

2019 Annual Report

Kentucky-West Virginia
Louis Stokes Alliance for
Minority Participation
(KY-WV LSAMP)



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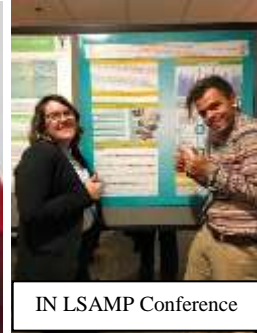




Annual Research Symposium



Dr. Tyrone Hayes –
Symposium Keynote



IN LSAMP Conference



LSU France iREU Workshop



2018 Alliance Retreat



NCUR 2019



KY Posters @ the Capitol



Women of Color STEM Conference



Black Engineer of the Year Award Conference

Kentucky-West Virginia Louis Stokes Alliance for Minority Participation

2019 Annual Report

Kentucky – West Virginia
Louis Stokes Alliance for Minority Participation
In Science, Technology, Engineering, and Mathematics
(KY-WV LSAMP STEM)

Submitted by

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TABLE OF CONTENTS

Section	Page
Project Personnel	1
Introduction.....	2
Program Goals and Measurable Objectives	3
Projected Outcome One: Increase Degrees	4
Projected Outcome Two: Increase Enrollment	5
Projected Outcome Three: Increase Graduate School Attendance	7
Projected Outcome Four: Increase Academic Year Research.....	7
Projected Outcome Five: Increase Summer Research	7
Projected Outcome Six: Increase Presentations	8
Projected Outcome Seven: International Experiences	9
Projected Outcome Eight: Increase Average GPA.....	10
Projected Outcome Nine: Increase Number of Participants.....	10
Proposed Activities	11
Scholar Activities	11
Annual Research Symposium	11
K-12 Mentoring and Connections.....	12
Bridge Programs for Academic Preparation	12
Academic Assistance	13
Hispanic Student Recruitment and Support.....	13
Professional Development and Graduate School Preparation	13
Transition and Support for Graduate Study	13
Internet and Social Media	14
Program Activities.....	14
External Evaluation Team.....	14
Institute Advisory Board.....	14
External Advisory Board	14
Links to Affinity Programs	15
Links with Other LSAMP Alliances and Related Organizations	19
Operations Manual.....	19
Participant Tracking and Program Reporting	20
Research Study: The Impact... ..	20
Current Year Progress	20
Overall Progress and Dissemination	20
Goals of the Coming Year.....	20
Institutional Support and Sustainability Plan.....	20

Alliance Organization and Structure.....	21
Program Staff Roles	22
Project Director	22
Financial Manager	22
Co-PI's and Campus Coordinators	22
Alliance Meetings	22
Alliance Retreat	22
Project Evaluation / External Review	24
Broader Impacts, Dissemination, and Outreach	25
External Partnerships and Funding.....	25
Dissemination.....	27
Proposal for Continued Funding	27
Faculty and Staff Highlights and Professional Development.....	27
Articles	27
Other Highlights	28
Scholar and Alumni Highlights	30
Conferences and Symposia	30
Individual Accomplishments	31
Appendixes	39
Appendix A – International Research Travel Checklist.....	40
Appendix B – KY-WV LSAMP Annual Research Symposium	45
Appendix C – KY-WV LSAMP 2018 Transfer Report.....	49
Appendix D – Campus Connections and Honors.....	59
Appendix E – KY-WV LSAMP Program Evaluation	88
Appendix F – NSF CIP Codes	129
Appendix G – KY-WV LSAMP Alliance Retreat	133
Appendix H – Continued Funding News Releases	135
Appendix I – Faculty and Staff Highlights and Professional Development.....	142
Appendix J – Conferences and Symposia.....	144
Appendix K – Individual Scholar and Alumni Highlights.....	150

LIST OF TABLES

Table	Page
1. Number of Presentations Made by KY-WV LSAMP Scholars by Type and Institution	8
2. Comparison of Presentations by Academic Year	8
3. Number of Symposium Attendees	12
4. Members of the External Advisory Board	15
5. KY-WV LSAMP Key Personnel	21
6. Summary of Retreat Goals and Actual Accomplishments	24

LIST OF FIGURES

Figure	Page
1. Graphic Representation of the KY-WV LSAMP Ripple Effect.....	3
2. URM STEM BS Degrees Granted at KY-WV LSAMP Institutions	4
3. URM STEM BS Degrees Granted by Ethnicity	5
4. URM STEM Enrollments at KY-WV LSAMP Institutions	6
5. URM STEM Enrollments by Ethnicity.....	6
6. Number of KY-WV LSAMP Participants by Year	10

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INTRODUCTION

The Kentucky-West Virginia Louis Stokes Alliance for Minority Participation program (KY-WV LSAMP) is a ten-institution alliance led by the University of Kentucky. Alliance members include: Bluegrass Community and Technical College (BCTC), Centre College, Jefferson Community and Technical College (JCTC), Kentucky State University (KSU), Marshall University, University of Kentucky (UK), University of Louisville (UofL), West Virginia State University (WVSU), West Virginia University (WVU), and Western Kentucky University (WKU). Alliance goals are to create, enhance, and expand programs designed to broaden participation and increase the quality and quantity of students from underrepresented populations who receive degrees in science, technology, engineering, and mathematics (STEM) disciplines. The alliance met projected outcomes for the second funding period (2013-2018) and projects the following key outcomes for the third funding period (2018-2023): increase URM STEM BS degrees at alliance institutions for a total of 1,900 BS STEM degrees over five years. This will be accomplished by achieving increases in total alliance enrollments to 2,800 average annually with similar increases in retention, transfer rate, and graduation rates. These increases will contribute to increases in application to and attendance in STEM graduate degree programs.

Each institution has developed programs consistent with LSAMP goals. Institutions have also, with the help of LSAMP, built sustainable partnerships within campus programs as well as with external (outreach) programs and organizations. Program activities and partnership resources focus on outreach and recruiting, peer mentoring, undergraduate research experiences, research presentation opportunities, summer bridge and transitional programs for entering students, curriculum reforms in “gatekeeper” courses, international experiences, and workshops on professional development and STEM career options.

The **intellectual merit** of the program is the increased knowledge base related to teaching and learning practices for underrepresented students in STEM disciplines, practices for improved recruiting and retention, and the development of improved curriculum materials and practices for STEM disciplines. As Scholars pursue their degrees and participate in program activities, they develop the skills needed to succeed not only in their degree programs, but also in the professional community of their chosen field. They learn the skills necessary to be the leaders and experts. Scholars give and receive mentoring on multiple levels from middle school and high school students to world-renowned researchers. In addition to increasing their knowledge and research skills, this multi-level mentoring also helps the Scholars to build excellent professional networks for current and future research, presentation, educational and professional opportunities. Often, the connections made through the LSAMP program guide Scholars to the next opportunity.

The **broader impact** is the increase in URM STEM BS degree production. This will broaden math, science, and engineering participation of underrepresented students from the two Established Program to Stimulate Competitive Research (EPSCoR) states and surrounding regions. Because of the skills developed and the connections made through LSAMP, Scholars are uniquely qualified for graduate programs and industry. Once they have received their BS degrees, many participants continue into graduate programs. This will increase the diversification of the STEM workforce and broaden the participation of underrepresented students who seek and earn graduate degrees.

The increase in skilled workforce has the potential to significantly improve the competitive position of the two states and eventually to improve faculty diversity in STEM fields. In turn, participants will play key roles in educating their respective communities about STEM fields and encouraging younger students to pursue STEM disciplines. The multi-level mentoring gives Scholars a venue for serving as role models for future generations.

September 2018, KY-WV LSAMP received funding to continue the program. There have been many successes as well as some continued challenges and trials in 2018-19. The most significant differences for the third cycle of funding include adding Jefferson Community and Technical College to the alliance, and KY-WV LSAMP

now qualifies to submit proposals for Bridge to the Doctorate funding. Progress continues to be made to increase the number and credentials of students from underrepresented populations who receive degrees in science, technology, engineering, and mathematics disciplines.

PROGRAM GOALS AND MEASURABLE OBJECTIVES

The Kentucky-West Virginia Louis Stokes Alliance for Minority Participation consists of ten colleges and universities. Of these, there are comprehensive research universities, two historically black college and universities (HBCU), regional universities, and two 2-year colleges. Using knowledge learned from past successes paired with lessons learned from past shortcomings, the alliance will continue to increase the number of students from underrepresented populations who receive degrees in science, technology, engineering, and mathematics disciplines.

In order to meet program goals of increasing URM STEM enrollments and degrees, KY-WV LSAMP must strive to increase the number of students who participate in program activities and receive program benefits. The increase in program participants (Scholars) should result in a ripple effect that increases the number of students earning STEM degrees not only at the partner institutions, but throughout the entire region including all of West Virginia and Kentucky. This is demonstrated in Figure 1. **Directly Funded Scholars** receive direct LSAMP financial support (such as stipends, tuition aid, textbooks, conference travel, etc.) *and* participate in program activities. **Unfunded Scholars** do not receive direct LSAMP financial support but are documented as being accepted into the program *and* participating in program activities. **Non-Scholar Participants** have not been formally accepted into the program but participate in one or more program activities (such as attending Scholar Meetings or research symposia). **Influenced Students** have no direct connection or communication with program staff or participation in program activities but may be influenced and/or mentored by friends and/or family who do. The ending result is an increase in URM, STEM, and undergraduate research programs and participants throughout the alliance and the region.

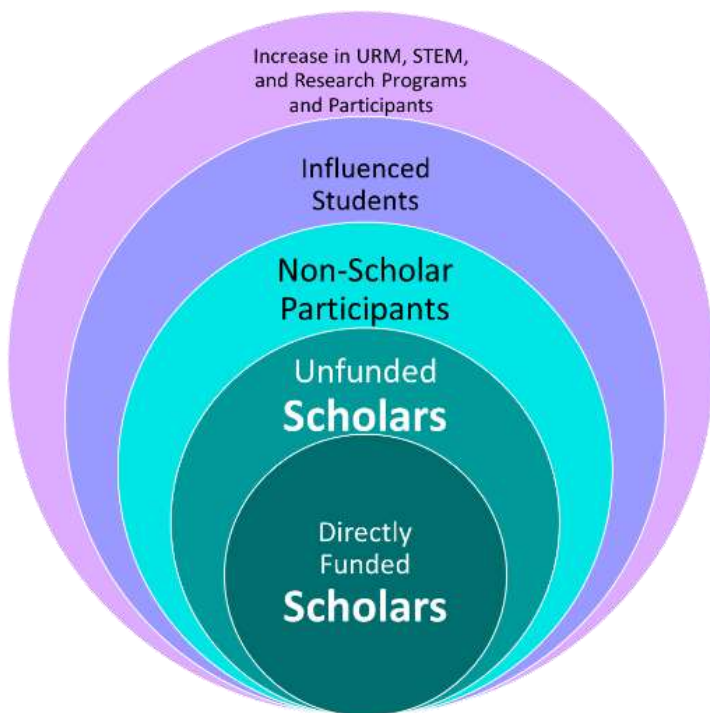


Figure 1: Graphic Representation of the KY-WV LSAMP Ripple Effect

Projected Outcome One

To increase URM STEM BS degrees to an average of 380 per year for a total of at least 1,900 degrees over five years.

In 2017-18, 375 URM STEM BS degrees were granted by KY-WV LSAMP institutions. This is a 4% increase from the previous year and a 140% increase from the baseline year (173 degrees in 2006-07). The Alliance granted 1552 URM STEM bachelor's degrees during the second cycle funding period. This meets that proposed goal of 1000 degrees and is progress for the current funding period. Figure 2 shows the number of degrees from 2006-07 to 2017-18. Overall, there have been 2,799 URM STEM bachelor's degrees granted at KY-WV LSAMP institutions since 2006. In addition, when exploring degrees by ethnicity, it is clear there has been a significant increase in degrees granted to African Americans, Hispanics, and students of more than one race. Figure 3 shows the breakdown of URM STEM bachelor's degrees granted by KY-WV LSAMP institutions by ethnicity.

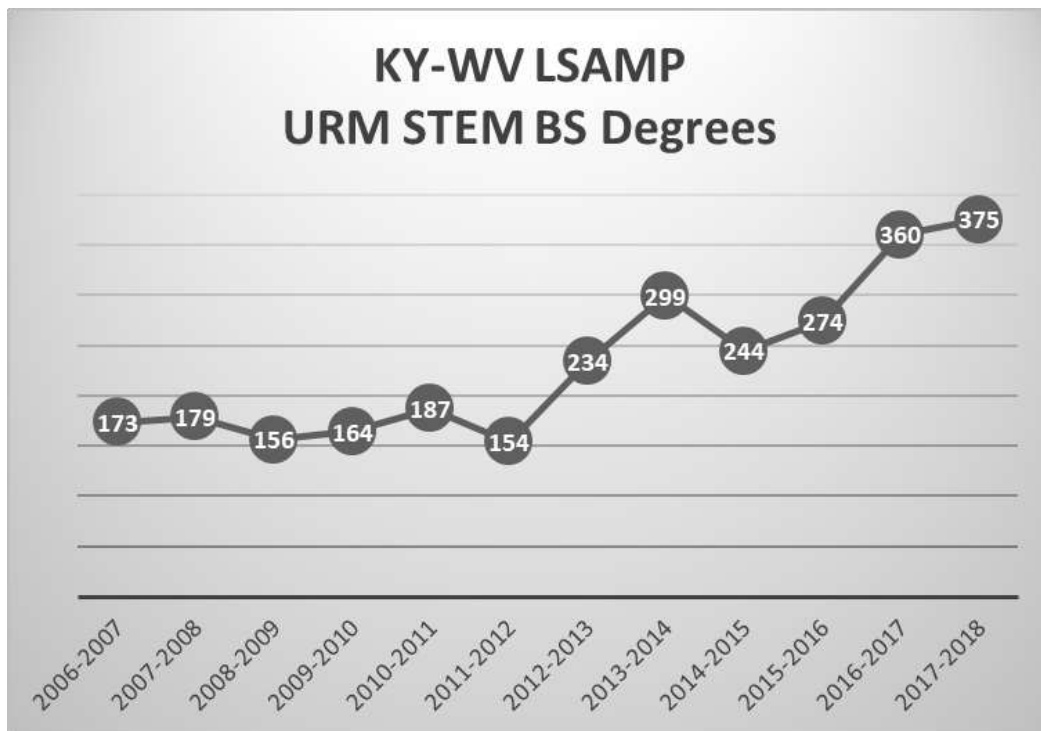


Figure 2: URM STEM BS Degrees Granted at KY-WV LSAMP Institutions

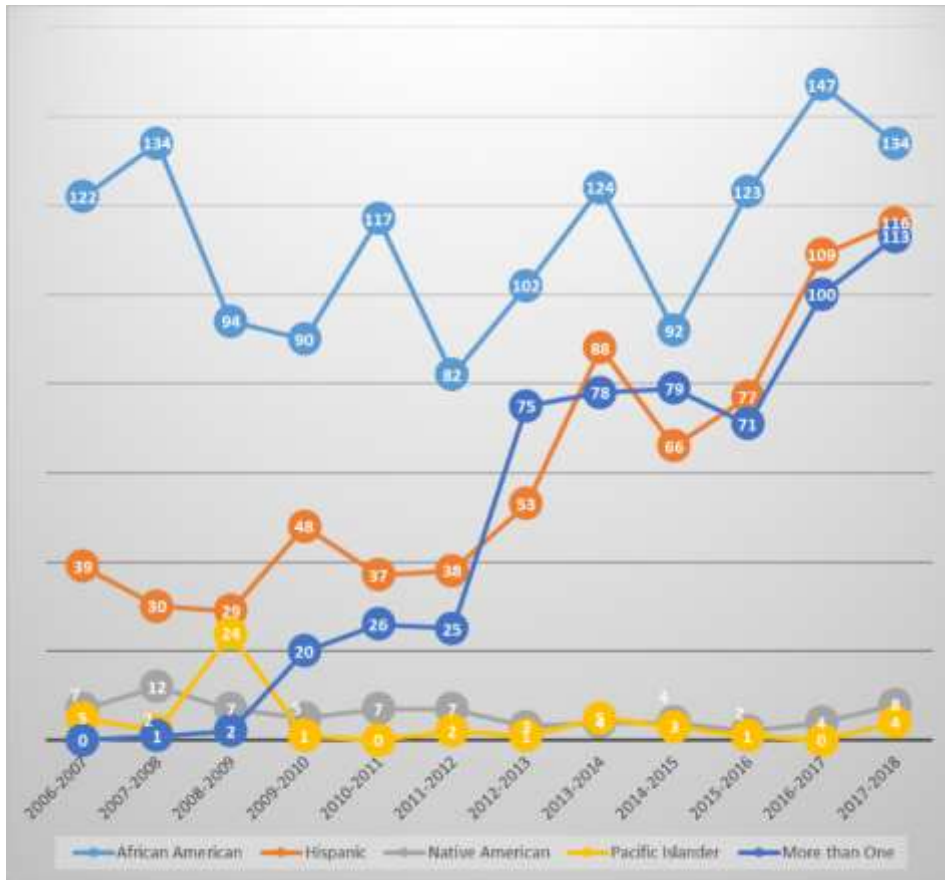


Figure 3: URM STEM BS Degrees Granted by Ethnicity

Projected Outcome Two

To increase URM STEM enrollments to an average of 2,800 per year.

