2023 Annual Conference & Exposition
Baltimore Convention Center, MD | June 25 - 28, 2023
The Harbor of Engineering Education for 130 Years
ASEE
Paper ID #38765

Career Outcomes of New York City Louis Stokes Alliance for Minority Participation Graduate Student Activities Coordinators 1998 to Present

Dr. Claude Brathwaite, City University of New York, City College

Dr. Claude Brathwaite currently serves as the Director of Student Resources and Services at the City College Grove School of Engineering, utilizing a model of High Impact Practices and Engagement (HIPE). Dr. Brathwaite previously served as the Project Administrator and later Executive Director of the NYC Louis Stokes Alliance. He has also served as the Deputy Director of the City College Black Studies Program, the Director of the City College Black Male Leadership and Mentoring Program and has taught courses in Black Studies and Chemistry at the City College. At the NYC Alliance, he oversaw the day-to-day operation of the NYC Alliance programming across the 18 participating campuses at the City University of New York for 20 years. Dr. Brathwaite began his college education at Hostos Community College, received his BS in Chemistry from the City College of New York and his Ph.D. in Organic Chemistry from the Graduate Center of CUNY. He served as a Chancellors Fellow, and conducted additional postdoctoral training at Weill Cornell in the Division of Molecular Medicine.

CAREER OUTCOMES OF NEW YORK CITY LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION GRADUATE STUDENT ACTIVITIES COORDINATORS 1998 TO PRESENT

Abstract
The NSF supported New York City Louis Stokes Alliance for Minority Participation (NYC LSAMP) at the City University of New York (CUNY) has, since its inception in November 1992, been at the forefront of a concentrated effort to substantially increase the number of underrepresented minority students (African-Americans, Hispanics, Native Americans and Native Pacific Islanders), who pursue and graduate with Baccalaureate Degrees in Science, Technology, Engineering and Mathematics (STEM). Since inception in November 1992 (through 2018), over 18,000 baccalaureate degrees have been awarded to underrepresented minority students in CUNY. The campus-based NYC LSAMP Activity Coordinators (ACs) served a critical role in the NYC LSAMP from inception. Initially focused on the operation of the STEM Learning Centers across the NYC LSAMP in Phase I (1992-1997), the role was institutionalized and changed to include the ACs as components of the STEM Pipeline across the university. Campus coordinators were institutionalized by restricting the role to graduate students primarily in STEM. All formed the university wide Activity Coordinators (AC) Committee led by the Executive Director and this committee met ten times during the reporting period. The day-to-day operation of the NYC LSAMP at the campus level is the main focus of the meetings, as well as scholar/mentor recruitment, NYC LSAMP Calendar/Deadlines, NYC LSAMP collaborations, NYC LSAMP Scholar academic and research progress, internships and graduate opportunities. Campus ACs served as the link to the NYC LSAMP central office, scholars, campus faculty, STEM programs and the campus Steering Committee structure working closely with the senior administrator (usually a dean), The paper will present the career outcomes of the 93 Activity Coordinators who participated with special emphasis to completion of the graduate degree, doctoral degree and career outcomes. Preliminary results show value of total immersion in a Higher Education Administration role led to a significant number completing the graduate degree and moving to careers in Higher Education.

Introduction

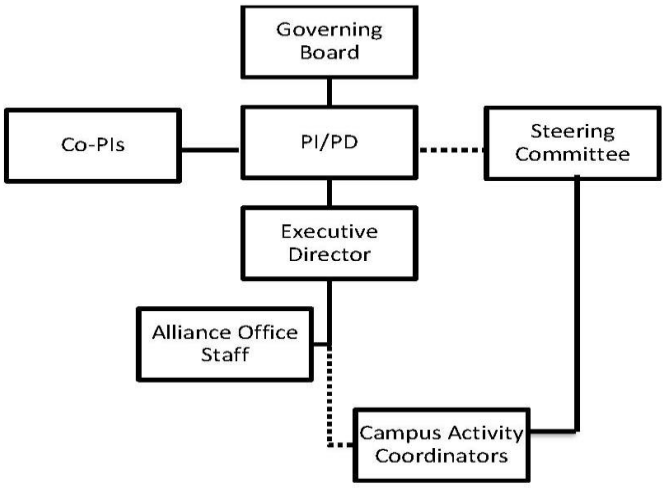
The NSF supported NYC Louis Stokes Alliance (NYC LSAMP) at CUNY has, since its inception in November 1992, been at the forefront of a concentrated effort to substantially increase the number of underrepresented minority students (African-Americans, Hispanics, Native Americans and Native Pacific Islanders), who pursue and graduate with Baccalaureate Degrees in Science, Technology, Engineering and Mathematics (STEM). Since inception in November 1992 (through 2018), over 18,000 baccalaureate degrees have been awarded to underrepresented minority students in CUNY. The campus based NYC LSAMP Activity Coordinators (ACs) served a critical role in the LSAMP from inception [1].

