPA, high school type, time since graduation).

At the point of application and acceptance into a CUNY community college, students have the opportunity to enroll in one of several developmental education pathways. For purposes of analysis, I will classify students into five distinct groupings based on their enrollment in one of the following pathways: 1. Traditional degree enrollment, 2. Noncredit summer immersions, 3. Noncredit English language immersion, 4. Accelerated developmental education noncredit instruction, and 5. No enrollment after application.

First, I will analyze data descriptively and compare the characteristics and numbers of students who enroll in the various developmental course pathways. The descriptive analysis will illustrate the overall movement of students into these pathways and then into degree programs at CUNY and other institutions. Descriptive quantitative analyses will identify various education pathways and will provide OLS estimates of postsecondary outcomes (i.e. retention, academic performance, graduation) for various subgroups. More rigorous quantitative strategies will then be employed—propensity score matching and discrete-time hazard models—in order to examine estimates across and within community colleges in the sample. For the purposes of the initial quantitative analysis using propensity scores, I will look at four primary outcomes: credit accumulation by the end of the first year, enrollment in the first college-level math and English course by the fourth semester, one-year retention, and graduation. A second type of quantitative analysis will be conducted based on a single-risk discrete-time survival methodology to test for differences in factors that affect community college completion, as defined as (1) completed all developmental courses required as part of a student's degree program and (2) receiving a degree or certificate in one of the 10 semesters after initial application (or the "event period" of the analysis). The methodology will attempt to estimate the likelihood of completion of the two milestones for every one of the 10 semesters within the event period. The goal of this analysis is to understand how certain milestones and pathways impact the likelihood of graduation for certain subgroups.

The second phase of this study will consist of a series of interviews with college administrators, program directors, and instructors at a sample of four CUNY community colleges. The goal of the interviews will be to better understand the results from the quantitative analysis and to elicit explanations from "on the ground" staff as to why certain pathways or subgroups might have better or worse quantitative results. Specific attention will be given to the process of allocation/selection into these programs and how it ultimately relates to student outcomes. Each interview will be structured around the college-specific data reports, and questions about specific findings will be asked of interviewees. At the conclusion of these interviews, the responses will be coded and analyzed to determine specific patterns of responses within and across institutions. An attempt will be made to determine the patterns of similar qualitative explanations across institutions for a specific phenomenon or finding. These data will then be used as evidence for a causal argument for the effects of developmental course pathways. The interview data will be analyzed to understand if common qualitative explanations are given for this finding. If a high correlation between qualitative explanations and quantitative findings is found, then this correlation provides evidence of the underlying mechanisms behind such quantitative findings.

References cited (no word limit):

- Adelman, C. (1998). The kiss of death? An alternative view of college remediation. *National Crosswalk*, 6(3), 11. San Jose, CA: National Center for Public Policy and Higher Education.
- Adelman, C. (2004). *Principal indicators of student academic histories in postsecondary education, 1972-2000*. Washington, DC: Institute of Education Sciences, U.S. Department of Education.
- Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. Washington, DC: Institute of Education Sciences, U.S. Department of Education.
- Allen, D., & Dadgar, M. (2012). Does dual enrollment increase students' success in college? Evidence from a quasi-experimental analysis of dual enrollment in New York City. *New Directions for Higher Education*, 158, 11-19.
- Allison, P. (1984). *Event history analysis: Regression for longitudinal event data*. Thousand Oaks, CA: Sage.