Traditionally, underrepresented (URM) populations targeted by the national LSAMP program (African American, Hispanic, Native American, and Pacific Islanders) represent an almost unique recruiting challenge for the KY-WV LSAMP institutions because of their unusually low percentages of the populations of the two states. Even though the URM population accounted for over 26% of the US population, they comprise only 16% and 6%* of the population in Kentucky and West Virginia, respectively. This continues to be a challenge to recruiting students.

* Source of URM population data: Kaiser Family Foundation estimates based on the Census Bureau’s March 2015 Current Population Survey (CPS: Annual Social and Economic Supplement).

Even with this challenge, the KY-WV LSAMP has been successful in increasing enrollments. In 2017-18, there were 2,743 URM students enrolled in STEM bachelor degree programs at KY-WV LSAMP institutions. This is a 4% increase from the previous year and a 32% increase from 2006/07. This brings the second funding period average enrollment to 2,394 per year. This more than meets the goal of 2,000 per year average for the second funding period. We expect to meet the third funding cycle goal of 2,800 per year. Figure 4 shows the number of URM STEM enrollments at KY-WV LSAMP institutions since 2006. Again, there has been a significant increase in the number of African Americans, Hispanics, and students of more than one race who enrolled in STEM programs at KY-WV LSAMP institutions. Figure 5 shows the breakdown of URM STEM enrollments by ethnicity.

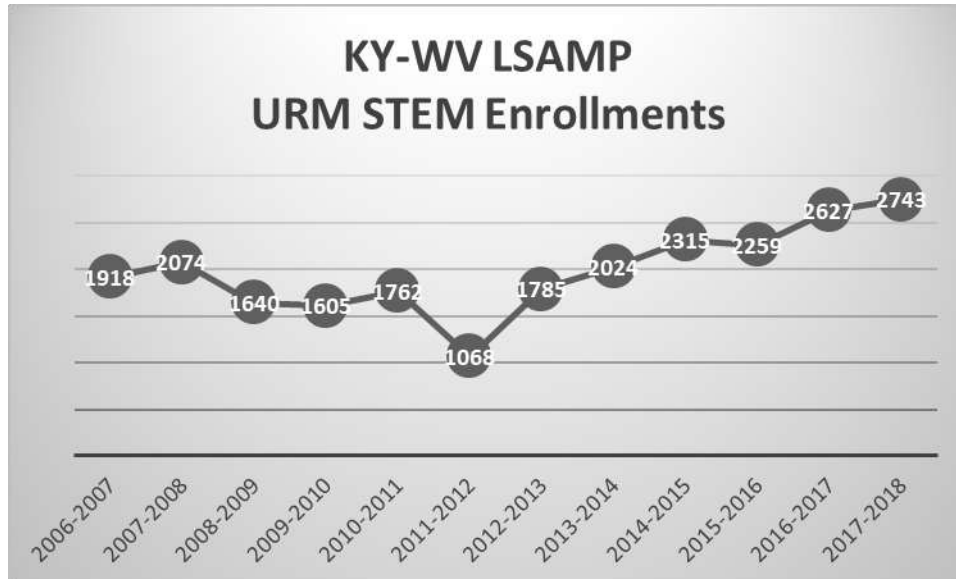


Figure 4: URM STEM Enrollments at KY-WV LSAMP Institutions

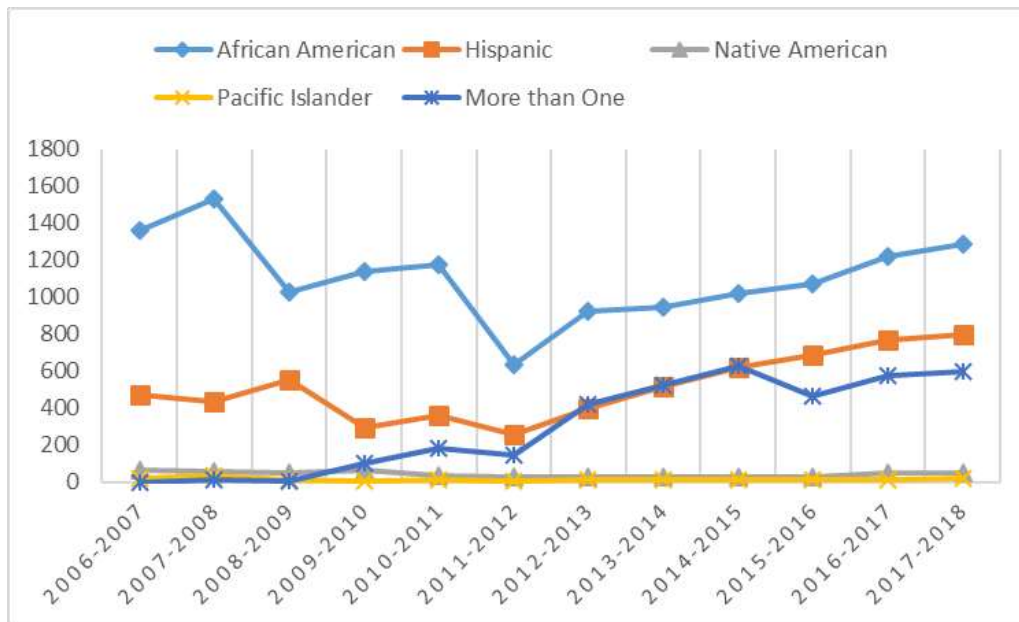


Figure 5: URM STEM Enrollments by Ethnicity

Projected Outcome Three

To have at least 50% of graduating LSAMP Scholars be accepted to graduate programs.

In 2018-19, there were 42 KY-WV LSAMP participants who graduated with STEM bachelor degrees. Of those, 24 (57%) are pursuing graduate and/or professional degrees. This meets the goal of having at least 50% of graduating participants pursuing advanced degrees.

Projected Outcome Four

To increase the percentage of LSAMP Scholars who conduct academic-year research.

Studies have shown that students who conduct research receive a significant confidence boost, a greater sense of accomplishment, a closer relationship with the faculty mentor, and are more likely to persist through to graduation. The act of research allows students to apply lessons learned in the classroom, thus increasing academic success. KY-WV LSAMP Scholars are highly involved in research projects. Many Scholars participated in research during the academic year, and some conducted research during a summer internship. Some Scholars may be provided an LSAMP stipend for conducting research with a faculty mentor. Other Scholars are paid as undergraduate research assistants by their mentor and/or department. Still others participate in co-op or other university or industry research opportunities. Centre, Marshall, UK, UofL, WVSU, WVU, and WKU have opportunities for research on their campuses. KSU has relationships with other universities and organizations to provide KY-WV LSAMP Scholars with research experiences. BCTC and JCTC are building a network of opportunities at nearby campuses such as UK and UofL and preparing Scholars for summer experiences. In 2018-19, there were 281 participants at the ten institutions. Of those, 49 (17%) conducted research during the academic year. This will serve as the baseline for the funding period.

Projected Outcome Five

To increase the percentage of LSAMP Scholars who participate in full-summer internship experiences

KY-WV LSAMP Scholars are provided opportunities to conduct research during the summer. Some alliance campuses have allocated LSAMP funds to support Scholars to conduct research on their home campus during the summer. Furthermore, KY-WV LSAMP Scholars are informed of and assisted with applying for summer experiences such as Research Experiences for Undergraduates (REU) programs, other college/university programs, national lab opportunities, and industry internships.

In summer 2018, 70 (25%) Scholars participated in full summer internships. This will serve as the baseline for the funding period. Examples of 2018 experiences in which KY-WV LSAMP Scholars participated in summer research included the France and Costa Rica REU programs and industry. In summer 2019, preliminary data has at least 63 Scholars who will participate in full summer internships. Summer 2019 internships include the first KY-WV LSAMP Scholar who will participate in the new Knowledge Independence through Externship (KIIE) initiative. Nicholas Graves, UK, will conduct research under the mentorship of Dr. Trisha Andrews at the University of Massachusetts, Amherst.

Projected Outcome Six

*To increase the number of documented conference presentations
by LSAMP Scholars to an average of 100 per year.*

Giving presentations, especially research presentations, is a skill that can and should be developed for today's STEM professionals. For that reason, KY-WV LSAMP encourages (and in some cases, requires) and supports Scholar presentations at local, state, and national conferences and symposia. In 2018-19, KY-WV LSAMP made 114 presentations – meeting the goal of 100 per year. These conferences included, but were not limited to: the Louisiana State University (LSU) international Research Experience for Undergraduates (iREU) Workshop in France, the Kentucky Academy of Sciences Annual Meeting, West Virginia Research Day at the Capitol, the KY-WV LSAMP Annual Research Symposium, the National Conference on Undergraduate Research, and the American Chemical Society National Meeting. Table 1 shows the breakdown of presentations by institution and type. Table 2 shows a comparison of presentations by academic year. It is clear to see the number of presentations is rising. In addition, though there are not presentation opportunities at the Women of Color STEM Conference nor the Black Engineer of the Year Award (BEYA) Conference, they are excellent professional development opportunities. The number of Scholars attending these events continues to rise with 57 attending in 2018-19. Furthermore, two UK Scholars attended the Alltech One19 Ideas Conference. This was an international event held in Lexington, KY, May 19-21, 2019.

Table 1: Number of Presentations Made by KY-WV LSAMP Scholars by Type and Institution

	Local	State/Regional	National	International	TOTAL
BCTC	0	0	0	0	0
Centre	11	3	0	0	14
KSU	4	5	2	0	11
Marshall	1	6	0	0	7
UK	3	13	6	2	24
UofL	0	5	0	0	5
WVSU	5	10	0	1	16
WVU	11	12	4	0	27
WKU	0	7	3	0	10
TOTAL	35	61	15	3	114

Table 2: Comparison of Presentations by Academic Year

BY TYPE	2015-16	2016-17	2017-18	2018-19	TOTAL
Local	8	11	20	35	74
State/Regional	32	26	29	61	148
National	11	10	20	15	56
International	0	2	6	3	11
TOTAL Presentations	51	49	75	114	289
Non-Present Nat'l	0	13	31	59	103

Projected Outcome Seven

To have at least five LSAMP Scholars per year who participate in international research experiences.

In 2017, **Sarah Hodges**, UK graduate, conducted research in Grenoble, France as a participant of the Louisiana international Research Experience for Undergraduates (iREU) program. Through her experience in planning her travel, she developed a checklist for international research travel. This document will help countless future Scholars in planning for and taking advantage of international experiences. Her checklist has already been utilized and updated several times. A copy of the checklist can be found in Appendix A.

In summer 2018, four Scholars participated in international research experiences such as REU programs. Those included:

- Mohanad Abdallah, UK, Germany, Research Internship in Science and Engineering from the German Academic Exchange Service
- Edwina Burnett, WVSU, Costa Rica, Organization for Tropical Studies REU
- Asare Nkansah, UK, France, Louisiana State University (LSU) iREU
- Karen Udoh, UofL, Greece, Fulbright

In addition, Sajana Dumre (UK) did a study abroad in Spain. Ky'Achia Atkins (WVSU), Lloyd Bartley (UofL), and Taylor Fisher (UofL) presented research in France at the LSU iREU Translational Chemistry Workshop in Toulouse, France, June 2018.

In 2018-19, two KY-WV LSAMP Scholars participated in academic year study abroad experiences. During the course of those experiences, they also conducted research in the host country. Je'Coya Moore (Centre) traveled to China, and Scott Lopez (WVU) traveled to Japan thanks to a Boren Scholarship.

In summer 2019, five Scholars will participate in international research experiences such as REU programs. Those include:

- Lloyd Bartley, UofL, France, LSU iREU
- Charles "Carlos" Beasley, UK, France, UK Broadening Participation in Engineering (BPE) Program
- Noela Botaka, UofL, Belgium, Fulbright Research Award
- Victor Holness, UK, France, UK BPE Program
- Darian Parker, UK, France, UK BPE Program

The Scholars conducting research in France through the UK BPE Program are as a direct result of collaborations a KY-WV LSAMP research mentor (Dr. Eduardo Santillan-Jimenez) built because of his LSAMP mentee's participation in the France REU in Summer 2017. That year, in addition to the support provided to Sarah Hodges, the iREU selected Dr. Santillan for a \$5,000 faculty award to build collaborations and provide support for conference travel.

Projected Outcome Eight

To increase the average GPA of LSAMP Scholars from 3.1 to 3.3 by year five (2022-23).

The average GPA of KY-WV LSAMP participants for 2017-18 was 2.51. Since this represents a drop from the previous year, there is even more need for improvement in order to meet this goal. Ideas for working on this outcome will be discussed at the 2019 Alliance Retreat.

Projected Outcome Nine

To increase the number of LSAMP Scholars by at least 5% each year for a minimum of 319 participants in year five (2022-23).

According to preliminary data, KY-WV LSAMP supported 281 Scholars at ten institutions during 2018-19. This is a slight increase from last year, however there is a need for improvement in program recruitment. Figure 6 shows the number of KY-WV LSAMP participants each year.