At every participating campus of the NYC LSAMP, the AC is usually the ‘face’ of the program and works very closely with the Steering Committee member and the Campus Steering Committee to ensure the Management/Operation at the campus. The organization and management structure of the NYC LSAMP is shown in Figure 1 and includes:

- A Governing Board, chaired by the Chancellor

- A University-wide Steering Committee, chaired by the Principal Investigator/Project Director
- College-wide Campus Steering Committees, chaired by the respective Steering Committee Members and
- A University-wide Activity Coordinators Committee, chaired by the Project Administrator

Figure 1: NYCLSAMP Program Structure



The NYC LSAMP Steering Committee consists of one dean/provost from each of the seventeen CUNY partner colleges. This committee meets at least four times each semester with the Project Directors and established policy for the LSAMP. LSAMP Steering Committee Members are presidential appointees of Alliance member campuses and supervise/direct the Alliance program activities at their respective campuses. The *Campus Steering Committees* are chaired by the respective AMP Steering Committee Members and meet on the respective campuses to provide executive direction to implement the Campus model.

Table 1: NYC LSAMP History (Phase 1- 5) 1992 to 2018

Phase I 1992-1997
Expansion of the Alliance from 12 to 17 campuses; Established Learning Centers; Restructures Gatekeeper Courses in Math and Chemistry (PLTL model); Initiated NASA Collaborations.
Phase II 1997-2002
Institutionalized the LSAMP Central Office and Campus Activity Coordinators; Expanded the Research Assistantship Program (undergraduate and graduate); Research Initiation Program and Research Articulation Programs; established the Urban University Conference Series; established. NASA-Institute on Climate and Planets; and NASA Teacher Prep Program.
Phase III 2002-2007
Bridge To the Doctorate began; Bridge to Teaching Program; DOE-MOU/Brookhaven National Lab Partnerships.
Phase IV 2007-2012

Integrating Research Strategies (Course restructuring); CUNY Collaborations – College-Science and Technology Entry Programs, and the CUNY Black Male Initiatives; Bridge to the Doctorate Program ended.
Phase V 2012-2018
Undergraduate and a limited number of Graduate Research Assistantships, International Research Programs, Peer Mentoring, Professional Development Institute, Weekly Research Presentations, Global CUNY Conference. Ongoing Program Components - Collaborative Infrastructure, Institutionalized Workshop Instruction in Gatekeeper courses, Research Assistantships

While in Phase I, the Learning Centers formed the hub of the activities for the NYC LSAMP providing tutoring in STEM courses and workshops for the restructured gatekeeper courses, the ACs did not require a STEM background and were full time positions at each campus. Initially focused on the operation of the STEM Learning Centers across the LSAMP in Phase I (1992-1997), the role was institutionalized and changed to include the ACs as components of the STEM Pipeline across the university. With the shift in the emphasis the activities and an institutionalization of the ACs position and the Learning Centers, a new recruitment strategy for the ACs allowed CUNY to tap into the pool of graduates who were STEM majors, NYC LSAMP Research Scholars, and had a CUNY experience as an undergraduate. Phase II brought an emphasis on expanding the undergraduate and graduate research components of the LSAMP and the ACs now constituted another mechanism to broaden participation in the STEM disciplines.