- Angrist, J. D. & Pischke, J. S. (2009). *Mostly harmless econometrics: An empiricist's companion*. Princeton, NJ: Princeton University Press.
- Arendale, D. R. (2002). Then and now: The early years of developmental education. *Research and Teaching in Developmental Education*, 18(2), 3-26.
- Attewell, P. A., Heil, S., & Reisel, L. (2012). What is academic momentum? And does it matter? *Educational Evaluation and Policy Analysis*, 34(1), 27-44.
- Attewell, P. A., Lavin, D., Domina, T., & Levey, T. (2006). New evidence on college remediation. *Journal of Higher Education*, 77(5), 886-924.
- Bahr, P. R. (2007). Double jeopardy: Testing the effects of multiple basic skill deficiencies on successful remediation. *Research in Higher Education*, 48, 695-725.
- Bahr, P. R. (2010). Revisiting the efficacy of postsecondary remediation: The moderating effects of depth/breadth of deficiency. *Review of Higher Education*, 33(2), 177-205.
- Bailey, T. (2009). Challenge and opportunity: Rethinking the role and function of developmental education in community college. *New Directions for Community Colleges*, 145, 11-30.
- Bailey, T., & Alfonso, M. (2005). *Paths to persistence: An analysis of research on program effectiveness at community colleges*. New Agenda Series. Indianapolis: Lumina Foundation for Excellence.
- Bailey, T., Jeong, D. W., & Cho, S. W. (2010). Referral, enrollment, and completion in developmental education sequences in community colleges. *Economics of Education Review*, 29(2), 255-270.
- Bailey, T. & Morest, V.S. (2006). The community college equity agenda in the twenty-first century: Moving from access to achievement. In T. Bailey & V. S. Morest (Eds.), *Defending the community college agenda*. Baltimore: The Johns Hopkins University Press.
- Bailey, T., & Weininger, E. (2002). Performance, graduation, and transfer rates of immigrants and natives at City University of New York community colleges. *Educational Evaluation and Policy Analysis*, 24(4), 359-77.
- Bean, J. P. & Metzner, B. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research*, 55(4), 485-540.
- Becker, H. S. (1967). Whose side are we on? *Social Problems*, 14, 239-247.
- Behringer, L. B. (2008). *Remedial education at the community college: A study of student sensemaking* (Doctoral dissertation). New York, NY: New York University Steinhardt School of Culture, Education, and Human Development.
- Bensimon, E. M. (2004). The diversity scorecard: A learning approach to institutional change. *Change*, 36, 45-52.
- Bettinger, E. P., & Long, B. T. (2007). Institutional responses to reduce inequalities in college outcomes: Remedial and developmental courses in Higher Education. In S. Dickert, Conlin & R. Rubenstein (Eds.), *Economic Inequality in Higher Education: Access, Persistence, and Success*. New York: Russell Sage Foundation Press.
- Bettinger, E., & Long, B. T. (2009). Addressing the needs of underprepared students in higher education: Does college remediation work? *Journal of Human Resources*, 44(3), 736-771.
- Bettinger, E., Boatman, A., & Long, B. T. (2013) Student supports: Developmental education and other academic programs. *The Future of Children*, 23(1), 93-115.
- Boatman, A., & Long, B. T. (2010). Does remediation work for all students? How the effects of postsecondary remedial and developmental courses vary by level of academic preparation (NCPR Working Paper). New York, NY: National Center for Postsecondary Research.
- Boylan, H. R. (2009). Targeted intervention for developmental education students (T.I.D.E.S.). *Journal of Developmental Education*, 32(3), 14-23.
- Boylan, H. R., & White, W. G. (1987). Educating all the nation's people: The historical roots of developmental education. *Research in Developmental Education*, 4(4), 1-4.
- Boylan, H. R., & Saxon, D. P. (1999). *What works in remediation: Lessons from 30 years of research*. Boone, NC: National Center for Developmental Education.
- Bragg, D. D. (2001). Community college access, mission, and outcomes: Considering intriguing intersections and challenges. *Peabody Journal of Education*, 76(1), 93-116.
- Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). Toward understanding and reducing college student departure. *ASHE-ERIC Higher Education Report*, 30(3). San Francisco: Jossey-Bass.
- Brier, E. (1984). Bridging the academic gap: An historical view. *Journal of Developmental Education*, 8(1), 2-5.
- Brock, T., & LeBlanc, A. (2005). *Promoting student success in community college and beyond: The Opening Doors demonstration*. New York: MDRC.
- Brubacher, J. S., & Rudy, W. (1976). *Higher education in transition: A history of American colleges and universities, 1636-1976*. New York: Harper & Row.
- Bueschel, A. C. (2004). The missing link: The role of community colleges in the transition between high school and college. In M. W. Kirst & A. Venezia (Eds.), *From high school to college*. San Francisco: Jossey-Bass.
- Calcagno, J. C., & Long, B. T. (2008). The impact of postsecondary remediation using a regression discontinuity approach: Addressing endogenous sorting and noncompliance (NCPR Working Paper). New York, NY: National Center for Postsecondary Research.
- Calcagno, J. C., Crosta, P., Bailey, T., & Jenkins, D. (2007). Stepping stones to a degree: the impact of enrollment pathways and milestones on community college student outcomes. *Research in Higher Education*, 48(7), 775-801.
- Casazza, M. E. (1999). Who are we and where did we come from? *Journal of Developmental Education*, 23(1), 2-7.
- Chen, X. (2007). *Part-time undergraduates in postsecondary education: 2003-04* (NCES 2007-165). Washington, DC: National Center for Education Statistics.
- Chen, X. & Carroll, C. D. (2005). *First-generation students in post-secondary education: A look at their college transcripts*. Washington, DC: National Center for Education Statistics.
- Conley, D. T. (2010). *College and career ready: Helping all students succeed beyond high school*. San Francisco, CA: Jossey-Bass.
- Connell, C. (2008). *The vital role of community colleges in the education and integration of immigrants*. Sebastopol, CA: Grantmakers Concerned with Immigrants and Refugees.
- Conway, K. (2009). Exploring persistence of immigrant and native students in an urban community college. *Review of Higher Education*, 32(3), 321-352.
- Conway, K. (2010). Educational aspirations in an urban community college: differences between immigrant and native student groups. *Community College Review*, 37(3), 209-242.
- Dadgar, M. (2012). *Essays on the economics of community college students' academic and labor market success*. Unpublished doctoral dissertation, Teachers College, Columbia University.
- Davis, R. J., & Palmer, R. T. (2010). The role of postsecondary remediation for African American students: A review of research. *The Journal of Negro Education*, 79(4), 503-520.
- Deil-Amen, R., & Rosenbaum, J. E. (2002). The unintended consequences of stigma-free remediation. *Sociology of Education*, 75(3), 249-268.