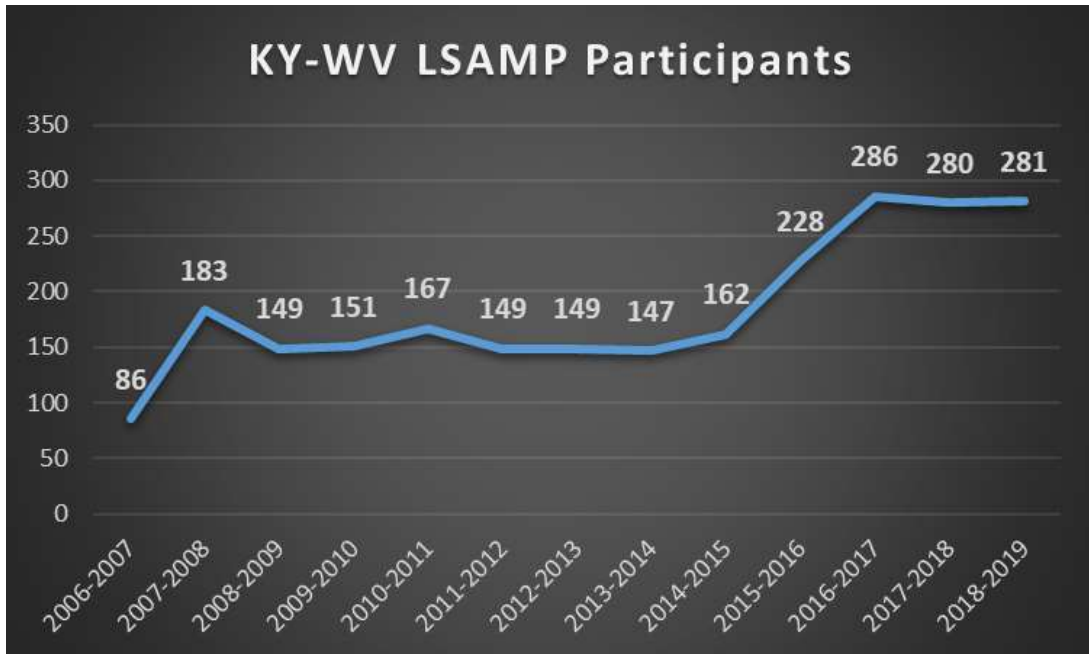


Figure 6: Number of KY-WV LSAMP Participants by Year

PROPOSED ACTIVITIES

Scholar Activities

KY-WV LSAMP Annual Research Symposium

The KY-WV LSAMP 11th Annual Research Symposium was held March 1-2, 2019. Activities held on Friday, March 1 were for LSAMP participants only. Sessions for the Scholars focused on international research. Scholars who participated in international summer experiences presented on a panel. Sarah Hodges, who created an international travel checklist, talked about how to prepare for international research. Friday sessions were attended by 129 people including 93 undergraduates and 14 faculty. Saturday, March 2 was open to the general public and was attended by 179 people including 94 undergraduates, 18 faculty, and 43 high school students. Sessions included recruitment tables as well as 34 poster presentations and four oral presentations made by Scholars. Tyrone Hayes, Ph.D. (Professor, Integrative Biology, UC Berkeley) presented the keynote address. Dr. Hayes talked about his research experiences including those as an undergraduate and graduate student.

Scholars who presented were:

Oral Presentations

Arrah	Calvin	WKU	Computer Science
Gustavo	Camargo Silva	WKU	Biology
Sajana	Dumre	UK	Biology
Trivan	Menezes	WKU	Computer Science

Poster Presentations

Ky'Achia	Atkins	WVSU	Biology
Lloyd	Bartley	UofL	Biochemistry
Samantha	Belcher	WVSU	Biology
Koji	Bernaby	WKU	Biochemistry
Cheyenne	Boone	KSU	Chemistry
Alexandra	Collins	WVU	Electrical Engineering
Shannon	Derkson	UofL	Biology
Tat'Ana	Dillard-Sims	WVSU	Biology
Raquel	Dominguez	WKU	Meteorology
Imani	Houston	UK	Biology
Annalissa	Huckaby	WVU	Microbiology
Cierra	Isom	UK	Biology
Dylan	Johnson	WVU	Computer Engineering
Osei	Jordan	UK	P&S Sciences
Muriithi-David	Kem	WVU	Mech. & Aerospace Eng.
K'Lynn	King	UK	Chemical Engineering
Savannah	Lewis	UK	Electrical Engineering
Zedan	Martin	WVSU	Biology
Caitlin	Mickles	WVU	Immunology
Lukas	Negron	WKU	Math
Asare	Nkansah	UK	Computation Chem
Maria	Ovalle	Marshall	Exercise Science
Oriana	Ovide	WVU	F&I Science/Chemistry

Darian	Parker	UK	Mech. Engineering
Julia	Parker	UK	Biosystems Engineering
Ja'Keshia	Peterson	WVSU	Biology
Ishita	Sharma	Marshall	Biology
America	Silva	UofL	Biochemistry
Mwenda	Singai	WKU	Bioengineering
Ray	Timmons	Marshall	Exercise Science
Gretel	Tolozza Alvarez	Marshall	Health Science
Ajia	Toth	Marshall	Computer IT
Nicole	Utano	WVU	Microbiology
Mya	Vannoy	WVU	Immunology

Table 3 shows a comparison of symposium attendees. The number of Saturday attendees in 2019 was a 60% increase from 2018. The cover of the program, event agenda, and photos can be found in Appendix B. The program book (in its entirety) can be found on the KY-WV LSAMP website on the Alliance Activities page.

Table 3: Number of Symposium Attendees

	Faculty	Staff	Graduate Students	Undergrad Students	K-12 Students	Other	TOTAL
2016 Saturday	15	11	1	27	0	5	59
2017 Friday	8	9	4	43	0	2	66
2017 Saturday	17	14	8	50	0	4	93
2018 Friday	10	9	3	74	0	1	97
2018 Saturday	13	9	2	84	2	2	112
2019 Friday	14	14	5	93	1	2	129
2019 Saturday	18	17	3	94	43	4	179

K-12 mentoring and connections.

Many alliance campuses participate in recruitment events. Several BCTC activities (such as Super Someday) focus on high school recruitment. Several campuses have enhanced LSAMP activities with connections to local K-12 institutions and organizations. Some examples include:

- Since 2017, BCTC’s Super Someday has specifically targeted STEM majors/careers.
- UK has increased its connections with the NerdSquad in Lexington. LSAMP Scholars have served as volunteers for this organization, and the founder, Cagney “CC” Coomer has mentored LSAMP Scholars.
- November 9, 2018, UK Scholars presented on a panel to URM students from STEAM Academy.
- November 30, 2018, URM STEAM Academy students participated in a speed mentoring session at the University of Kentucky at which four LSAMP Scholars served as mentors.

Bridge programs for academic preparation.

Many students begin their academic career at a community college for a number of reasons including financial considerations. Community colleges throughout the country play a critical role for students who intend to, eventually, complete a bachelor’s degree, particularly in STEM fields. The KY-WV LSAMP alliance fully recognizes the importance of working with community colleges in creating a STEM pipeline for partnering colleges and universities. KY-WV LSAMP will work closely with both partner community colleges as well as others in the region to enhance the STEM pipeline.

The transfer activities for KY-WV LSAMP include three aspects.

1) Direct LSAMP programming. Bluegrass Community and Technical College (BCTC) has been a partner institution since the inception of KY-WV LSAMP. Now, Jefferson Community and Technical College (JCTC) has also become a partner in the alliance. The addition of JCTC is important because of their large URM student population.

2) Alliance institution programming. Though not directly funded by LSAMP, BCTC and JCTC have other activities that contribute to students' successful transfer to 4-year institutions including KY-WV LSAMP institutions. In addition, there are transfer programs at other alliance institutions.

3) Articulation agreements. KY-WV LSAMP partners (such as WVU and WKU) also have articulation agreements with other 2-year and 4-year institutions. It is important to note the relationships and connections of partner institutions with non-partner institutions in the region for expanded reach of students transitioning successfully.

As a requirement of the new grant, KY-WV LSAMP submitted a Transfer Report to NSF within 30 days of receiving the grant award. A copy of the full report is included in Appendix C.

Academic assistance.

All campuses in the alliance offer academic assistance. Some offer connections to campus-wide services and programs such as tutoring centers, Student Support Services (and similar) programs, supplemental instruction programs, and use of high-impact practices such as community-based learning. Some offer LSAMP and/or campus-funded tutoring support and academic coaching such as Marshall's therapeutic intensive advising model – where each Scholar works with an assigned progressive advisor to create a written academic and advising plan. KSU and WVU have LSAMP activities geared to academic content and instruction. The **Peer Led Team Learning (PLTL)** program at KSU is a supplemental instruction activity in which LSAMP participants spend time outside of class working in cooperative groups on class concepts. These sessions focus on subjects such as chemistry, calculus, and physics. The **Emerging Scholars Program (ESP)** at WVU involves calculus classes that are taught in cooperative groups rather than the traditional lecture-style. Both PLTL and ESP are grounded in research by Uri Treisman. An article on the success of ESP has been published in *Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS)*. This article was selected by WVU marketing who created a comic strip of the article. That comic strip can be found in Appendix D.

Hispanic student recruiting and support.

Hispanic students are a rapidly growing demographic in the region. Some alliance campuses have specific programs/initiatives for the Hispanic/Latino communities. For example: BCTC partners with KSU on exemplary award-winning programs such as the Latino/Multicultural Student College Fair; UofL has a designated Hispanic recruiter; and UK has connections with research mentors, Dr. Eduardo Santillan-Jimenez and Dr. Isabel Escobar, who target Hispanic/Latino recruitment for the Engineering Broadening Participation program (NSF-funded) and the Society of Hispanic Professional Engineers, respectively.

Professional development and graduate school preparation.

Attainment of STEM degrees beyond the bachelor's degree is a goal of KY-WV LSAMP. To this point, KY-WV LSAMP provides professional development and support for preparing Scholars to successfully apply for and complete graduate programs. These sessions also aid in community building among the participants and prepare them for becoming leaders as they pursue careers in STEM.

Transition and support for graduate study.

KY-WV LSAMP facilitates participants in applying for graduate fellowships such as the NSF Graduate Research Fellowship Program (GRFP), Sloan Foundation, Ford Foundation, GEM, and Bridge to the Doctorate (BD). KY-WV LSAMP campuses have scholarships and fellowships for graduate study as well. For example, the Marshall University Chancellor Scholars Program offers full tuition and living expenses for select minority students

pursuing a Ph.D. in biomedical sciences. KY-WV LSAMP now qualifies to apply for LSAMP BD funding. Proposals are anticipated to cycle through UK, WVU, and UofL. The first was submitted November 2, 2018. If awarded funding for this initiative, the University of Kentucky will support 12 graduate students who are all former LSAMP scholars for two years of graduate study beginning Fall 2019.

Internet and Social Media.

KY-WV LSAMP strives to increase communications and dissemination of program accomplishments and best practices. The program website has been extensively updated and continues to evolve to include more information and resources for Scholars, program staff, mentors and faculty across the nation. Features include, but are not limited to: information on each of the partner campuses, important resource links for Scholars and other students, and copies of the Annual Reports and symposium program books.

<http://www.uky.edu/KYWV-LSAMP/index.html>

The Facebook group continues to grow. Though it has not, yet, gained adequate participation, it will aid in conversations regarding accomplishments and opportunities. Information and questions may be posted by anyone who is a member of the Facebook group. Scholars are encouraged to post questions to each other and to other members of the group including faculty mentors and graduate students. The possibilities are endless.

<https://www.facebook.com/groups/750676201700146/>

KY-WV LSAMP now has Twitter and Instagram accounts.

@KYWVLSAMP, <https://twitter.com/KYWVLSAMP>

<https://www.instagram.com/kywvlsamp/>

Social media will be utilized more in the new phase of the program. An Ambassador Group of program participants is being created. One scholar from each campus will be selected to serve in this group. They will be given leadership training and opportunities in order to lead the presence of KY-WV LSAMP in social media outlets.

Program Activities

External evaluation team.

Dr. Willie Pearson, Jr., a prominent and well-respected scholar and evaluator with extended experience in URM STEM education, will continue to serve as the program evaluator. The role of the evaluation team will be to help guide the Alliance to refine and improve the program over time, to advise on best practices in collecting key information without introducing undue administrative record-keeping burden, and to help the leadership team interpret and analyze the evaluations in terms of effective best practices. Ed Marshall and Dr. Cheryl B. Leggon assist Dr. Pearson in evaluating the program.

Institute advisory board.

The Institute Advisory Board (previously called the Governing Board), comprised of the presidents of the KY-WV Alliance Institutions, provides high-level direction for the Alliance. As KY-WV LSAMP PI and lead institution President, Dr. Eli Capilouto communicates with Board members and other key campus administrators to review Alliance progress and reports from the external evaluator to provide relevant guidance and feedback to the Alliance. A video meeting of the Institute Advisory Board is in process of being scheduled for Fall 2019.

External advisory board.

An advisory board of professionals in higher education as well as research, diversity, and community organizations has been created. Members of the board provide expert advice on program activities and initiatives and represent a variety of backgrounds and experiences. Board members are listed in Table 4. Each year, board members will review the KY-WV LSAMP Annual Report and provide feedback on program activities during a

video conference held in the fall. In the spring, board members will be invited to attend the Annual Research Symposium. Board members may also be asked to serve as speakers, critique Scholar research presentations, or volunteer in other capacities.

Table 4: Members of the External Advisory Board

Name	Institution/ Organization	Discipline / Position	Expertise
Bessie Guarrant – 2019 Chair	UK Office of Undergraduate Research	Associate Director	Research Experiences and Professional Development
Carolina Atkins	KY Council on Postsecondary Education	Chief Diversity Officer	Recruitment and Retention
Daniel Crockett	WV Higher Education Policy Commission	Director of Student and Educational Services	Recruitment and Retention
Charles Holloway	Morehead State University	Chief Diversity Officer	Diversity and Inclusion
Michael J. Lauer	STEAM Academy	Science Teacher	Academic Preparedness and Recruitment
Julia Roberts	Gatton Academy	Executive Director	Academic Preparedness and Recruitment
Sonia Sanders	KSU; Central Kentucky Diversity Consortium	Assistant VP for Public Engagement and Community Outreach; Board member	Diversity and Inclusion
Tina Stevenson	STEAM Academy	Director	Academic Preparedness and Recruitment
Jan Taylor	WV EPSCoR	Director	Research Experience and Professional Development

In June 2018, copies of the 2018 Annual Report were provided to members of the Advisory Board. An Advisory Board video meeting was held on Wednesday, September 12, 2018. Those who attended the meeting were: Bessie Guarrant, UK; Girmay Berhie, Marshall; John Aaron Moody, UofL; Dawn Offut, KY CPE; Julia Roberts, Gatton Academy; Sonia Sanders, KSU; Tina Stevenson, STEAM Academy; and Fara Williams, KY-WV LSAMP. The agenda for the meeting included: overall thoughts on the 2018 Annual Report and 2017-18 program activities, ways to improve or expand activities, and possible connections for program participants or leaders. One of the key take-aways of the meeting was for members of the advisory board to visit partner campuses. Thus, when director visits are set for Fall 2019, members of the board will be invited to participate in those visits.

Three Advisory Board Members attended the 11th Annual Research Symposium: Bessie Guarrant, Tina Stevenson, and Michael J. Lauer.

Links to affinity programs.

Each campus has unique resources and connections. This includes enhanced collaborations and connections with K-12 institutions and community organizations. Campuses in the KY-WV LSAMP alliance have also been given awards for diversity and other accomplishments. Examples of connections and honors are listed below. Select honors have accompanying news releases which can be found in Appendix D.

Bluegrass Community and Technical College

BCTC/KSU BLINKS Transfer Enterprise is a transfer collaboration. B is for BCTC, K is for KSU, and LINK is for The Links, Incorporated. The Links, Inc. *is one of the oldest and largest volunteer service organizations of women who are committed to enriching, sustaining, and ensuring the culture and economic survival of African Americans and other persons of African ancestry.* Students who are selected for the BLINKS Program receive an opportunity to utilize mentoring, study strategies, and other resources to help them be successful at BCTC and to graduate with an Associate of Arts or an Associate of Science degree. After which, if they have a 2.8 GPA or above, they are awarded full tuition to KSU for their undergraduate study. The purpose of the program is to: *increase the graduation rate of community college students, increase the number of community college students who transfer to HBCUs, encourage greater collaboration among community colleges and HBCUs, increase the enrollment of selected HBCUs, and increase the graduation rate of students at HBCUs.*

Since its beginning, BLINKS has run on mutual promises. However, Fall 2018, an official MOU was signed by both BCTC and KSU to keep the program going. BLINKS was selected to receive the Access Heritage Award. “This award is granted by the University to an individual / program who has made significant contributions to the equal educational opportunity and institutional access heritage of Kentucky State University.” An article about the Access Heritage award as well as a previous article about BLINKS can be found among the campus highlights in the appendix.