The Campus Activity Coordinators meet monthly with the Project Administrator, to review the Research Assistants performances, campus operations, and plan and review operations to be carried out throughout CUNY. consists of the NYC LSAMP Activity Coordinator from each participating college. This committee meets monthly during the academic year and as needed during the summer months. The Activity Coordinator at the CUNY college had the responsibilities below:

1. Recruit and advise students on NYC LSAMP fellowship, application process, and requirements of the NYC LSAMP program.
2. Communicate and work closely with students' faculty mentors to confirm that students are doing the required research hours.
3. Coordinate NYC LSAMP activities at the college as well as any collaborative projects with other offices on the campus of the college.
4. Facilitate group meetings with Research Assistants during the academic year and summer sessions at the college.
5. Advise students on research internships and scholarships at the college, CUNY, nationally, and internationally.
6. Work closely with the campus Steering Committee member and assigned supervisory staff on STEM student recruitment, retention, and graduation.
7. Attending CUNY-wide Activity Coordinator meetings and serve as a liaison to the NYC LSAMP Central Office at the City College on administrative tasks related to the NYC LSAMP and preparing an annual report.

In the five years of Phase II, from 1997-2012 demonstrated the first indication of the unique role the ACs had in the NYC LSAMP and the potential. Per the job description, ACs became an

integral component of the STEM landscape at the campuses, interacting with other student programs, becoming familiar with faculty research, and cross-campus programming. It was not a requirement of the funding agency to track or report on the ACs. Thirty-four (34) had obtained master's degrees from CUNY. These positions have served as an effective pathway to graduate studies and a bridge to the Ph.D. From 2003-2011, twelve received MS degrees with ten continuing to doctoral studies at University of Arizona (1), Cornell University (1), Yale University (1), the CUNY Graduate Center (4), Howard University (1), and Colorado State University (1). In 2012 (after nearly a decade of operation in CUNY), seven (current and past) were enrolled in doctoral programs at the CUNY Graduate Center. For the 2001-2012 period, twenty-three (23) of the activity coordinators were NYC LSAMP Research Scholars and twenty-three (23) have moved to doctoral programs. From inception, six have completed Ph.D. degrees, and four currently have tenure track faculty appointments at Hampton University, NYC College of Technology, Hostos Community College, and Queensborough Community College.

From the start of Phase II (1997) ACs were required to be a graduate student (master's or doctoral) in STEM preferably, required to take a minimum of 6 graduate credits each semester (a tuition waiver was awarded), perform the duties of the AC (15-20 hours per week/$15K) and Health Insurance was provided. The AC package was an attractive fellowship for CUNY graduates planning to complete a graduate degree. ACs were provided the opportunities for professional development, attendance to professional society conferences, retreats, serve in an Adjunct Professor position (doctoral students) and lead CUNY wide NYC LSAMP programming at their campus. These formed an unofficial Preparing Future Faculty program via the AC position. A review of the duties performed by the ACs also revealed the core activities formed the cornerstone of some master's degree programs in Higher Education Administration programs that were stood up over the last fifteen years.

The selection of the ACs was done in close collaboration with the campuses. It was not a requirement that candidates have an undergraduate degree in STEM or were CUNY graduates at the baccalaureate level. An AC Operations Manual was also available to incoming ACs some left the position after two years on completion of the master's degree. The monthly meetings of the university-wide Activity Coordinators Committee also served to get the incoming ACs up to speed quickly and facilitate knowledge transfer from AC to AC on best practices.

Many ACs were also engaged in research and continued to develop their critical thinking skills, managerial skills, public speaking/communication skills in the position. They served as career counselors, and advisers to the undergraduates and were a near peer source of information and experiences about a career in STEM. As a member of the Activity Coordinators Committee, they were intimately involved in planning project activities to address changes in CUNY and served as touch points to assess the program changes/activities, Higher Education trends (diversity in Higher Ed, FERPA, Student Development, Higher Ed Software, and Global Education) on their campus with insights that come from across CUNY. ACs were also made aware of budgeting issues in CUNY and were battle tested in seeing up front how an organization works and building consensus.

ACs have also served as Graduate Student Advisers (GSAs) for the NYC LSAMP Summer Research Program, designed and implemented a Professional Development Institute program for the NYC LSAMP Scholars and assisted in accreditation, grant proposal writing and the Annual

Campus Reports on NYC LSAMP. With the creation of the International Education thrust, ACs have also served as site coordinators for the International Research programming in China (BUCT), Colombia (Uni Valle) [2, 3].