- DesJardins, S. (2003). Event history methods: Conceptual issues and an application to student departure from college. In J. Smart (Ed.), *Higher Education: Handbook of Theory and Research*, 18, 421-471.
- Erisman, W. & Looney, S. (2007). *Opening the door to the American dream: Increasing higher education access and success for immigrants*. Washington, DC: Institute for Higher Education Policy.
- Goudas, A. M., & Boylan, H. R. (2012). Addressing flawed research in developmental education. *Journal of Developmental Education*, 36(1), 2-13.
- Grubb, W. N., & Kalman, J. (1994). Relearning to earn: The role of remediation in vocational education and job training. *American Journal of Education*, 103, 54-93.
- Grubb, W. N., & Worthen, H. (1999). Remedial/developmental education: The best and the worst. In W. N. Grubb (Ed.), *Honored but invisible*. New York: Routledge.
- Gumpert, P. J., & Bastedo, M. N. (2001). Academic stratification and endemic conflict: Remedial education policy at CUNY. *The Review of Higher Education*, 24(4), 333-349.
- Hagy, A. P. & Staniec, J. F. (2002). Immigrant status, race, and institutional choice in higher education. *Economics of Education Review*, 21, 381-92.
- Howell, J. S., Kurlaender, M., & Grodsky, E. (2010). Postsecondary preparation and remediation: Examining the effect of the early assessment program at California State University. *Journal of Policy Analysis & Management*, 29(4), 726-748.
- Hoyt, J. E., & Sorenson, C. T. (2001). High school preparation, placement testing, and college remediation. *Journal of Developmental Education*, 25(2), 26-34
- Hughes, K., & Scott-Clayton, J. (2010). Assessing Developmental Assessment in Community Colleges: A Review of the Literature. NCPD Working Paper. Presented at the NCPD Developmental Education Conference: What Policies and Practices Work for Students?, September 23-24, 2010.
- Ignash, J. M. (1997). Who should provide postsecondary remedial/developmental education? *New Directions for Community Colleges*, 100, 5-20.
- Jehangir, R. R. (2002). Higher education for whom: The battle to include developmental education at the four-year university, in Higbee, J. L., Lundell, D. B., & Duranczyk, I. M. (Eds.). *Developmental education: Policy and practice*. Auburn, CA: National Association for Developmental Education.
- Jenkins, D., & Boswell, K. (2002). State policies on community college remedial education: Findings from a national survey. Denver, CO: Education Commission of the States.
- Jenkins, D., Jaggars, S. S., & Roksa, J. (2009). Promoting gatekeeper course success among community college students needing remediation: Findings and recommendations from a Virginia study. New York: Community College Research Center, Teachers College, Columbia University.
- Jenkins, D., Speroni, C., Belfield, C., Jaggars, S. S., & Edgecombe, N. (2010). A model for accelerating academic success of community college remedial English students: Is the Accelerated Learning Program (ALP) effective and affordable?. CCRC Working Paper No. 21. New York: Community College Research Center, Teachers College, Columbia University.
- Kane, T. J. & Rouse, C. E. (1999). The community college: Educating students at the margin between college and work. *Journal of Economic Perspectives*, 13, 63-84.
- Karen, D. and Dougherty, K. (2005). Necessary but not sufficient: Higher education a strategy of social mobility. In Gary Orfield, Patricia Marin, and Catherine Horn (Eds.), *Higher education and the color line*. Cambridge, MA: Harvard Education Press.
- Kibler, A. K., Bunch, G. C., & Endris, A. K. (2011). Community college practices for U.S.-educated language-minority students: A resource-oriented framework. *Bilingual Research Journal*, 34(2), 201-222.
- Kilian, N. G. (2009) Self-efficacy and remediation of higher education mathematics students. Unpublished Dissertation.
- Kolajo, E. F. (2004). From developmental education to graduation: A community college experience. *Community College Journal of Research and Practices*, 28(4), 365-371.
- Kuh, G., Kinzie, J., Buckley, J., Bridges, B., & Hayek, J. (2006). *What matters to student success: A review of the literature*. Washington, DC: National Center for Education Statistics.
- Kurzet, R. (1997). Quality versus quantity in the delivery of developmental programs for ESL students. *New Directions for Community Colleges*, 100, 53-62.
- Leinbach, T., & Bailey, T. R. (2006). Access and achievement of Hispanics and Hispanic immigrants in the colleges of the City University of New York. New York: Community College Research Center Teachers College, Columbia University.
- Levin, H. M. (1987). Education as a public and private good. *Journal of Policy Analysis and Management*, 6, 628-641.
- Levin, H. M. (2002). A comprehensive framework for evaluating educational vouchers. *Educational Evaluation and Policy Analysis*, 24(3), 159-174.
- Levin, H. M., & Calcagno, J. C. (2008). Remediation in the community college: An evaluator's perspective. *Community College Review*, 35(3), 181-207.
- Long, M. C., Iatarola, P., & Conger, D. (2009). Explaining gaps in readiness for college-level math: The role of high school courses. *Education Finance and Policy*, 4(1), 1-33.
- Martorell, P., & McFarlin, I. (2011). Help or hindrance? The effects of college remediation on academic and labor market outcomes. *Review of Economics and Statistics*, 93(2), 436-454.
- McGrath, D., & Spear, M. B. (1989). The remedialization of the community college. In J. L. Ratcliff, S. Schwartz & L. H. Ebbers (Eds.), *Community colleges* (Second ed). New York: Simon and Schuster.
- Melguizo, T., Hagedorn, L. S., & Cypers, S. (2008). Remedial/developmental education and the cost of community transfer: A Los Angeles county sample. *Review of Higher Education*, 31, 401-431.
- Meriosotis, J. P., & Phipps, R. A. (2000). Remedial education in colleges and universities: What's really going on? *Review of Higher Education*, 24(1), 67-85.
- Oudenhoven, B. (2002). Remediation at the community college: Pressing issues, uncertain solutions. *New Directions for Community Colleges*, 117, 35-44.
- Parker, T. L., & Richardson, R. C. (2005). Ending remediation at CUNY: Implications for access and excellence. *Journal of Educational Research and Policy Studies*, 5(2), 1-22.
- Perin, D. (1998). Curriculum and pedagogy to integrate occupational and academic instruction in the community college: Implications for faculty development. New York: Community College Research Center, Teachers College, Columbia University.
- Perin, D. (2004). Remediation beyond developmental education: The use of learning assistance centers to increase academic preparedness in community colleges. *Community College Journal of Research and Practices*, 28, 559-582.
- Perin, D. (2006) Can community colleges protect both access and standards? The problem of remediation. *Teachers College Record*, 108(3), 339-373.
- Perna, L. W. (2000). Differences in the decision to attend college among African Americans, Hispanics, and Whites. *Journal of Higher Education*, 71(2), 177-141.
- Perna, L. W. (2007). The sources of racial-ethnic group differences in college enrollment: A critical examination. *New Directions for Institutional*