<http://www.linksinc.org/>

http://bluegrass.kctcs.edu/en/Multiculturalism_and_Inclusion/Blinks.aspx

Carnegie Hall is a *one week intense summer immersion camp continuing throughout the year with semi-monthly Saturday learning activities.* The mission of Carnegie Hall is: *sparking an age of a generation who conquers all challenges, while remaining committed to success. Constructing mathematical and engineering thought processes so that the sciences and technological aspect lead to more success. Making others stronger, by forfeiting....NOTHING!*

http://bluegrass.kctcs.edu/Multiculturalism_and_Inclusion/Carnegie_Hall.aspx

Latino Leadership and College Experience Camp (LLCEC) *is a unique experience that provides Latino and immigrant youth with an intensive college preparation and leadership development experience. Simulating college processes, high school students from across the state of Kentucky are able to enjoy a creative mix of college-like courses, leadership development workshops, team-building activities and social justice awareness. The LLCEC introduces participants to current college students, college professors, community leaders, and an extensive peer network. The close work with professors allows students to forge healthy and challenging professor/student mentorships that focus on academic success and personal accomplishment.*

http://bluegrass.kctcs.edu/en/Multiculturalism_and_Inclusion/Latino_Hispanic_Outreach/Camp.aspx

Multicultural Opportunities, Strategic and Institutional Inclusiveness Conference (MOSAIIIC) *is a time for candid and sustained dialogs on diversity and inclusion across higher education institutions in the Bluegrass area. This is a conference that is organized and funded by the Central Kentucky Diversity Consortium every year. The 2018 MOSAIIIC Conference was held on November 29-30 at Transylvania University. The theme of this event was “The Great White Lie: A Social Construct that Destroys Society.” A book by Dr. John Hodge was the inspiration for the theme, and he served as one of the keynote speakers. Several BCTC, UK and KSU Scholars as well as program coordinators and project director participated in the event. Nerd Squad founder Cagney Coomer (LSAMP mentor and UK biology Ph.D. candidate) was a recipient of a 2018 MOSAIIIC award. A copy of the cover and a letter from Charlene Walker (BCTC VP Multiculturalism and Inclusion and LSAMP Coordinator) can be found in the appendix.*

<http://www.uky.edu/studentacademicsupport/mosaiic>.

Super Someday is an event to prepare high school students for selecting a college major and exploring career options. Charlene Walker, BCTC VP for Multiculturalism and Inclusion and LSAMP coordinator, completed

career assessments with each student to help them in selecting and exploring career choices. Of the 140 students who attended the 2018 Super Someday event, 55 of them scored “Realistic and Investigative” career interests and were assigned career mentors from the STEM fields in which they showed interest.

Centre College

The Posse Foundation has partnered with Centre College for over 10 years. *It has identified, recruited and trained 7,728 public high school students with extraordinary academic and leadership potential to become Posse Scholars. Since 1989, these students—many of whom might have been overlooked by traditional college selection processes—have been receiving four-year, full-tuition leadership Scholarships from Posse’s partner institutions of higher education. Most important, Posse Scholars persist and graduate at a rate of 90 percent and make a visible difference on campus and throughout their professional careers.* <http://www.possefoundation.org/>

Centre College has a **commitment to study abroad** experiences. This commitment can be seen in their continued rank in the nation for the number of students who participate in experiences abroad.

University of Kentucky

Center for Academic Resources and Enrichment Services (CARES) *is a division of the Office for Institutional Diversity. CARES's mission is to provide a comprehensive academic support system as well as enrichment services to aid in increasing the retention and graduation rates of underrepresented students. Programs and activities assist students in achieving academic excellence and adjusting to student life at the University of Kentucky. Services provided by CARES include: Academic planning through academic progress sessions with a CARES counselor, free tutoring that includes individual tutoring and study groups, assistance with study skills through one-on-one meetings or workshops; and enrichment programs and activities through activities designed to address specific topics at each grade level, i.e. the Critical First Year Program that focuses on topics that range from Understanding Faculty Expectations to Study Abroad Opportunities for first year students, Pathfinders Program that focuses on major exploration and career development for sophomores, and SOAR that focuses on professional and leadership development that enhances career preparedness for juniors and seniors. CARES also hosts the Freshman Summer Program. A University computer lab is also housed at CARES.* <http://www.uky.edu/cares/>

Center for Applied Energy Research (CAER) serves as a center to answer today’s energy questions. *Among the most important aims is to assure that the benefits of investigations, research and study are applied, made available to the public and brought into the widest possible use. The Center, through its technology innovation and service to the community, contributes to improving the lives of Kentuckians by creating jobs and economic opportunities; by sustaining vital industries and public services; and by improving energy efficiency and protecting the environment.* <http://www.caer.uky.edu/energy/energy-research.shtml>

Engineering Broadening Participation Program is funded by the National Science Foundation and focuses on mentoring students from underrepresented populations at both the undergraduate and graduate level. Housed at the CAER, the program has three goals: *1) to motivate African American, Hispanic, and Native American students to choose engineering and help them graduate with engineering degrees, 2) to help these students acquire the skills they need to become engineering professionals, academics, leaders, and role models, and 3) to investigate if mentoring in research centers offers advantages over mentoring in traditional engineering departments.*

<http://enr-mentoring.caer.uky.edu/about.html>

NerdSquad *makes science an experience; bringing it to life, making it tangible so it becomes real, relatable and above all memorable.* LSAMP Scholars in Lexington volunteer with this non-profit organization that provides hands-on science activities and mentoring to K-12 students. KY-WV LSAMP Scholars are also mentored by Cagney “CC” Coomer, NerdSquad founder - a UK biology PhD candidate and Lexington community leader. <https://www.facebook.com/NERD-SQUAD-1429006443980870/>

Office of Undergraduate Research's mission is to promote high quality, undergraduate student-faculty collaborative research and Scholarship in all disciplines across campus, and to use all available resources to support and advance the research endeavor. This office provides extensive matching assistance as well as support for academic year research, summer research, and presentation opportunities and support including the annual UK Showcase of Undergraduate Research and the National Conference on Undergraduate Research (NCUR). <http://www.uky.edu/academy/UGResearch>

STEAM Academy was created through a grant awarded by EDUCAUSE and the Gates Foundation as part of the Next Generation Learning Challenge (More information here:

<http://www.educause.edu/focus-areas-and-initiatives/teaching-and-learning/next-generation-learning-challenges>). This grant was awarded to STEAM due to the partnership with the University of Kentucky and particularly the College of Education Faculty and was used to construct the innovational foundations for STEAM. University of Kentucky Faculty are helping to create the infrastructure and instructional model for STEAM. As content experts, faculty members provide training for classroom teachers across a range of instructional innovations including project-based learning, design thinking, digital literacy, and blended learning. Pre-service teachers, master teachers and faculty all work together in this innovative learning environment. Dual enrollment opportunities, internships, as well as multiple events at the University of Kentucky campus throughout the high school curriculum, will ensure that STEAM students graduate ready for college and careers. <https://sites.education.uky.edu/steam/>

STEMCats, is a Howard Hughes Medical Institute (HHMI) funded initiative. STEMCats is a pre-Fall freshmen academic, research and professional-development residential program. This living learning program is intended for first year students who have applied for a STEM major or who are interested in a STEM major plus a small cohort of transfer students from the Bluegrass Community and Technical College. STEMCats is supported by the College of Arts and Sciences, Pharmaceutical Sciences, Physiology, Molecular & Biomedical Pharmacology, and the Division of Natural Sciences at Bluegrass Community and Technical College. STEMCats will make for a smoother transition for first year and transfer students coming to UK.

<https://stemcats.as.uky.edu/stemcats-about-us>

University of Louisville

The Summer Research Opportunity Program (SROP) directed by the Office of the Executive Vice President for Research and Innovation and the Office of the Provost, provides University of Louisville students, who would like to know more about graduate-level education, with a 10-week research experience in a department that offers graduate degrees. These fellowships will also be available to under-served/under-represented student populations from regional colleges and universities. Mentors will provide students with individualized research projects, and the program will provide group seminars on topics related to research and graduate education. Students should be, preferably, in their sophomore or junior year of study.

<http://louisville.edu/research/students/srop/details>

West Virginia University

The Emerging Scholars Program (ESP) classes at West Virginia University are 100% funded by the institution. The faculty salaries, classroom space, and other needs of the class are provided by WVU at no cost to the LSAMP program.

Programs on Multiple Campuses

On each campus, the LSAMP program has a close working relationship with the **Diversity Offices**. The level of support and partnership varies among institutions, but types of support have included, but is not limited to: direct financial support for LSAMP Scholars, support for recruitment and retention initiatives, and partnerships with programs housed under the diversity office. In some cases, the LSAMP program is directly housed under the Diversity Office.

Bucks for Brains began in 1997 when the Kentucky legislature approved a bold plan to reform the state's system of higher education. The goal was to develop a "seamless, integrated system of postsecondary education strategically planned and adequately funded to enhance economic development and quality of life." A key component of this reform was the state's creation of the Research Challenge Trust Fund, a strategic investment in university research designed to create new jobs, generate new economic activity and provide new opportunities for Kentucky citizens. Commonly known as "Bucks for Brains," the program uses state funds to match private donations, effectively doubling the impact of private investment supporting research in strategically defined areas and planting the seeds for a better future.

The University of Kentucky, University of Louisville, and West Virginia University were selected for the 2018 HEED Award. This is the second year in a row for all three institutions. The University of Kentucky was again selected as a HEED Diversity Champion as well. More information and news releases on the awards can be found in the appendix. ***INSIGHT Into Diversity Higher Education Excellence in Diversity (HEED) Award.*** The HEED Award and the Health Professions HEED Award are the only national awards that honor individual institutions for being outstanding examples of colleges, universities, or health profession schools that are committed to making diversity and inclusion a top priority across their campuses. Sharing this important recognition with your campus and community helps showcase your school's excellence in developing innovators and leaders for today's global workforce. <http://www.insightintodiversity.com/about-the-heed-award/>

Student Support Services (SSS) Program is a TRiO program funded by the Department of Education. This program exists on many of the alliance campuses and serves as a partner for recruitment and services to LSAMP Scholars. Funds are awarded to institutions of higher education to provide opportunities for academic development, assist students with basic college requirements, and to motivate students toward the successful completion of their postsecondary education. SSS projects also may provide grant aid to current SSS participants who are receiving Federal Pell Grants. The goal of SSS is to increase the college retention and graduation rates of its participants. <http://www2.ed.gov/programs/triostudsupp/index.html>

Upward Bound and Talent Search are TRiO programs funded by the Department of Education. These programs are intended for middle school and high school students to prepare them for entrance into and success in college. One or both programs exist on many alliance campuses and serve as a resource for recruiting students to college and the LSAMP program. In addition, there are occasions when LSAMP Scholars serve as volunteers, speakers, and/or summer staff for these programs.

Links with other LSAMP alliances and related organizations.

KY-WV LSAMP has partnered with the University of Texas System LSAMP, the Colorado LSAMP, and the Northeast LSAMP to develop ***Knowledge Independence through Externships (KiTE)***. KiTE is an exchange of program participants who will conduct research during the summer. In 2019, one UK LSAMP scholar (Nicholas Graves) will conduct research at the University of Massachusetts Amherst through the KiTE initiative.

The KY-WV LSAMP project director serves as a Liaison for Foundation Relations for the LSAMP NSF International Center of Excellence (LSAMP NICE).

The KY-WV LSAMP project director serves on an advisory committee for the Louis Stokes Midwest Regional Center of Excellence (LSMRCE). Among other projects, this committee is developing a regional campus coordinator handbook, which will have applications and influence the KY-WV LSAMP campus coordinator handbook.

Operations manual.

A draft operations manual (Campus Coordinator Handbook) is created. This document will help to provide guidance to new campus program staff and to create unity and consistency in program communications and data

collection and maintenance. The manual includes information such as suggested program activities, requirements for student program participation, instructions and formats for providing participant data, and much more. When the final draft is complete, the document will be provided to each campus in electronic and print formats.

Participant tracking and program reporting.

A database of Scholars has been created to track demographics, program participation, and accomplishments. The database is updated periodically and can be easily edited to store additional information as needed for project evaluation, reports, and dissemination. Templates have been created for quarterly reporting, so information gathered and collected can be more easily documented and be more consistent throughout the alliance.

Quarterly reports are required from each institution. Using a template, coordinators must report on participants (including demographics and academic progress), program activities, and Scholar highlights (such as presentations, publications, honors, and awards). Reports are required to be submitted before invoices will be processed for payment.

Research Study: The Impact of Non-Traditional Teaching Styles and LSAMP Programs on Non-Cognitive Factors in URM STEM Student Success

Current Year Progress.

December 11, 2018, IRB approval was given for the University of Kentucky (UK). A pilot survey was sent to UK LSAMP participants in May 2019. Surveys were completed and will be analyzed in the coming months. Since West Virginia University (WVU) and Kentucky State University (KSU) will be the sites for the main focus of the study, those two institutions were the first to be added to the IRB protocol. IRB approval was received for WVU and KSU on May 20, 2019.

Overall Progress and Recent Dissemination.

Overall, the research study has made progress. However, no dissemination has occurred, yet. More details on the project and the progress made this year are included at the end of the program evaluation found in Appendix E.

Goals for Coming Year.

Goals for the coming year are to analyze the results of the pilot survey. Any needed adjustments will be made to the questionnaire and the survey will be implemented at WVU and KSU. IRB approval will be processed for the other seven institutions in the alliance. All KY-WV LSAMP staff who will assist with the research study will undergo training on human subjects.

INSTITUTIONAL SUPPORT AND SUSTAINABILITY PLAN

The Alliance plans to continue as a self-perpetuating consortium working to recruit and retain students into undergraduate and graduate STEM programs. Each campus has an institutional commitment for the continuation of the program. Examples of this commitment include, but are not limited to: 1) a portion of the project director's salary and the financial manager's salary are supported by the UK Office of the President, 2) ESP sections are, and will continue to be, institutionalized with WVU providing the space and salaries for the professors teaching the courses, and 3) Centre has a diversity specialist on its admission team and has scholarship, support service programs, and community-based learning practices to increase recruitment and retention of URM students. In

addition, each campus has connections and resources that help LSAMP leverage support for program participants.

ALLIANCE ORGANIZATION AND STRUCTURE

KY-WV LSAMP is a collaboration of many institutions. More importantly, it is a collaboration of many people who work diligently to provide opportunities and support services to program participants. Without the campus coordinators and those who aid them on each campus, KY-WV LSAMP would not progress and increase the number of STEM degrees granted to URM students. Table 5 is a list of program staff and their LSAMP roles as well as their institution roles. Descriptions of project roles follow.