NYC LSAMP Activity Coordinator Outcomes

In our attempts to track ACs from 1997 to 2018, we have been able to track 91 participants thus far (Table 2 - 4). CUNY is a major beneficiary of the expertise (administrative/research) by the ACs as we see 21% continue to serve at the university. Beyond serving as faculty, service to the university in higher administration roles of student development in programs such as the Men Teach program to prepare more male candidates to serve as K-12 teachers and the CUNY Research Scholarship Program designed to provide research opportunities to community college students at the university.

Table 2: NYC LSAMP Activity Coordinator Outcomes

AC Outcomes	Number of ACs
Master's degrees	39
Completed the Doctoral degree at CUNY	23
Female Doctoral Degree recipients	15
Completed the Doctoral degree at a non-CUNY school	1
Currently doctoral candidate	7
Currently non-CUNY doctoral candidate	1
Activities/Status currently unknown	11
Started the doctoral degree at CUNY and left the program	5
Faculty at CUNY (Full time and Adjunct)	19
Full time faculty at CUNY	4
Direct or Coordinate URM/UG research programs ay CUNY	4
Higher Ed Administrators at CUNY	9

ACs also represent a wide range of disciplines, ethnicities and were equally split between male and female. It should be noted that 65% of the 23 doctoral degree recipients at CUNY were female (Table 2). Several of the ACs were International (F1 visa students), had undergraduate degrees from non-CUNY schools and were not an underrepresented minority. In Table 2 we see the education outcomes of the coordinators obtaining graduate degrees and the fulfillment of the initial goal of making the ACs a part of the STEM pipeline at CUNY.

Doctoral degree attainment in Table 3 illustrates the diversity of the disciplines. No one discipline dominates and this is important as the ACs who are doctoral students have the longest tenure of the ACs and an incredible amount of program knowledge. They serve as informal mentors to the new ACs as well as role models for the undergraduates they interact with. This is of some importance to the students at the community/comprehensive campuses. Additionally, ACs are an integral component of the undergraduate research enterprise at the colleges working collaboratively with other programs such as the College Science and Technology Entry Program

(CSTEP) funded by New York State, NIH, NSF, NASA and USDA and college foundation funded programs open to all students.

Table 3: Doctoral Degrees by Discipline and Educational Origins

AC Disciplines of Graduate Study	Number of ACs
Physical Sciences	5
Biological Science	11
Engineering/Computer Sciences	5
SBE Sciences	3
Community/Comprehensive College	13
Doctoral Degree from CUNY Graduate Center	23

Major Outcomes of the Alliance ACs include:

- 39 completing Master's degrees
- 23 completing the Doctoral degree at CUNY
- 1 at completed the Doctoral degree at Stevens Institute of Technology
- 7 currently doctoral candidates
- 5 starting the doctoral degree at CUNY, and later leaving the program
- 19 serve as faculty at CUNY (full time and Adjunct)
- 4 serve as full time faculty members at CUNY
- 4 Directing or coordinating URM/UG research programs
- 9 serving as Higher Ed Administrators

It should be noted that during the period 1997 to 2018, eight of the seventeen Alliance member campuses offered graduate degrees in STEM. ACs had to be enrolled as a graduate student at City College, Hunter College, College of Staten Island, Lehman College, Queens College, Baruch College, Brooklyn College, John Jay College or the CUNY Graduate Center (CUNY GC) to take advantage of the opportunity. The Community Colleges and Comprehensive Colleges of the Alliance benefit from cross campus exchange of experiences and knowledge. This aids the creation of an NYC LSAMP network across CUNY, no campus more than 30 minutes away from another campus, the articulation/transfer of community college students to the senior colleges and the sharing of best practices. In Table 4 we illustrate the cross-campus exchange inherent in the AC program that was an asset to the Program/CUNY.