Research, 133, 51-66.

Phipps, R. A. (1998). College remediation: What it is. What it costs. What's at stake. Washington, DC: Institute for Higher Education Policy.

Richardson, R. C., Jr., & Bender, L. W. (1987). Fostering minority access and achievement in higher education: The role of urban community colleges and universities. San Francisco, CA: Jossey-Bass Publishers, Inc.

Richardson, R. C., Jr., & Martinez, M. (2009). Policy and performance in American higher education: An examination of cases across state systems. Baltimore, MD: Johns Hopkins University Press.

Rosenbaum, P. R. & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41-55.

Roueche, J. (1968). *Salvage, redirection, or custody?* Washington, D.C.: American Association of Junior Colleges

Roueche, J. & Roueche, S. (1993). *Between a rock and a hard place: The at-risk student in the open door college.* Washington, DC: Community College Press.

Rouse, C. E. (1998). Do two-year colleges increase overall educational attainment? Evidence from the states. *Journal of Policy Analysis and Management*, 17(4), 595-620.

Rutschow, E. Z., & Schneider, E. (2011). *Unlocking the gate: What we know about improving developmental education.* New York: MDRC.

Sawyer, R., & Schiel, J. (2000). Posttesting students to assess the effectiveness of remedial instruction in college. Paper presented at the Annual Meeting of the National Council on Measurement in Education, New Orleans, LA.