Table 5: KY-WV LSAMP Key Personnel

NAME	CAMPUS	CAMPUS POSITION	LSAMP ROLE
Eli Capilouto	UK	President	PI
Kazi Javed	KSU	Associate Professor: Chemistry	Co-PI: KY and Campus Coordinator
Lynnette Michaluk	WVU	Social Sciences Research Assistant Professor, Center for Excellence in STEM Education	Co-PI: Research Study
David Miller	WVU	Associate Professor: Mathematics	Co-PI: WV and Campus Coordinator
Johné Parker	UK	Associate Professor: Mechanical Engineering	Co-PI: Lead Institution
Fara Williams	UK	Director: KY-WV LSAMP	Project Director
Willie Pearson, Jr.	GA Tech	Professor: Sociology	External Evaluator
Mark Pittman	UK	Program Manager	Financial Manager
Maurice Cooley	Marshall	Associate VP: Intercultural Affairs & Outreach	Campus Coordinator
Tierra Freeman	KSU	Associate Professor: Psychology	Research Study Social Scientist
V. Faye Jones	UofL	Associate VP: Health Affairs & Diversity Initiatives	Campus Coordinator
Charles McGruder	WKU	Professor: Physics & Astronomy	Campus Coordinator
Hannah Payne	WVSU	Director: Center for the Advancement of STEM	Campus Coordinator
Danielle Sims	JCTC	Director: Office of Diversity, Inclusion, and Community Engagement	Campus Coordinator
Raül Torres	UK	LSAMP Campus Coordinator	Campus Coordinator
Charlene Walker	BCTC	Vice President: Multiculturalism & Inclusion	Campus Coordinator
John Wilson	Centre	Professor: Mathematics	Campus Coordinator

Program Staff Roles

Project Director

The director, again, received enrollment and degree data directly from the Kentucky Council on Postsecondary Education (KY CPE) and the West Virginia Higher Education Policy Commission (WV HEPC). This ensures accuracy and consistency in data provided to NSF through the WebAMP system. Each agency was provided a list of NSF CIP Codes. Those codes are used to retrieve data on STEM enrollments and degrees. A list of the most current CIP Codes can be found in Appendix F.

Other duties/tasks that continue to be improved include: 1) a database for tracking participant information and activities; 2) continued improvement on the process for collection and maintenance of data to ensure complete accurate information and to make it easier for campus coordinators as well as administration staff; 3) language and ideas for improving the program website; 4) programmatic and documentation ideas for increasing the quality and quantity of program activities and participants on each campus; and 5) planning of the annual alliance retreat for all coordinators and lead program staff.

Financial Manager

Mark Pittman has been designated as the project financial officer at the University of Kentucky. Mr. Pittman (with help and oversight of the Office of Sponsored Projects) 1) creates the subcontracts for the alliance institutions, 2) processes payment of invoices from the alliance institutions, 3) tracks all expenditures, and 4) provides monthly reports to the PI, UK Co-PI, and project director.

Co-PI's and Campus Coordinators

The program co-PI's and campus coordinators as well as the other faculty and staff who assist them are integral to the mission of KY-WV LSAMP. It is their daily leadership and dedication that keep the program moving forward. KY-WV LSAMP staff are committed to helping participants prepare for, find, and take advantage of opportunities that lead them to become experts in their field.

Campus Coordinators are tasked with the day-to-day recruitment and retention of program participants. This includes, but is not limited to: organizing and implementing program activities, communicating with program participants as well as program staff on their campus and throughout the alliance, documenting participant participation, and providing information to program administration for inclusion in alliance reports.

Alliance Meetings

Each year, two face-to-face alliance meetings occur. There is an hour-long meeting during the Annual Research Symposium as well as a 1 ½ day Alliance Retreat in the summer. These meetings serve as opportunities for program administration and staff to discuss best practices and programming issues as well as connect as a community. In addition, in the fall, a video meeting is held, and the project director visits each campus. The itinerary for the visits include discussions with campus staff on programming as well as meetings with participants and other campus faculty, staff, and administrators.

Alliance Retreat

Each year, there is an Alliance Retreat. The 2018 retreat was held June 14-15, 2018 at Blue Licks Battlefield State Resort Park, Carlisle, KY. This retreat continued the development of a more cohesive alliance. Program staff communicated best practices and set goals for 2018-19. Some of those goals and the resulting data from the academic year include:

Increase the number of participants to 300 in 2018-19.

Preliminary data shows KY-WV LSAMP supported 281 students in 2018-19. The goal of 300 participants was not met. This will be a main topic of conversation at the 2019 Annual Retreat.

Increase the number of documented Scholar presentations to 100 in 2018-19.

In 2018-19, KY-WV LSAMP Scholars made 114 presentations at local, state, national, and even international conferences. This is a 52% increase from the previous year, and the expectation of research presentations continues to spread throughout the alliance. The goal of 100 documented presentations was met. In addition to Scholars who made research presentations (see page 8), Scholars attended non-presentation national and regional conferences including the Women of Color STEM Conference, the Black Engineer of the Year Award (BEYA) Conference, and the National Society of Black Engineers (NSBE) Conferences.

Increase the percentage of Scholars conducting academic year research to 25% in 2018-19.

In 2018-19, forty-nine (17%) of the 281 Scholars conducted research during the academic year. This does not meet the 25% goal, but KY-WV LSAMP will continue to work on this initiative. Studies have shown that students who conduct research have many benefits to their professional skills and connections as well as improvement of their academics. Each campus will encourage, enhance, and offer more opportunities for Scholars to participate in research projects during the academic year.

Increase the number of documented summer research internships to 80.

Seventy Scholars were selected to participate in summer 2018 experiences including international experiences. Preliminary data shows at least 63 scholars participating in summer 2019 experiences. Examples of 2018 internships include:

- One Scholar participated in the LSU France iREU.
- One Scholar conducted research in Germany through a Research Internship in Science and Engineering (RISE) from the German Academic Exchange.
- One Scholar participated in the Organization for Tropical Studies Costa Rica REU.
- One another Scholar will spend a full year in China through a Boren Scholarship.
- One Scholar will study in Greece through a Fulbright Scholarship.

Other internships included the EPSCoR, General Motors, and Air Products and Chemicals. The goal of 80 documented internships was not met. With aggressive encouragement and promotion of summer opportunities, the number of Scholars participating in summer internships is expected to rise.

Document 55% of KY-WV LSAMP graduates who have been accepted into graduate programs.

In 2018-19, forty-two Scholars graduated. Of those, 24 (57%) have been accepted to graduate and professional programs. This met the goal of 55% Scholars accepted into graduate programs.

A summary of goals set during the alliance retreats (2016, 2017, and 2018) and actual accomplishments can be found in Table 6. The next Alliance Retreat will be held June 14-15, 2019, at Four Points Sheraton, Lexington, KY.

Table 6: Summary of Retreat Goals and Actual Accomplishments

OBJECTIVE	2015-16 Actual	2016-17 GoaL	2016-17 Actual	2017-18 GoaL	2017-18 Actual	2018-19 Goal	2018-19 Preliminary
# of Scholars	228	250	286	275	280	300	281
% Scholars AY Research	15%	20%	11%	20%	18%	25%	17%
# of Scholars w/ Summer Internships	9	50	35	50	78	80	70
# of Scholar Presentations	51	100	49 (*plus 18)	100	75 (*plus 31)	100	114 (*plus 59)
# of Graduates To Grad School	Not Available	20	22	25	16	55%	24/42 57%

*Though they did not present research, these Scholars attended national and international conferences – the Women of Color STEM Conference, the Black Engineer of the Year Award (BEYA) Conference, and the Alltech One19 Ideas Conference.

At the Alliance Retreat, photos were taken of each coordinator for use in future documents. A collage of photos from the event can be found in Appendix G.

PROJECT EVALUATION / EXTERNAL REVIEW

Each year, the evaluation team visits three of the ten institutions in order to perform focus groups and interviews with Scholars, faculty mentors, program staff, and campus administration. An electronic survey is distributed to Scholars throughout the alliance. Interviews are also held with the project director and other program staff at the lead institution. Using data collected through these methods as well as data provided by the project director, the evaluation team creates an analysis of the success of the LSAMP program as an alliance. They offer recommendations to improve the program as a whole as well as give quality feedback to the site visit campuses. KY-WV LSAMP will continue to address recommendations made during the previous funding period as well as attend to future recommendations. A copy of the complete evaluation is in Appendix E. A few highlights include:

The evaluation team drew several conclusions from the site visits. “The institutions experienced differing levels of success in implementing certain components of its LSAMP programs.” Though the three campuses were unique, several similarities were observed. LSAMP needs greater visibility on campus. Recruitment and retention are challenging. There should be a consistent (uniform) orientation across the alliance. Communication and scholar research engagement need to be improved. It is extremely important to build a sense of community among LSAMP participants within each campus and within the alliance as a whole.

In addition to continuing to address past recommendations, recommendations for the coming year are:

- A more enhanced STEM-focused graduate school and job recruitment fair should be implemented as part of the KY/WV LSAMP Symposium. Ideally, through both recruitment fairs and campus visits, relationships should be formed with graduate school programs participating in the NSF Bridges to the Doctorate initiatives.
- To help ensure basic comprehension of the KY/WV LSAMP Alliance and the LSAMP goals, a uniform orientation format should be developed and posted on the Alliance website.

- In order to aid in funding research experiences and social activities, faculty with eligible grants or proposals should be encouraged to apply for diversity supplements or REUs that support hosting scholars.
- Improve the timeliness, appropriateness and consistency of communication within and across sites. Concern was expressed that some of the posted opportunities for scholars are state- or institution-specific.
- Improve advertising LSAMP on campuses: develop and implement standard operating procedures to introduce the program to students. e.g., have scholars act as ambassadors for the program. Previous evaluations suggested Alliance t-shirt or sweat-shirt competitions. This would engage scholars and provide some campus visibility when scholars wear the shirts.
- Develop and share strategies to secure more resources to build and enhance a sense of community among program participants. This includes providing scholars with dedicated office space to socialize with each other.
- Develop strategic plans with faculty mentors to secure funds to support scholar travel to conferences.
- Campus coordinators are encouraged to discuss holding the Symposia at institutions other than Marshall and the University of Kentucky.
- The Alliance office must secure documentation from the National Science Foundation/LSAMP office regarding which disciplines (i.e., majors) are designated STEM eligible.
- The Alliance office must be more intentional in posting “promising practices and policies.” Stakeholders continue to request information on effective recruiting and retention activities. Predominantly teaching institutions continue to call for more opportunities for their scholars to engage in research opportunities at research partner institutions.

BROADER IMPACTS, DISSEMINATION, AND OUTREACH

External Partnerships and Funding

Scholars are encouraged to apply for summer internships through local, state, and federal programs as well as industry. Participation in these programs provides Scholars with a wider range of experiences and a larger professional network. These paid summer internships also allow better leveraging of KY-WV LSAMP funds, so the program can support more participants during the academic year as well as the summer. In addition, KY-WV LSAMP has partnerships and collaborations with other organizations, agencies, departments, and companies.

Air Products and Chemicals – *is a world-leading Industrial Gases company in operation for over 75 years. The Company’s core industrial gases business provides atmospheric and process gases and related equipment to manufacturing markets, including refining and petrochemical, metals, electronics, and food and beverage. Air Products is also the world’s leading supplier of liquefied natural gas process technology and equipment.*
<http://www.airproducts.com/Company/company-overview.aspx>

General Motors, Detroit, MI – *is passionate about earning customers for life. This vision unites us as a team and is the hallmark of our customer-driven culture.* <http://www.gm.com/company/company-overview.html>

Hensel Phelps, Phoenix, AZ – *Plan. Build. Manage. From planning and design, to construction, and facility management, we work to solve our clients’ challenges from start to finish, and beyond. Our clients, both domestic and international, have entrusted us with a tremendous range of landmark projects, in nearly every market sector.* <http://www.henselphelps.com/>

Kentucky EPSCoR – Kentucky Experimental Program to Stimulate Competitive Research *exists to stimulate sustainable improvements in the Commonwealth’s R&D capacity and to advance science and engineering capabilities for discovery, innovation, and knowledge-based prosperity. KY EPSCoR’s activities are focused upon: developing human and physical infrastructure to advance academic research, promoting and nurturing a culture of innovation and economic creativity, and supporting increased STEM education, workforce development, and research participation diversity.* <http://kyepscor.org/>

LSU iREU, France – the Louisiana State University international Research Experience for Undergraduates program *sponsors students who are interested in projects that feature aspects of translational chemistry and incorporate major European “Innovation Campuses” where national laboratory, industry, and university scientists work as teams. This will provide students the opportunity to experience a network of research not typically available to students at most American colleges and universities.* NSF #1263336

NASA Kentucky – Kentucky’s Space Grant Consortium partners with NASA to advance research, education, and workforce development within the state. *Managed alongside Kentucky’s NASA EPSCoR, these programs promote aerospace-related scientific and technological innovation.* <http://nasa.engr.uky.edu/>

Organization for Tropical Studies (OTS) – OTS hosts an REU in Costa Rica. *The NSF LSAMP REU (open to students from LSAMP member institutions): students will be living at La Selva Research Station or Las Cruces Research Station for their nine-week research experience. Features of this program include 1) research skills in the field, 2) enhancing communication skills through training in scientific writing, oral presentations, science blogging, and videography, and 3) integration of cultural experiences with research development. The program will focus on environmental topics such as biodiversity conservation and agroecology and will offer opportunities to interact with local farmers, smaller field stations, and/or environmental NGOs.* <https://education.tropicalstudies.org/en/education/undergraduate-opportunities/programs/reu-research-experience-for-undergraduates-in-costa-rica.html>

Research Experiences for Undergraduates – The REU program *supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program.* https://www.nsf.gov/funding/pgm_summ.jsp?pid=5517

Summer Health Professional Education Program (SHPEP) – The program at Louisiana State University is *strongly committed to increasing the number of students from underrepresented/underserved, rural, and/or disadvantaged backgrounds who are skilled, confident, and motivated to remain and succeed in challenging academic programs/majors that are designed to support health sciences careers.* <http://www.shpep.org/site/louisiana-state-university-health-sciences-center/>

UK Environmental Research Training Laboratories, Lexington, KY – *The University of Kentucky and the College of Engineering recognize the need to enhance the statewide infrastructure for environmental studies. Open to users from throughout the university, ERTL is a hands on learning and research facility used for a variety of organic and inorganic analyses and microbial analyses. Established in March of 2002, ERTL’s mission is to increase research opportunities and improve results by offering personalized training and access to state-of-the-art laboratory equipment and techniques.* <http://ertl.uky.edu/>

USDA Wallace-Carver Fellowship – *offers exceptional college students the opportunity to collaborate with world-renowned scientists and policymakers through paid internships at leading USDA research centers and offices across the United States. The fellows also participate in a high-level week-long Wallace-Carver Leadership Symposium at the US Department of Agriculture in Washington, DC, hosted by the US Secretary of Agriculture.* https://www.worldfoodprize.org/en/youth_programs/usda_wallacecarver_fellowship/

Dissemination

There have been several avenues for dissemination. KY-WV LSAMP continues to update the program website by continuing to add resources for Scholars, faculty mentors, and program staff. There continues to be plans for Co-PI's, campus coordinators, and the project director to submit abstracts to conferences and continue working on articles for peer-reviewed journals. One example is:

Charlene Walker, BCTC Coordinator, and Raúl Torres, UK Coordinator, presented, "STEM Transplantation: Transition from Community College to HBCUs" at the High Impact Programs (HIPs) in the States National Conference in Bowling Green, KY, February 21, 2019. HIPs is an informal community of college and university educators working with the National Association of System Heads and Taking Student Success to Scale (TS3) to improve the definitions, tracking, and assessments of high-impact educational practices at public institutions. The KY-WV LSAMP presentation highlighted the BLINKS project which provides students who begin their education at BCTC, transfer to KSU (an HBCU), and meet program requirements with tuition support during their two years at KSU.

Proposal for Continued Funding

In January 2018, KY-WV LSAMP submitted a proposal for continued funding. A major change to the program is the addition of another community college. Jefferson Community and Technical College (JCTC) has now been added to the KY-WV LSAMP alliance with this cycle of the program. This addition was made at the request of the external evaluators and will add new energy, participants, and potential collaborations for JCTC as well as the rest of the alliance. JCTC is located in Louisville, Kentucky, and has the largest number of URM students enrolled in community college STEM programs in Kentucky and West Virginia. We are excited to have JCTC as part of the KY-WV LSAMP family and to have received funds to continue the progression of the program. Several news releases were made concerning the renewal. Those can be found in Appendix H.

FACULTY and STAFF HIGHLIGHTS and PROFESSIONAL DEVELOPMENT

KY-WV LSAMP program administration and staff continue to be active in their respective fields as well as disseminate best practices learned via LSAMP. KY-WV LSAMP support staff are an important aspect of the program. Project staff continue to seek professional development opportunities. Copies of abstracts, conference proceedings, pictures and news releases can be found in Appendix I.