Table 4: ACs Collaborative Infrastructure and Knowledge Transfer

	BA	BC	**CCNY**	**CSI**	**HC**	**JJ**	**LC**	**QC**	**GSUC**
Baruch College (BA)	2	1	**4**				1		
Brooklyn College (BC)		**2**							
City College of New York (CCNY)		**1**	**5**						
College of Staten Island (CSI)				**6**					

Hunter College (HC)			**1**		**2**				1
John Jay College (JJ)						**3**			
Lehman College (LC)			**1**				**5**		**1**
Medgar Evers College			**3**				1		
NYC College of Technology	1		**2**				1		2
Queens College (QC)								**6**	
York College			**2**					2	
Hostos CC			**3**				1		
Borough of Manhattan CC		1	**4**						
Bronx CC			**1**				3	1	
Kingsborough CC		1	**2**		1		1		
LaGuardia CC	1		**3**		1				1
Queensborough CC			2						

Lehman College for example had 5 ACs from Lehman College and 2 that were from another CUNY campus, while 8 graduate students based at Lehman College graduate students served as ACs for 6 other CUNY campuses.

City College provided 28 ACs for 12 other CUNY campuses and 5 of the 6 ACs at City College were graduate students at City College. College of Staten Island on the other hand has ACs that were all students at the College of Staten Island. The same is true for John Jay.

Brooklyn College had two ACs that were graduate students at Brooklyn College, while 4 Brooklyn College students served at 4 other CUNY campuses.

CUNY is also the beneficiary of the presence of two NSF funded AGEP programs that emerged a decade after the Alliance programs as well as the NSF CREST programs. Both contribute to the Collaborative Infrastructure at CUNY. Collaborations and partnerships between the programs at the university is crucial for the success of these programs [4-6].

Conclusion

At the end of five phases of NYC LSAMP at CUNY over 25 years, the impact of the program will be felt beyond, 1) Restructuring Gatekeeper Courses in calculus, chemistry, and physics, 2) Science and Mathematics Learning Centers, 3) Undergraduate and Graduate Research Program, 4) Peer and Faculty Mentoring Programs, 5) Partnerships with DOE and NASA. A major legacy is the Collaborative Infrastructure at CUNY that allowed for adaption and adoption of best practices in educational pedagogy and cutting-edge STEM research. Additionally, for the university, the return on the investment for institutionalizing the AC position was also a workforce development program, preparing future faculty and staff with deep institutional knowledge and research expertise that the campuses benefited from, and successfully graduating 23 with doctoral degrees.

Acknowledgements

We acknowledge the support of the faculty and staff of the City University of New York in supporting the NYC LSAMP activities. We acknowledge the dedication and work of the faculty

mentors at CUNY and at the non-CUNY partner sites, as well as the Project Directors, Steering Committee and Activity Coordinators. We acknowledge the funding support of the NSF to the City University of New York and the NYC LSAMP.

References

[1] New York City Louis Stokes Alliance Impact Report 1992-2015 (2012 and 2015)

[2] Vernon, Julieanne., and Brathwaite, Claude., "Authentic International Research Experience: Program Model in Cartagena, Colombia" in the Proceedings of the 2016 ASEE Annual Conference, Paper ID # 15025, New Orleans, June, 2016.

[3] Vernon, Julieanne., and Brathwaite, Claude., "GlobalCUNY: The NYC Louis Stokes Alliance Model for International Re- search Experiences for Minority Students" in the Proceedings of the 2019 ASEE Annual Conference, Paper ID 26211, Tampa, June, 2019.

[4] Boyd-Williams, A,. Bigsby, S., Gloster, C., Sowells-Boone, E., Melton, M., Preparing Future Minority Faculty for the Professoriate (Experience)" in the Proceedings of the 2019 ASEE Annual Conference, Paper ID 27241, Tampa, June, 2019.

[5] McCoy, T., Haynes, C., Higgs, F., Hicks, I., Clark, C., Arnet, N., Mendez, S., Conley, V., Stuhlsatz, M., "The AGEP Engineering Alliance: A Model to Advance Historically URM Postdoctoral Scholars and Early-Career Faculty in Engineering" in the Proceedings of the 2021 ASEE Annual Conference, Paper ID 32994, Virtual Conference 2021.

[6] Mehrubeoglu , M., Kelly, K., Walton, S, Richardson, R. Butler-Purry, K., King, S., "Academic Job Preparation for Underrepresented STEM Dissertators, Postdoctoral Researchers, and Early Career Faculty: Contributions to an Institutional Partnership Model for Promoting Diversification of the Professoriate" in the Proceedings of the 2022 ASEE Annual Conference, Paper ID 37937, Minneapolis, June, 2022.