Schwartz, W. & Jenkins, D. (2007). *Promising practices for community college developmental education.* New York: Community College Research Center, Teachers College, Columbia University.

Scott-Clayton, J., & Rodriguez, O. (2012). Development, discouragement, or diversion? New evidence on the effects of college remediation (NBER Working Paper No. 18328). Cambridge, MA: National Bureau of Economic Research.

Shaw, K. M. (1997). Remedial education as ideological battleground: Emerging remedial education policies in the community college. *Educational Evaluation and Policy Analysis*, 19(3), 284-296.

Shults, C. (2000). *Remedial education: practices and policies in community colleges.* Washington, DC: American Association of Community Colleges.

Singer, J. & Willett, J. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence.* New York: Oxford University Press.

Soliday, M. (2002). *The politics of remediation: Institutional and student needs in higher education.* Pittsburgh, PA: University of Pittsburgh Press.

Speroni, C. (2011). High school dual enrollment programs: Are we fast-tracking students too fast? National Center for Postsecondary Research Working Paper.

Stage, F. K. (2007). Answering critical questions using quantitative data. *New Directions for Institutional Research*, 133, 5-16.

St. John, E. P., Paulsen, M. B., & Starkey, J. B. (1996). The nexus between college choice and persistence. *Research in Higher Education*, 37, 175-220.

Suárez-Orozco, C., Yoshikawa, H., Teranishi, R., & Suárez-Orozco, M. (2011). Growing up in the shadows: The developmental implications of unauthorized status. *Harvard Educational Review*, 81(2), 438-73.

Teranishi, R. T., Allen, W. R., & Solorzano, D. G. (2004). Opportunities at the crossroads: Racial inequality, school segregation, and higher education in California. *Teachers College Record*, 106(11), 2224-2245.

Teranishi, R. T., Suárez-Orozco, C., & Suárez-Orozco, M. (2011). Immigrants in community colleges. *Future of Children*, 21(1), 153-69.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89-125.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition.* (2nd ed.). Chicago, IL: University of Chicago Press.

Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education*, 68(6), 599-623.

Tinto, V. (1998). Learning communities and the reconstruction of remediation in higher education. Paper presented at the Conference on Replacing Remediation in Higher Education, Stanford University, Palo Alto, CA.

Venezia, A., Bracco, K. R., & Nodine, T. (2010). One shot deal? Student perceptions of assessment and placement in California's community colleges. San Francisco, CA: WestEd.

Vernez, G., & Abrahamse, A. (1996). *How immigrants fare in U.S. education.* New York: The RAND Corporation.

Visher, M. G., Schneider, E., Wathington, H., & Collado, H. (2010). *Scaling up learning communities: The experience of six community colleges.* New York: MDRC.

Wathington, H. D., Barnett, E. A., Weissman, E., Teres, J., Pretlow, J., & Nakanishi, A. (with Zeidenberg, M., Weiss, M. J., Black, A., Mitchel, C., & Wachen, J.). (2011). *Getting ready for college: An implementation and early impacts study of eight Texas developmental summer bridge programs.* New York, NY: National Center for Postsecondary Research.

Wilcox, K., delMas, R., Stewart, B., Johnson, A., & Ghere, D. (1997). The "package course" experience and developmental education. *Journal of Developmental Education*, 20(3), 18-26.

Zachry, E. M., & Dibble, E. (2009). Transitioning from ESL and the GED to post-secondary education: A case study of a college transition program. In Bailey, K. M., & Santos, M. G. (eds.), *Research on ESL in U.S. community colleges: People, programs, and potential.* Ann Arbor: University of Michigan Press.

Zachry, E. M., & Schneider, E. (2010). *Building foundations for student readiness: A review of rigorous research and promising trends in developmental education.* NCPR Working Paper. Presented at the NCPR Developmental Education Conference: What Policies and Practices Work for Students?, September 23-24, 2010.

Project Description - Appendix

- [Data Appendix](#)

NSF Datasets

NSF datasets:

Will you use a NSF dataset?

No

Please check all NSF datasets that apply:**Explain why the selected NSF dataset(s) best serves this research limit (250 words):**

Include a variable list for each dataset used.

NCES Datasets**NCES datasets:**

Will you use a NCES dataset?

No

Please check all NCES datasets that apply:**Explain why the selected NCES dataset(s) best serves this research (limit 250 words):**

Include a variable list for each dataset used.

NPEC Focus Topic**NPEC Focus Topic:**

Will you address the NPEC focus topic, *Noncredit Instructional Activity at Postsecondary Institutions*?