Articles

W. David Lohr, Deborah Winders Davis, Carla A. Rich, Lesa Ryan, **V. Faye Jones**, P. Gail Williams, Gilbert C. Lui, Charles R. Woods, Nicole Sonderman, Natalie Pasquenza & Kyle B. Brothers. Addressing the mental healthcare needs of foster children: perspectives of stakeholders from the child welfare system, *Journal of Public Child Welfare*. 2018. DOI: 10.1080/15548732.2018.1477651

Jones VF, Changing the faces of STEM. *HSC Celebrating Diversity Newsletter*. Fall ed. 2018; 1-2.

Jones VF, Morris M. Child Hunger: A hidden epidemic. *Louisville Magazine*. 2018; 66(6):15-17.

Jones VF and the Committee of Early Childhood, Adoption and Dependent Care. Comprehensive Health Evaluation of the Newly Adopted Child-Revised. Clinical Report. Pediatrics. 143(5); DOI: <https://doi.org/10.1542/peds.2019-0657>

Jones VF. Did that really happen? HSC Celebrating Diversity Newsletter. Summer ed. 2019; 1-2.

Davis DW, Williams PG, **Jones VF**, et al. Longitudinal Trends in the Diagnosis of ADHD and stimulant Use in Preschool Children on Medicaid. Journal of Pediatrics. 2019; 207: 185-191.e1. DOI: 10.1016/j.jpeds.2018.10.062

A.M. Whitney, **J.M. Parker**, Z.C.N. Kratzer, J.T. Fessler and J.G. Whitney, “Reducing RF Distance Error by Characterizing Multipath,” in *IEEE Transactions on Instrumentation and Measurement*, 2018. DOI: 10.1109/TIM.2018.2875899

Sculte EE, **Jones VF**. Report updates initial health evaluation needed for newly adopted children. AAP News. April, 2019.

Other Highlights

Leondra Gully, UofL Assistant Coordinator, (1) serves on the University of Louisville Staff Senate; (2) presented at the 2018 NPHC Retreat, Louisville, KY, September 2018; (3) was interviewed for “UofL Receives Top Ranking for Supporting Black Students” by Mark Hebert Radio, Louisville, KY, October 8, 2018; and (4) presented LSAMP to students individually and in groups including during the University of Louisville Accolade and Cardinal Preview Day events.

Kazi Javed, KSU Co-PI and Coordinator, assisted with the submission of an abstract and the creation of the presentation given at the High Impact Practices (HIPs) in the States National Conference, Bowling Green, KY, February 21, 2019.

V. Faye Jones, UofL Coordinator, (1) serves as invited senior mentor for APA, Research in Academic Pediatrics Initiatives in Diversity (RAPID); (2) serves on the National Advisory Board, RAPID; (3) presented, “Wishing for Wakanda: The Path to Adolescent Wellbeing” at Make It Matter! Make It Happen! Make a Healthy Lifestyle 3rd Annual Conference, Chatanooga, TN, September 8, 2018; (4) invited RIME Discussant: “Addressing Implicit Bias” at the AAMC Learn, Serve, Lead National Conference, Austin, TX, November 2-6, 2018; (5) presented, “Chief Diversity Officers using a Multiprong Approach to Ensure the Success of URM Health Professional Students” at the Annual NADOHE Conference, Philadelphia, PA, March 6-9, 2019; (6) presented, “Developing and Implementing Effective Strategic Diversity Plans” at the AAMC GBA/GDI/GIP Spring Meeting, Chicago, IL, April 11, 2019; (7) presented, “Use of Stimulants and Alpha-2 Agonists for Treating ADHD in Preschool-age Children receiving Medicaid from 2012-2017” at the Pediatric Academic Societies Annual Meeting, Baltimore, MD, April 27-30, 2019; (8) served on the 2018 Leadership Panel: Blooms Conference, Louisville, KY, September 2018; presented on a panel at Women Leading West Louisville, Louisville, KY, October 11, 2018; (9) presented “Unconscious Bias in Everyday Life” at Leadership Louisville, Louisville, KY, December 4, 2018; (10) presented a poster, “Building trust with our smoketown neighbors: Understanding individual and systemic barriers” at Research!Louisville, Louisville, KY, October 9-12, 2018; (11) presented a poster, “Healthy food options contributed by international food markets in Jefferson County, Kentucky at Research!Louisville, Louisville, KY, October 9-12, 2018; (12) presented a poster, “Black men as agents of change in children’s literacy success: a study of the effect of volunteer readers and early literacy behaviors in a pediatric clinic waiting room” at Research!Louisville, Louisville, KY, October 9-12, 2018; (13) presented a poster, “Healthy Me! A university-community collaborative” at AAP National Conference and Exhibition Annual Meeting, Orlando, FL,

November 2-6, 2018; and (14) presented a poster, “Disparities in Rates of ADHD Diagnosis and Treatment by Race/Ethnicity in Youth receiving Kentucky Medicaid in 2017” at the Pediatric Academic Societies (PAS) Annual Meeting, Baltimore, MD, April 27-30, 2019.

David Miller, WVU Co-PI and campus coordinator, served as a reader of AP calculus exams and was promoted to full professor.

Charles McGruder, WKU campus coordinator, gave two presentations at the General Assembly of the International Astronomical Union in Vienna, August 20-31, 2018.

Johné Parker, UK Co-PI, (1) presented a poster at the International IEEE Instrumentation and Measurement Technology Conference in Auckland, New Zealand, May 2019; (2) served as a reviewer for the 2019 Ford Foundation Fellowship; (3) served as a reviewer on the 2019 NSF Improving Undergraduate STEM Education (IUSE) panel; and (4) served as research mentor for five undergraduate students including three LSAMP Scholars.

Hannah Payne, WVSU campus coordinator, served in a leadership capacity in planning and implementing the West Virginia Research Day at the Capitol, Charleston, WV, February 26, 2018.

Danielle Sims (JCTC Director for the Office of Diversity, Inclusion, and Community Engagement), joined KY-WV LSAMP as the Coordinator of the new alliance campus. She is also working on her doctoral degree.

Raúl Torres, UK campus coordinator, (1) attended and served at a recruitment table at the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) National Conference in San Antonio, TX, October 11-13, 2018; (2) continued taking graduate courses; (3) attended the Black Engineer of the Year Award (BEYA) Conference, Washington, D. C., February 7-9, 2019; (4) assisted with the creation and delivery of the presentation given at the High Impact Practices (HIPs) in the States National Conference, Bowling Green, KY, February 21, 2019; (5) attended the National Conference on Undergraduate Research (NCUR), Atlanta, GA, April 11-13, 2018; (6) attended the National Association of Student Personnel Administrators (NASPA) Bridging the Achievement Gap Conference in Columbus, OH, May 31-June 2, 2018; (7) attended various UK professional development trainings; and (8) volunteered for NerdSquad – a local non-profit that provides tutoring, mentoring, and hands-on science activities for Lexington K-12 students.

Charlene Walker, BCTC campus coordinator, assisted with the creation and delivery of the presentation given at the High Impact Practices (HIPs) in the States National Conference, Bowling Green, KY, February 21, 2019.

Fara Williams, project director, (1) planned and implemented an Alliance Retreat for KY-WV LSAMP program staff including Co-PI's and Campus Coordinators, Blue Lick Battlefield State Resort Park, Carlisle, KY, June 14-15, 2018; (2) attended the LSMCE Workshop: Leveraging Private Support for Broadening Participation in STEM, Indianapolis, IN, June 22, 2018; (3) attended and assisted program administrators in the implementation of the Louisiana State University international REU Translational Chemistry Workshop, Toulouse, France, June 25-30, 2018; (4) presented/volunteered for the Cherokee College Preparatory Institute (CCPI) - college readiness program for Native American high school juniors and seniors, at Northeastern State University, Tahlequah, OK, July 14-20, 2018; (5) attended the IN LSAMP Alliance Retreat, Indianapolis, IN, July 27, 2018; (6) participated in Preparing Science Professionals Jorge Cham, “The Power of Procrastination,” University of Kentucky, Lexington, KY, September 6, 2018; (7) participated in the University (of Kentucky) Women's Forum Conference: Intention, Lexington, KY, October 10, 2018; (8) attended the Women of Color STEM Conference, Detroit, MI, October 12-14, 2018; (9) attended EATON Day and Poster Session, Southfield, MI, November 2, 2018; (10) participated in the workshop, 7 Habits of Highly Effective People, Lexington, KY, November 13-15, 2018; (11) attended the Multicultural Opportunities, Strategies, and Institutional Inclusiveness Consortium (MOSAIC) Conference, Transylvania University, Lexington, KY, November 29-30, 2018; (12) served on the

planning committee for the Expanding Your Horizons – a workshop for middle school girls to interest them in STEM careers and majors; (13) participated in the Humanity Academy, Lexington, KY, January 28-February 1, 2019; (14) attended the Black Engineer of the Year Award (BEYA) Conference, Washington, D.C., February 8-9, 2019; (15) attended the NSF LSAMP PI/PD Meeting and the Emerging Researchers National Conference, Washington, D.C., February 19-23, 2019; (16) attended the Alltech One19 Conference – an international event for Alltech employees, partners, and customers, Lexington, KY, May 19-21, 2019; (17) continued to serve as a member of the IN LSAMP Policy and Procedure Manual Committee, a committee formed to produce a policy and procedure manual to share at the IN LSAMP retreat in Indianapolis; (18) attended meetings of the Kentuckiana FileMaker Developers Group, Louisville, KY; (19) presented LSAMP to students individually and in groups including at the BTC STEM Academy; (20) attended various UK HR Professional Development sessions including completing all required sessions for Essential Leader (May 3, 2019) and SuperVision (completed May 1, 2019) programs (21) attended various events and activities at the University of Kentucky including staff appreciation day and a seminar and workshop for diversity and inclusion officers guided by Dr. Damon A. Williams on June 11, 2018.

SCHOLAR and ALUMNI HIGHLIGHTS

Conferences and Symposia

There were some conferences that were attended by Scholars from multiple campuses. In some cases, travel for these events was coordinated in order to provide opportunities for Scholars on different campuses to meet and interact with one another. Pictures and graphics from those events can be found in Appendix J.

Women of Color STEM Conference

Thirty-five students including 30 KY-WV LSAMP Scholars attended the Women of Color STEM Conference held in Detroit, MI, October 12-13, 2018. The Scholars were accompanied by **Fara Williams**, project director; **Jean Branttie**, UK graduate student; and **Nigel Vinegar**, UK graduate student. Scholars from Marshall included: **Jacqueline Brown, Jaelin Cochran, Oluchi Otugo, Ariana Swayne, Makayla Swayne, and Stephanie Warlitner**. Scholars from UK included: **Jayla Baker, Jordan Burdette, Sajana Dumre, Sarah Hodges, Antoria Jackson, K'Lynn King, Savannah Lewis, Sampada Rijal, Ariel Robinson, and Ndeye Thiaw**. Scholars from UofL were **EBertha Aguazul, Payton Atwood, Manuela Botka, Noela Botaka, Carmen Cline, Shannon Derkson, Rachel Durbin, Taylor Fisher, Jaleyea Foster, Alana Gipson, Christabel Kusi Appiah, Caitlin Powel, and Erika Tucker**.

Black Engineer of the Year Award (BEYA) Conference

Over 20 KY-WV LSAMP Scholars attended the BEYA Conference in Washington, D. C. February 8-10, 2018. Scholars were accompanied by Fara Williams (Project Director), **Raúl Torres** (UK campus coordinator), Kayla Titilii (UK biology graduate student), and Cagney “CC” Coomer (UK biology graduate student). Scholars from Marshall included: **Jacqueline Brown, Malik Smith, and Romello Thorpe**. Scholars from UK included: **Jayla Baker, Jordan Burdette, Sajana Dumre, De'Andre Gibbs, Nicholas Graves, Onyee Ibekwe, Antoria Jackson, K'Lynn King, Mark Lawhorn, Savannah Lewis, Julian Little, Jimmy Mickens, Sampada Rijal, Steven Roberts III, Ariel Robinson, PJ Scott, Alston Sickles, and Ndeye Thiaw**. **Erika Tucker** represented UofL.

National Conference on Undergraduate Research (NCUR)

KY-WV LSAMP was represented at the 33rd NCUR. The April 2019 event was held at the Kennesaw State University in Atlanta, GA. Scholars presented posters and gave oral presentations on their research projects. In

addition, they attended pre-conference workshops, other student presentations, visited with graduate school and industry representatives, made connections with faculty, and explored the Atlanta area.

Scholar abstracts accepted for the 2018 NCUR included: **Koji Barnaby**, WKU, *Cytotoxicity of Platinum(II) Anticancer Compounds in Mammalian Cell Lines*; **Cheyenne Boone**, KSU, *An In Vitro Study on Skin Protection Across the UV Spectra*; **Arrah Calvin**, WKU, *Recap of the Engineering Design Process and the Usefulness of 3D Printing Prototypes*; **Raquel Dominguez**, WKU, *An Analysis of Tornadoes Spawned by Land-Falling Hurricanes*; **Sajana Dumre**, UK, *Embryonic Hyperglycemia is Associated with Abnormal Photoreceptor and Muller Glia Cell Development*; **Muriithi-David Kem**, WVU, *Fabrication of Kirigami Based Structures for Flexible Electronics Applications*; **Caitlin Mickles**, WVU, *Classification of Chemical Hypersensitivity Potential Based on Gene Expression Profiles*; **Darian Parker**, UK, *Development of an Algae-Based Carbon Capture and Utilization System to Mitigate CO₂ Emissions and Produce High-Value Chemicals and Bioplastics*; **Kalvin Rucker**, KSU, *Effect of Dietary Carbohydrate Type and Inclusion Rate on Growth and Feed Efficiency in Largemouth Bass, *Micropterus Salmoides**; and **Mya Vannoy**, WVU, *The Epigenetic Role of Septic Microparticles in Alzheimer's Disease*. Campus coordinators Charles McGruder (WKU) and Raúl Torres (UK) attended the event as well.

Individual Accomplishments

Many Scholars made accomplishments and received honors throughout the 2018-19 academic year. Snapshots and news releases of select accomplishments can be found in Appendix K. Below are some examples of KY-WV LSAMP Scholar accomplishments.

Mohanad Abdallah, UK electrical engineering senior, (1) received an internship to conduct research in Germany summer 2018; (2) graduated December 2018; (3) presented at the European Association for Renewable Energy Conference in Dusseldorf, Germany, March 2019; (4) had an abstract accepted for NCUR 2018; and (4) is now working in industry.

Bertha Aguazul, UofL, attended the Women of Color STEM Conference, October 12-13, 2018.

I. Khalil Appleton, UK mechanical engineering senior, received a summer 2018 internship as a business technology consultant at Deloitte; and graduated December 2018.

Ky'Achia Atkins, WVSU biology junior, presented a poster at the LSU iREU Meeting, Toulouse, France, June 25-30, 2018; and at the KY-WV LSAMP 11th Annual Research Symposium.

Payton Atwood, UofL, attended the Women of Color STEM Conference, October 12-13, 2018.

Joe Baird, WVSU biology junior, presented at the IIN LSAMP Annual Research Conference, Indianapolis, IN, October 19, 2018 and at the WVSU Summer Research Symposium, July 27, 2018.

Jayla Baker, UK, attended the Women of Color STEM Conference, October 12-13, 2018; and the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Koji Barnaby, WKU sophomore, had an abstract accepted for NCUR 2018; and presented at the KY-WV LSAMP 11th Annual Research Symposium.