Yes

If yes, briefly describe (limit 250 words):

The research project is designed to describe and document the complex set of largely noncredit, developmental education pathways that students can follow. Although the research focuses on a set of community colleges within one university system, the pathways existing at CUNY are representative of a broad set of developmental education courses, initiatives, and other noncredit instructional activity on campuses around the county. This study will not only document these types of programs – many of which have not yet been documented in official university institutional research data except for the Finance and Human Resources reporting – but will also attempt to examine some of the postsecondary outcomes related to this noncredit activity. Qualitative research will be used to supplement quantitative analyze to provide a detailed picture of how noncredit developmental education – in all of its forms – is situated within community college contexts. Finally, an analysis of how these noncredit pathways correspond to officially reported university numbers for various purposes, including IPEDS, will be carried out to better inform institutional research practices throughout CUNY and at institutions across the country.

Timeline and Deliverables**Timeline:**

Provide a timeline of key project activities.

Approval to access data from all CUNY colleges was granted in July 2014, and final IRB approval is expected in August 2014. All stages of quantitative data collection and analysis will be conducted in September through December 2014. Qualitative data collection and analysis will occur in January and February of 2015. I will finalize analysis, conclusions, and discussion for my dissertation through March 2015 and will plan to defend by May 2015. From January through May 2015, I will prepare manuscripts and presentations as outlined in the "Deliverables" section below.

Deliverables:

List deliverables such as research reports, books, and presentations that will be developed from this research initiative.

Upon completion of the dissertation, I plan to produce three scholarly articles based on the results of this research and submit for inclusion in peer-reviewed journal. I also plan to produce a practitioner-focused report that will be aimed at providing those working in noncredit developmental education programs at CUNY with the findings that are most applicable to on-the-ground program administration and management. Through my position with CUNY, I will also develop a presentation and handout materials that will be featured in the University' Higher Education Research Seminar and featured on the CUNY Office of Institutional Research and Assessment (OIRA) website. Finally, the results of this research will be used as base material for a report for institutional researchers and program evaluators that will focus on tips and tools for working with developmental education administrative data.

Disseminate results:

Describe how you will disseminate the results of this research.
(Note: Costs of travel to meetings should be calculated on the budget page.)

In addition to scholarly article submissions, I would like to present findings at several academic and practitioner conferences (in addition to AIR), including the Associate for Education Finance and Policy (AEFP) conference, the Association for the Study of Higher Education (ASHE) conference, and the American Association of Community Colleges (AACCC) annual convention. I am also planning to present findings to an advisory board of educators and researchers affiliated with developmental education research projects currently funded by IES, with the hope that my research might help inform current policy discussions among this board.

IRB Statement**Statement of Institutional Review Board approval or exemption (limit 250 words):**

As part of the proposal, a statement outlining a plan for Institutional Review Board (IRB) approval is required. The statement should outline the applicant's timeline and plan for submitting the proposal to an IRB or explain why IRB approval is not necessary. Final IRB action is not necessary prior to submitting the application.

I am currently finalizing submission materials for both the NYU and CUNY Institutional Review Boards (IRB). All participating colleges within the CUNY system have provided written approval to access data and to conduct research. Preliminary IRB approval is anticipated in August 2014, with final revisions accepted by September 2014. Through prior research work through my job at CUNY, and I familiar with the IRB process and anticipate swift approval.

I will follow the appropriate protocols and security guidelines for accessing sensitive identified student-level data from multiple offices within CUNY.

Restricted Datasets**Statement of use of restricted datasets (limit 250 words):**

Applicants should provide a statement indicating whether the proposed research will require use of restricted datasets. If restricted datasets will be used, the plan for acquiring the appropriate license should be described. Review the requirements for restricted use licenses at the NCES and NSF websites.

If restricted datasets will not be used, leave this text box blank and click *Save and Continue*.

Biographical Sketch(es)**Biographical sketch (limit 750 words):**

Having worked at the City University of New York (CUNY) for over six years in various research and evaluation positions, I have developed a deep understanding for institutional policies and contexts within the higher education world. My first experience working at CUNY involved the evaluation of University initiatives within the New York City public school system. My work led to several large-scale research reports using national datasets (IPEDS) as well as CUNY institutional research data. I turned one program evaluation report into a chapter of a 2012 volume of *New Directions for Higher Education* entitled, "Does Dual Enrollment Increase Students' Success in College? Evidence from a Quasi-Experimental Analysis of Dual Enrollment in New York City."

Since this initial research work at CUNY, I have honed my quantitative skills through subsequent research opportunities and through my doctoral program in Higher and Postsecondary Education at New York University. My position within CUNY and my NYU coursework have led to collaborations with multiple faculty members and research organizations across New York City, including MDRC and the Community College Research Center (CCRC) at Columbia University. My own research interests have gravitated toward policies and programs designed to support underprepared students in college. My interests range from institutional models to state and local developmental education policies.

In 2013, as I completed advanced coursework in research methods, econometrics, and program evaluation NYU, I also formed group of institutional and program researchers at CUNY with the goal of providing staff with data and professional support for work across various campuses and programs within the University. This group then quickly evolved into a recognized office within CUNY. Now, as the founding director of the Office of Research, Evaluation and Program Support, I oversee the development and implementation of a comprehensive research and evaluation strategy for a wide range of initiatives at the University, including adult literacy and GED programs, workforce development and continuing education, collaborative programs with the New York City public school system, as well as community college completion and alternative remediation programs such as the Graduation Success Initiative (GSI) and CUNY Start. The goal of this newly-formed office is to provide practitioners and researchers with timely data and research essential to effective program development and improvement

Through my time at CUNY and NYU, I have presented research at numerous academic conferences and panels and have just completed a book chapter on issues of equity and access for community college service-learning programs.

I hold an M.A. in Quantitative Methods in the Social Sciences from Columbia University and a B.A. in Sociology from the University of Arkansas.

Budget

- [Dissertation Budget Form](#)

Funding History

Funding history (limit 250 words):

A statement of prior, current, and pending funding for the proposed research from all sources is required. The statement should also include a history of all prior funding from AIR to any of the PIs for any activity. Funding from other sources will not disqualify the application but may be considered in the funding decision.

No funding for this research project has been awarded or is anticipated. I have no prior AIR funding.

Dissertation Advisor Letter of Support

- [DrewAllen AIR Dissertation Letter of Support](#)

APPENDIX

Table 1. Institutional Characteristics of CUNY Community Colleges in Sample

	CUNY Community Colleges					
	BMCC	Bronx	Hostos	Kings-borough	LaGuardia	Queens-borough
NYC Borough	Manhattan	Bronx	Bronx	Brooklyn	Queens	Queens
Year Founded	1963	1957	1968	1963	1971	1959
Fall 2012 Total Undergraduate Enrollment	24,537	11,287	6,455	18,934	19,287	15,711
Total First-time Freshmen	6,056	1,757	927	2,722	3,348	3,335
Total Advanced Standing Transfers	889	949	299	1,465	1,484	734
Total Continuing Undergraduate Degree, Non-degree, and Undergraduate Readmits	17,592	8,581	5,229	14,747	14,455	11,642
% Full-time	65.8	57.6	55.3	57.3	51.9	59.7
Fall 2012 Total First-time Freshmen Enrollment	6,056	1,757	927	2,722	3,348	3,335
% American Indian/Native Alaskan	0.3	0.1	0.3	0.2	0.4	1.1
% Asian/Pacific Islander	13.7	2.6	2.7	14.3	14.8	24.7
% Black	30.8	30.2	31.7	32.7	24.7	22.5
% Hispanic	46.3	65.4	63.4	19.3	48.8	32.3
% White	8.8	1.8	1.8	33.7	11.3	19.4
% Female	53.0	53.0	59.8	52.5	56.8	50.1
% Under 20	74.8	61.5	60.3	74.4	71.6	82.3
% 20-22	15.9	21.5	19.8	14.8	15.1	11.2
% 23-24	3.3	5.2	5.3	3.3	3.9	2.3
% 25-29	3.2	5.8	7.4	3.3	4.8	1.9
% 30-44	2.5	4.8	6.1	3.6	3.8	1.9
% 45 & Over	0.4	1.2	1.0	0.5	0.7	0.3
% Received Pell Grant	76.5	85.7	83.9	66.2	67.9	58.9
Remedial Need Upon Entry ¹						
% Math, Reading, and Writing	13.8	22.3	22.6	15.5	14.7	9.7
% Math and Reading	4.4	7.0	5.7	5.6	6.5	4.7
% Math and Writing	9.1	14.5	10.5	10.8	10.1	5.8
% Math Only	43.2	40.8	41.4	41.8	42.6	47.9
% Reading and Writing	2.5	1.7	1.8	3.6	3.2	3.3
% Reading Only	0.8	0.6	1.7	0.5	0.8	0.8
% Writing Only	3.0	1.4	2.7	1.7	2.7	2.0
% None	23.1	11.7	13.5	20.5	19.3	26.0

¹ Percentages were calculated only for those students whose remedial status was known.