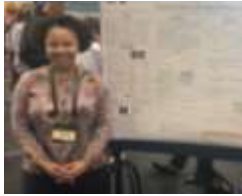


Edwina Barnett, WVSU biology sophomore, (1) participated in the Organization for Tropical Studies REU in Costa Rica summer 2018; (2) presented at the La Selva REU Summer Research Symposium, La Selva, Costa Rica, August 6, 2018; (3) presented at the KY-WV LSAMP 11th Annual Research Symposium; (4) served on a panel of international researchers at the KY-WV LSAMP 11th Annual Research Symposium; (5) graduated with her BS degree; and (6) is pursuing graduate study.

Lloyd Bartley, UofL cellular biology senior, (1) presented a poster at the LSU iREU Meeting, Toulouse, France, June 25-30, 2018; (2) presented at Kentucky Posters at the Capitol, February 21, 2019.

Charles “Carlos” Beasley, UK, and will conduct research in France summer 2019.

Samantha Belcher, WVSU, (1) presented at the KY-WV LSAMP 11th Annual Research Symposium; (2) presented at the IIN LSAMP Annual Research Conference, Indianapolis, IN, October 19, 2018; and (3) presented at the WVSU Summer Research Symposium, July 27, 2018.



Cheyenne Boone, KSU chemistry Scholar, (1) conducted research at the UK Environmental Research Training Laboratories (ERTL) summer 2018; (2) had an abstract accepted for NCUR 2018; (3) presented at the KY-WV LSAMP 11th Annual Research Symposium; and (4) presented at Kentucky Posters at the Capitol, February 21, 2019.

Manuela Botaka, Marshall biology senior, attended the Women of Color STEM Conference, October 12-13, 2018; and had an abstract accepted for NCUR 2018.

Noela Botaka, Marshall biology senior, (1) attended the Women of Color STEM Conference, October 12-13, 2018; (2) presented at Kentucky Posters at the Capitol, February 21, 2019; and (3) received a 2019 Fulbright Research Scholarship.

Deja Bowen, UK graduate, is pursuing a graduate degree at Xavier University.

Janae Boyd, UofL, attended the Women of Color STEM Conference, October 12-13, 2018.

William Britt, Centre Scholar, presented at the Kentucky Section of the Math Association of America Annual Meeting, Danville, KY, March 29, 2019; and at the 2018 Centre College Weekly Summer Research Seminar.

Isaiah Brown, UK, presented at the Annual Biomedical Research Conference for Minority Students, Indianapolis, IN, November 14-17, 2018; and received a post-bach position.



Jack Brown, Marshall biology Scholar, (1) attended the Women of Color STEM Conference, October 12-13, 2018; (2) attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019; and (3) presented at the Marshall Computer Science Symposium, April 30, 2019.

Jordan Burdette, UK neuroscience junior, attended Women of Color STEM Conference, October 12-13, 2018; and the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Arrah Calvin, WKU, had an abstract accepted for NCUR 2018; and presented at the KY-WV LSAMP 11th Annual Research Symposium.

Gustavo Camargo Silva, WKU, had an abstract accepted for NCUR 2018; and presented at the KY-WV LSAMP 11th Annual Research Symposium.

Chase Cavanaugh, Centre, presented at the Kentucky Section of the Math Association of America Annual Meeting, Danville, KY, March 29, 2019; and at the 2018 Centre College Weekly Summer Research Seminar.



Trevor Claiborn, (Former BCTC) KSU agriculture senior, is also known as Farmer Brown tha' MC and continues to be featured by various media. He continues to write songs, produce videos, post on social media, and remain an active participant in community projects. <https://www.farmerbrownthamc.com/>

Jacob Clay, UK, presented at the UK Showcase of Undergraduate Scholars, April 24, 2019.

Carmen Cline, UofL, attended the Women of Color STEM Conference, October 12-13, 2018.

Jaelin Cochran, Marshall, attended the Women of Color STEM Conference, October 12-13, 2018.

Alexandra Collins, WVU, presented at the KY-WV LSAMP 11th Annual Research Symposium and at the WVU Summer Undergraduate Research Experience Poster Session, July 28, 2018.

Nicholas David, WVU mechanical engineering sophomore, was selected as a 2018 intern with GE; and attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Demetrius Davis, KSU biology senior, conducted biotechnology and water quality research at KSU summer 2018.



Shannon Derkson, UofL, (1) served as the UofL LSAMP Student Coordinator; (2) participated in the Summer Cardiovascular Research Program at the University of Louisville for summer 2018; (3) presented a poster at the KY-WV LSAMP Annual Research Symposium at Marshall University, Huntington, WV, March 2, 2019; (4) conducted research in the Psychology Department in Marci DeCaro Ph.D's Learning and Performance Lab at UofL; (5) attended the Women of Color STEM Conference, October 12-13, 2018; and (6) has been selected for the Summer Research Opportunity Program (SROP) at UofL for Summer 2019.

Tat'Ana Dillard-Sims, WVSU biology junior, presented at the KY-WV LSAMP 11th Annual Research Symposium; and at the WVSU Summer Research Symposium, July 27, 2018.

Raquel Dominguez, WKU meteorology sophomore, (1) had an abstract accepted for NCUR 2018; (2) presented at the KY-WV LSAMP 11th Annual Research Symposium; and (3) has been selected to conduct meteorology research at the National Weather Center in Oklahoma summer 2019.

Sajana Dumre, UK neuroscience junior, (1) participated in a 2018 study abroad to Spain; (2) attended the Women of Color STEM Conference, October 12-13, 2018; (3) attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019; (4) had an abstract accepted for NCUR 2018; and (5) presented at the KY-WV LSAMP 11th Annual Research Symposium.

Rachel Durbin, UofL, attended the Women of Color STEM Conference, October 12-13, 2018.

Taylor Fisher, UofL bioengineering junior, presented a poster at the LSU iREU Meeting, Toulouse, France, June 25-30, 2018, and attended the Women of Color STEM Conference, October 12-13, 2018.

Paola M. Flores, KSU biology sophomore, conducted biotechnology and water quality research at KSU summer 2018.

Miekayla R. Ford, KSU biology Scholar, conducted biotechnology and water quality research at KSU summer 2018.

Jaleyea Foster, UofL Scholar, attended the Women of Color STEM Conference, October 12-13, 2018.



Makaylah Garrett, KSU biology senior, was listed as an author on an article, “Effect of Cu promotion on cracking and methanation during the Ni-catalyzed deoxygenation of waste lipids and hemp seed oil to fuel-like hydrocarbons,” published in *Catalysis Today*. She graduated May 2018.

Jordan George, UK, attended the Alltech One19 Ideas Conference, an international event, Lexington, KY, May 19-21, 2019. She graduated May 2019 and will begin working for IBM.

De’Andre Gibbs, UK, attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Alana Gipson, UofL, attended the Women of Color STEM Conference, October 12-13, 2018; and had an abstract accepted for NCUR 2018.

Nicholas Graves, UK junior, attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019; and was selected to participate in the 2019 KItE initiative.

Imani Harris, KSU biology Scholar, conducted biotechnology and water quality research at KSU summer 2018.

Keelan Hendricks, WVU, presented at the WVU Summer Undergraduate Research Experience Poster Session, July 28, 2018.



Sarah Hodges, UK biochemistry senior, (1) served as a student leader for the 2018 LSU iREU in France; (2) attended the Women of Color STEM Conference, October 12-13, 2018; (3) presented at the KY-WV LSAMP 11th Annual Research Symposium; (4) conducted a seminar at the KY-WV LAMP 11th Annual Research Symposium; (5) presented on a panel of international researchers at the KY-WV LSAMP 11th Annual Research Symposium; (6) served as a mentor during the UK STEAM Academy Speed Mentoring event; and (7) presented on a panel of scholars during a STEAM Academy visit.

Victor Holness, UK, and will conduct research in France summer 2019.

Ieisha Hopwood, KSU biology Scholar, conducted biotechnology and water quality research at KSU summer 2018 and presented at Kentucky Posters at the Capitol, February 21, 2019.

Imani Houston, UK, presented at the KY-WV LSAMP 11th Annual Research Symposium.

Annalisa Huckaby, WVU, (1) presented at the KY-WV LSAMP 11th Annual Research Symposium; (2) presented at West Virginia Posters at the Capitol, February 26, 2019; (3) presented at the WVU Summer Undergraduate Research Experience Poster Session, July 28, 2018; and (4) presented at the Van Liere Research Conference, Morgantown, WV, March 21-22, 2019.

Onyee Ibekwe, UK biology senior, attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Cierra Isom, UK biology junior, presented at the KY-WV LSAMP 11th Annual Research Symposium and served as a mentor during the UK STEAM Academy Speed Mentoring event.

Antoria “Tori” Jackson, UK, attended the Women of Color STEM Conference, October 12-13, 2018; and the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Dylan Johnson, WVU, presented at the KY-WV LSAMP 11th Annual Research Symposium and at the WVU Summer Undergraduate Research Experience Poster Session.



Osei Jordan, UK agriculture biotechnology junior, conducted research at UK during summer 2018 and presented at the KY-WV LSAMP 11th Annual Research Symposium.

Mahireyaa Kao, KSU biology sophomore, conducted biotechnology and water quality research at KSU summer 2018.

Muriithi-David Kem, WVU, (1) had an abstract accepted for NCUR 2018; (2) presented at the KY-WV LSAMP 11th Annual Research Symposium; (3) presented at West Virginia Posters at the Capitol, February 26, 2019; and (4) presented at the WVU Summer Undergraduate Research Experience Poster Session, July 28, 2018.

Jeremy Kimbrough, KSU, presented at KSU Research Day, April 2019.

K’Lynn King, UK chemical engineering sophomore, (1) participated in the 2018 UK Engineering Undergraduate Research Opportunity Program; (2) attended the Women of Color STEM Conference, October 12-13, 2018; (3) attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019; and (4) presented at the KY-WV LSAMP 11th Annual Research Symposium.

Mitch Kirman, WVU, presented at the WVU Summer Undergraduate Research Experience Poster Session, July 28, 2018.

Christabel Kusi Appiah, UofL, attended the Women of Color STEM Conference, October 12-13, 2018.

Mark Lawhorn, UK engineering sophomore, attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Savannah Lewis, UK electrical engineering sophomore, (1) participated in a 2018 University of Missouri REU; (2) attended the Women of Color STEM Conference, October 12-13, 2018; (3) attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019; and (4) presented at the KY-WV LSAMP 11th Annual Research Symposium.

Julian Little, UK, attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.



Scott Lopez, WVU chemistry senior, received the Boren Scholarship and spent a year learning the language and culture of a country that has been identified as critical to US interests. He received intensive language training at the Beijing Language and Culture University and studied at Tsinghua University.

Geoffrey MacRae, WVU, presented at the WVU Summer Undergraduate Research Experience Poster Session, July 28, 2018.

Zedan Martin, WVSU, (1) presented at the KY-WV LSAMP 11th Annual Research Symposium; (2) presented at West Virginia Posters at the Capitol, February 26, 2019; and (3) presented at the WVSU Summer Research Symposium, July 27, 2018,

Corey Mattic, Jr., KSU chemistry and chemical engineering senior, conducted biotechnology and water quality research at KSU summer 2018 and presented at Kentucky Posters at the Capitol, February 21, 2019.

Jimmy Mickens, UK mechanical engineering junior, (1) spent summer 2018 in Detroit, MI as an intern for GNC; (2) attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019; and (3) presented on a panel of scholars during a STEAM Academy visit.

Caitlin Mickles, WVU, had an abstract accepted for NCUR 2018; presented at the KY-WV LSAMP 11th Annual Research Symposium.



Je'Coiya Moore, Centre Scholar, participated in study abroad in China, fall 2018. While there, she conducted research at the Shanghai School of Medicine Fudan University. Her research focused on epidemiology and public health. She conducted lab experiments and also worked with TB patients in a hospital and rural settings. She also presented about her experience at the Centre College Internship Showcase on February 4, 2019.

Lukas Negron, WKU, presented at the KY-WV LSAMP 11th Annual Research Symposium.



Asare Nkansah, UK computer science senior, (1) conducted international research in Bordeaux, France, through the LSU iREU program summer 2018; (2) served as a UK Undergraduate Research Ambassador to *inspire broader engagement in undergraduate research at the University of Kentucky*; (3) presented at the LSU iREU Meeting, Toulouse, France, June 28-30, 2018; (4) had an abstract accepted for NCUR 2018; (5) presented at the International Conference on Computing, Networking, and Communications, in Honolulu, HI, February 18-21, 2019; (6) presented at the KY-WV LSAMP 11th Annual Research Symposium; (7) presented on a panel of international researchers at the KY-WV LSAMP 11th Annual Research Symposium; (8) presented at the Society for the Advancement of Chicanos and Native Americans in Science National Conference, San Antonio, TX, October 11-13, 2018; (9) served as a mentor during the UK STEAM Academy Speed Mentoring event; (10) presented on a panel of scholars during a STEAM Academy visit; (11) attended the Alltech One19 Ideas Conference, an international event, Lexington, KY, May 19-21, 2019; and (12) has been accepted to the computer science Ph.D. program at UK.

LaShonna T. Odom, KSU biology sophomore, conducted biotechnology and water quality research at KSU summer 2018.

Oluchi Otugo, Marshall, attended the Women of Color STEM Conference, October 12-13, 2018.

Emmely Ovalle, Centre, presented at the Midwestern Psychological Association meeting, March 8, 2019.

Maria Ovalle, Marshall, presented at the KY-WV LSAMP 11th Annual Research Symposium.

Oriana Ovide, WVU, (1) presented at the KY-WV LSAMP 11th Annual Research Symposium; (2) presented at American Academy of Forensic Science Annual Conference, in Baltimore, MD, February 18-23, 2019; and (3) presented at the WVU Summer Undergraduate Research Experience Poster Session, July 28, 2018.

Darian Parker, UK mechanical engineering junior, (1) had an abstract accepted for NCUR 2018; (2) presented at the KY-WV LSAMP 11th Annual Research Symposium; (3) presented at the Annual Biomedical Research

Conference for Minority Students, Indianapolis, IN, November 14-17, 2018; (4) presented at the Emerging Researchers National Conference in Washington, D.C., February 21-23, 2019; and (5) will conduct research in France summer 2019.

Julia Parker, UK, presented at the KY-WV LSAMP 11th Annual Research Symposium and has been accepted to graduate school at UK.

Ja’Keshia Peterson, WVSU, presented at the KY-WV LSAMP 11th Annual Research Symposium and at West Virginia Posters at the Capitol, February 26, 2019.

Caitlin Powell, UofL, attended the Women of Color STEM Conference, October 12-13, 2018.

Jazmine L. Richmond, KSU mathematics and engineering Scholar, conducted biotechnology and water quality research at KSU summer 2018 and presented at KSU Research Day, April 2019.

Sampada Rijal, UK biology junior, attended the Women of Color STEM Conference, October 12-13, 2018, and the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Steven Roberts II, UK mining engineering senior, participated in an internship with a mining engineering company summer 2018, and attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Ariel Robinson, UK civil engineering junior, attended the Women of Color STEM Conference, October 12-13, 2018 and the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Philip Robinson, KSU, presented at KSU Research Day, April 2019.

Kalvin Rucker, KSU, had an abstract accepted for NCUR 2018.

PJ Scott, UK engineering senior, attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Ishita Sharma, Marshall, presented at the KY-WV LSAMP 11th Annual Research Symposium.

Alexius Shorter, KSU biology freshman, conducted biotechnology and water quality research at KSU summer 2018 and had an abstract accepted for NCUR 2019.

Alston Sickles, UK, attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

America Silva, UofL, presented at the KY-WV LSAMP 11th Annual Research Symposium.

Mwenda Singai, WKU, presented at the KY-WV LSAMP 11th Annual Research Symposium.

Jalaaja Slaton, UK biology sophomore, participated in a 2018 Summer Health Services Internship.