Sources: CUNY Office of Institutional Research & Assessment; Office of Research, Evaluation and Program Support

Table 2. Applicants to CUNY Community Colleges by Term and Institution

	CUNY Community Colleges						TOTAL
	BMCC	Bronx	Hostos	Kings-borough	LaGuardia	Queens-borough	
Term of Application							
Fall 2006	4,151	2,607	1,183	2,571	2,541	3,315	16,368
Spring 2007	2,234	1,352	606	1,178	1,276	886	7,532
Fall 2007	4,929	2,296	1,184	2,631	3,183	3,663	17,886
Spring 2008	1,488	894	525	947	968	816	5,638
Fall 2008	5,752	2,823	1,323	3,381	3,083	4,156	20,518
Spring 2009	1,443	1,032	812	842	908	1,070	6,107
Fall 2009	6,473	4,208	2,150	4,546	4,543	6,278	28,198
Spring 2010	2,779	1,588	876	1,353	1,264	1,678	9,538
Fall 2010	6,953	4,082	2,233	5,872	5,247	5,749	30,136
Spring 2011	3,077	1,359	1,057	1,117	1,861	1,493	9,964
Fall 2011	8,263	4,211	2,712	5,145	6,209	5,705	32,245
Spring 2012	3,157	1,109	1,091	1,150	1,879	1,095	9,481
Fall 2012	8,284	3,398	2,622	4,247	5,864	4,695	29,110
Spring 2013	3,087	1,153	1,096	1,242	2,129	1,426	10,133
Total	62,070	32,112	19,470	36,222	40,955	42,025	232,854

Sources: CUNY Office of Institutional Research & Assessment; University Application Processing Center (UAPC)



**2014 Dissertation Grant Proposal
Budget Form**

Salary/Stipend

\$

Tuition and Fees (if any)

\$

Travel

2015 AIR Forum (Presentation at 2015 Forum required):

\$

Other research related travel:

\$

(Note: Other planned travel should be listed in the "Timelines and Deliverables" section)

Other research expenses

Allowable expenses include: materials, such as software, books, supplies, etc.; consultant services, such as transcription, analysis, external researchers, etc.; and costs for publishing articles in journals. The purchase of computer hardware, printing a stand-alone book, overhead or indirect costs, and living expenses are not allowable. If you have questions about specific expenditures please contact AIR.

\$

TOTAL REQUESTED

\$

NYU Steinhardt

Steinhardt School of Culture, Education, and Human Development

DEPARTMENT OF ADMINISTRATION, LEADERSHIP, AND TECHNOLOGY
Grants Program
Association for Institutional Research

RE: AIR Dissertation Grant

Dear Review Panel:

It is with great enthusiasm that I recommend Drew Allen for an AIR Dissertation Grant for his research on developmental education pathways. As Drew's Dissertation Advisor at NYU, I have worked with Drew closely as he developed his dissertation proposal.

Drew is proposing a multi-faceted look at noncredit developmental course pathways across multiple community colleges to understand these types of educational programs and courses, as well as the students who enroll in developmental education. The project is unique in that it takes a comprehensive look at all developmental education opportunities available to incoming students in these postsecondary institutions, including non-degree and alternative methods of instruction. The idea for the research began with Drew's interest in understanding how colleges and universities serve students through multiple noncredit credit paths.

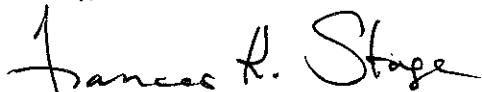
Having a background in institutional research, I believe that this grant opportunity is a perfect fit for Drew's dissertation. Findings from this research would have great benefits to the institutional research community and would inform how data on noncredit instruction at institutions is collected and analyzed.

Drew has years of experience in increasingly responsible institutional research positions at the City University of New York. In his role he has access to and regularly uses a database that includes information on CUNY's eleven senior colleges, seven community colleges. For his dissertation Drew will focus on the community college data. Drew has completed several research courses and is well versed in and has applied ordinary least squares and logistical regression, structural equation modeling, hierarchical modeling and other complex techniques in his own work.

Drew successfully defended his dissertation proposal in May 2014 and has completed all coursework necessary to begin research work in the coming months. He has continually expressed his excitement about diving into such a rigorous yet timely research project, and I believe the AIR funding will contribute greatly to Drew's planned research and his ability to share results with a wide variety of audiences. I am absolutely confident that Drew has the necessary momentum and enthusiasm for this project this is required for a successful completion of the project within the next year.

Drew is enthusiastic about his project, dedicated, and hardworking. He will complete his project in a timely manner. Please feel free to contact me if you need any further information or have questions.

Sincerely,



Francis K. Stage, Professor of Higher Education
Department of Administration, Leadership and Technology
Email: fks1@nyu.edu