Malik Smith, Marshall civil engineering junior, attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019, and presented at the KY-WV LSAMP 11th Annual Research Symposium.

Ariana Swayne, Marshall Scholar, attended the Women of Color STEM Conference, October 12-13, 2018.

Makayla Swayne, Marshall Scholar, attended the Women of Color STEM Conference, October 12-13, 2018.

Ndeye Thiaw, UK biology senior, (1) received the Gertrude Flora Ribble Undergraduate Fellowship for recognition of academic achievement and scientific excellence; (2) attended the Women of Color STEM Conference, October 12-13, 2018; (3) attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019; and (4) graduated May 2018.

Romello Thorpe, Marshall, attended the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Ray Timmons, Marshall, presented at the KY-WV LSAMP 11th Annual Research Symposium.

Gretel Toloza-Alvarez, Marshall, presented at the KY-WV LSAMP 11th Annual Research Symposium.

Derrick Tonto, Centre, presented at 2018 Centre College Weekly Summer Research Seminar and the Centre College RICE (Research, Internships, Creative Endeavors) Symposium.

Ajia Toth, Marshall, presented at the KY-WV LSAMP 11th Annual Research Symposium.

Erika Tucker, UofL, attended the Women of Color STEM Conference, October 12-13, 2018, and the Black Engineer of the Year Award (BEYA) Conference in Washington, D.C., February 8-10, 2019.

Karen Udoh, UofL biology graduate, was selected as a 2018 Fulbright Scholar and studied in Greece.

Oruada Ukiwo, WVSU, presented at West Virginia Posters at the Capitol, February 26, 2019.

Nicole Utano, WVU, presented at the KY-WV LSAMP 11th Annual Research Symposium and at the WVU Summer Undergraduate Research Experience Poster Session, July 28, 2018.

Day Vance, Centre Scholar, presented at 2018 Centre College Spring Internship Showcase and the Centre College RICE (Research, Internships, Creative Endeavors) Symposium.

Mya Vannoy, WKU, (1) had an abstract accepted for NCUR 2018; (2) presented at the KY-WV LSAMP 11th Annual Research Symposium; (3) presented at West Virginia Posters at the Capitol, February 26, 2019; and (4) presented at the WVU Summer Undergraduate Research Experience Poster Session, July 28, 2018.

Deyshon Ward, KSU engineering senior, presented at KSU Research Day, April 2019.

L. Stephanie Warlitner, Marshall Scholar, attended the Women of Color STEM Conference, October 12-13, 2018.

Desiree Warren, KSU biology freshman, conducted biotechnology and water quality research at KSU summer 2018.

Shaka Wilkerson, WVSU, presented at the WVSU Summer Research Symposium, July 27, 2018.

APPENDIXES

APPENDIX A
INTERNATIONAL RESEARCH
TRAVEL CHECKLIST

International Research Travel Checklist

Travel information

Departing Flight Booked	Amount of Luggage Allowed:	Returning Flight Booked	Amount of Luggage Allowed:
Time to Arrive at Airport:	Airport Address:	Time to Arrive at Airport:	Airport Address:
Time of First Flight:	Time of Final Landing:	Time of First Flight:	Time of Final Landing:
Mode of Transportation to Destination: Car/ Rental Car TaxiTrainBus	Destination Address:	Mode of Transportation to Destination: Car/ Rental Car TaxiTrain Bus	Destination Address:

STUDENT VISA (For 90+ days abroad, Arrange 7-12 weeks before arrival)

- Campus France Application
- Identity photo
 - Passport
 - Permanent Address
 - Program Description
 - Validating document from host Research Institution
 - Resume
 - Language Proficiency
 - \$180.00 3 week processing fee
OR \$330.00 3 day processing
 - Signed and Scanned Service Form

- Visa Application
- Visa Appointment (within three month of leaving the US, no less that three weeks before leaving)
 - Valid Original Passport
 - Proof of travel medical insurance (\$50,000 minimum)
 - Proof of Financial Means
 - US permanent residence card (non US citizens only)
 - Completed Application form
 - Completed and Approved Campus France Application
 - Travel Itinerary (Do not purchase tickets)
 - Pre-paid express mail envelope addressed to yourself
 - Passport sized photo (Passport photo restrictions apply)

Internship Visa (Any period of time) (Arrange 4-12 weeks before arrival)

- Visa Application
- Visa Appointment (within three month of leaving the US, no less that three weeks before leaving)
 - Valid Original Passport
 - US permanent residence card (non US citizens only)
 - Processing fee \$71.00 (in Cash)
 - Completed Application Form
 - "Convention de Stage" completed form (Can be found on visa application website)
 - Proof of Financial means or payment agreement
 - Pre-paid express mail envelope addressed to yourself
 - Passport sized photo (Passport photo restrictions apply)

International Communication (only check 1, Arrange 2-3 weeks before arrival)

- Contact phone service provider about unlocking cell phone (Necessary if you plan to purchase an international SIM card) and canceling service for months abroad
- Contact domestic phone service provider about a short term or long term international plan

International Housing (Arrange 4-8 weeks before arrival)

- Arrange for Arrival (keys, entrance pass, etc.)
- Pack or plan to buy housing items (linens, pillows, dishes, towels, etc.)
- Pay housing deposit, fees and/or first rent
- Plan route from housing to workplace
- Read housing reviews and amenities

International Banking (2-4 weeks before arrival)

- Acquire small amount of foreign currency before departure from US (can be done at an international airport or ordered through a domestic bank)
- Collect required materials for opening a bank account (Some banks will require a copy of your birth certificate)
- Notify Domestic bank of travel and all credit card companies
- Research international banking system (compatible with US bank or not compatible)
- Research requirements for setting up a bank account
- Purchase a prepaid travel card (recommended)

Insurance and Medical Needs (1-4 weeks before arrival)

- Check CDC recommended vaccinations and health risks for host country
- Check foreign national requirements for insurance (some countries require civil insurance, recommend purchasing through a local company in host country)
- Check international coverage on current medical insurance or purchase medical insurance in host country
- Purchase Traveler's insurance

What to Pack

Medications

Note: Before packing any medications check which drugs are allowed or not allowed in host country. All medications should be in original packaging.

- Allergy Medications
- Common Cold Medications
- Daily Medications (Supply For The Duration Of Your Stay)
- Emergency Medications (Ex. EpiPen, Inhaler)

- Multivitamins
- Motion sickness/ Altitude sickness drugs
- Pain Medication

Clothing

Note: Check weather averages for the entire duration of your stay in the host country.

- Belt
- Business Pants/ Skirts
- Business Shirts
- Casual Lab Appropriate Shirts
- Casual Long Pants
- Casual Shorts
- Exercise bottoms
- Exercise tops
- Formal/ Business Shoes

- Glasses/ Sunglasses
- Outdoor Jacket
- Pajama bottoms
- Pajama tops
- Rain Jacket
- Swimsuit or swim trunks
- Socks
- Sweater(s)
- Undergarments

Toiletries

Note: Most things can be bought in host country, bring for 1-2 weeks.

- Contacts and contact solution
- Deodorant
- Feminine Hygiene Products
- Floss
- Formal/ Business Shoes
- Laundry Detergent
- Lotion
- Mouthwash
- Shaving kit/ Razor

- Face wash
- Hair Accessories
- Hair comb/ brush
- Makeup and makeup remover
- Personal Hygiene items
- Sunscreen
- Shampoo and Conditioner
- Toothbrush and toothpaste
- Toilet paper

- Linens

Note: Some may be provided by or can be rented from the housing establishment; others can be bought in the host country.

 - Blanket (travel size)
 - Eye/Sleep mask
 - Hand dry towel
 - Pillow
 - Pillow case
 - Sheet set
 - Travel Pillow
 - Washcloth and towel set

- Electronics
 - Camera
 - Plug Adapter/ Converter
 - Phone charger
 - Laptop/ Tablet
 - Headphones

- Travel Documents
 - Birth Certificate (if needed)
 - Flight Itinerary
 - Documentation of Insurance
 - Host country housing documents
 - Passport
 - Personal ID/ Drivers License
 - Student ID
 - Visa documentation

Important Contacts

LSAMP Campus Coordinator Name:	Campus Study Abroad Office Contact Person:	REU/Program Coordinator: Name:
Phone Number:	Phone Number:	Phone Number:
Email:	Email:	Email:

Recommended Steps:

- Register with the State Department Smart Traveler Enrollment Program

The Smart Traveler Enrollment Program notifies the nearest US embassy to your location abroad of your presence in that country. The State Department will notify you of any relevant information to your safety such as: terrorist's attacks or heightened possibility of terrorist attacks, natural disasters, disease outbreaks, and travel warnings.

Enroll at: <https://step.state.gov/step/>
- Register with Study Abroad office

Some study abroad offices keep a list of all students abroad, regardless of the program you are participating in. This provides a second safety net while abroad and may consist of: additional security alerts, medical coverage while abroad, and a network of resources while abroad.
- Talk to your on campus Financial Aid advisor, Office of Undergraduate Research, or Study Abroad Office

Some universities have money set aside for students wanting to travel abroad to do research. Often one or multiple of the listed offices will be able to inform you of the amount available, conditions, and deadlines associated with receiving financial support for your research abroad.

Helpful Links While Abroad

Travel Within France

Trains (SNCF)	https://en.oui.sncf/en/
Busses (Oui Bus)	https://www.ouibus.com/
Busses (Flix Bus)	https://www.flixbus.com/
Flights (Ryan Air)	https://www.ryanair.com/fr/fr/
Car Sharing (Bla Bla Car)	https://www.blablacar.fr/

Travel Outside of France

Busses (Oui Bus)	https://www.ouibus.com/
Busses (Flix Bus)	https://www.flixbus.com/
Flights (Ryan Air)	https://www.ryanair.com/fr/fr/
Car Sharing (Bla Bla Car)	https://www.blablacar.fr/

Purchasing a French Sim Card (Phone)

Free Mobile	http://mobile.free.fr/
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Purchasing French Insurance (Of Any Kind)

MAE Insurance	https://www.mae.fr/
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Learning French

DuoLingo	https://www.duolingo.com/course/fr/en/Learn-French-Online
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French Banking

Société General	https://www.societegenerale.fr/
La Banque Postale	https://www.labanquepostale.fr/
Western Union	https://www.westernunion.com/fr/en/home.html

APPENDIX B

KY-WV LSAMP 11th
ANNUAL RESEARCH SYMPOSIUM
HUNTINGTON, WV
MARCH 1-2, 2018



KY-WV LSAMP 11th Annual Research Symposium



Marshall University, Student Center
Huntington, WV, March 1-2, 2019



KY-WV LSAMP

11th Annual Research Symposium



Marshall University

Huntington, WV

March 1-2, 2019

Agenda

Friday, March 1, 2019		For LSAMP Only	
Marshall University - Student Center			
02:00-04:00 PM	Symposium Registration		BE5
02:00-03:00 PM	Networking Mixer		BE5
03:00-03:15 PM	Welcome and Introductions	Maurice Cooley, Marshall Assoc. VP for Intercultural Affairs and KYWV LSAMP Coordinator	BE5
		Fara Williams, KY-WV LSAMP Director	
03:15-04:00 PM	KY-WV LSAMP	Fara Williams, KY-WV LSAMP Director	BE5
	International Experiences	KY-WV LSAMP Scholars Lloyd Bartley, UofL Edwina Barnett, WVSU Sarah Hodges, UK Asare Nkansas, UK	BE5
04:00-07:30 PM			
		Dinner	BE5
	Preparing for International Research	Sarah Hodges, UK Scholar	BE5
07:30-09:00 PM	Networking Mixer / One-on-One Clinic		BE5
Saturday, March 2, 2019		For the General Public & KY-WV LSAMP	
Marshall University - Student Center			
08:00-10:00 AM	Symposium Registration and Refreshments		1st Floor Lobby
09:00-09:30 AM	Welcome and Introductions	Girmay Berhie, Ph.D., Marshall Assoc. Dean of Research and LSAMP Coordinator	Don Morris Room
		David Miller, Ph.D., KY-WV LSAMP Co-PI	
		Fara Williams, KY-WV LSAMP Director	
09:30-10:30 AM	Keynote Presentation	Tyrone Hayes, Ph.D., Professor, Integrative Biology, UC Berkeley	Don Morris Room
10:30-10:45 AM	Pictures		Fountain/Staircase
10:45-11:00 AM		Break	
11:00-12:00 PM	Oral Presentations	See Presentation List	Don Morris Room
11:00-12:00 PM	High School Session		TBD
12:00-01:30 PM		Networking Lunch	John Marshall Dining Room
12:00-01:30 PM	Alliance Meeting Lunch	KY-WV LSAMP Administration, Campus Coordinators, and Invited Guests	Shawky Dining Room
01:30-03:00 PM	Recruitment Tables	See Recruitment List	Don Morris Room
01:30-02:15 PM	Poster Session 1 - Odd #'s	See Presentation List	Don Morris Room
02:15-03:00 PM	Poster Session 2 - Even #'s	See Presentation List	Don Morris Room
03:00-03:30 PM	Closing / Recognition Presentations	Fara Williams, KY-WV LSAMP Director	Don Morris Room

APPENDIX C

KY-WV LSAMP 2018
TRANSFER REPORT

2018 Transfer Report

Kentucky-West Virginia Louis Stokes Alliance for Minority Participation (KY-WV LSAMP)



Submitted to
The National Science Foundation 2415 Eisenhower Avenue
Alexandria, VA 22314



September 20, 2018

2018 Transfer Report

STEM Pathways and Research
Alliance: KY-WV LSAMP
NSF HRD #1826763

Kentucky – West Virginia
Louis Stokes Alliance for Minority Participation
In Science, Technology, Engineering, and Mathematics

Submitted by

University of Kentucky
Lead Institution

Eli Capilouto, DMD, Sc.D.
Principal Investigator

Kazi Javed, Ph.D.
Lynn Michaluck, Ph.D.
David Miller, Ph.D.
Johné Parker, Ph.D.
Co- Principal Investigators

Fara Williams
Project Director

The Kentucky - West Virginia Louis Stokes Alliance for Minority Participation (KY-WV LSAMP) is a consortium of colleges and universities working together to create, enhance, and expand programs designed to broaden participation and increase the quality and quantity of students from underrepresented populations who receive degrees in science, technology, engineering, and mathematics (STEM) disciplines. Program goals and activities focus on undergraduate research experiences, graduate school preparation, and international experiences.

Many students begin their academic career at a community college for a number of reasons including financial considerations. Community colleges throughout the country play a critical role for students who intend to, eventually, complete a bachelor's degree, particularly in STEM fields. The KY-WV LSAMP alliance fully recognizes the importance of working with community colleges in creating a STEM pipeline for partnering colleges and universities. KY-WV LSAMP will work closely with both partner community colleges as well as others in the region to enhance the STEM pipeline.

The transfer activities for KY-WV LSAMP include three aspects.

- 1) Direct LSAMP programming.** Bluegrass Community and Technical College (BCTC) has been a partner institution since the inception of KY-WV LSAMP. Now, Jefferson Community and Technical College (JCTC) has also become a partner in the alliance. The addition of JCTC is important because of their large URM student population.
- 2) Alliance institution programming.** Though not directly funded by LSAMP, BCTC and JCTC have other activities that contribute to students' successful transfer to 4-year institutions including KY-WV LSAMP institutions. In addition, there are transfer programs at other alliance institutions.
- 3) Articulation agreements.** KY-WV LSAMP partners (such as WVU and WKU) also have articulation agreements with other 2-year and 4-year institutions. It is important to note the relationships and connections of partner institutions with non-partner institutions in the region for expanded reach of students transitioning successfully.

Transfer statistics for Kentucky include:

- In 2014, 5,826 students transferred from two-year to four-year institutions in Kentucky.
- More transfers in 2014-15 came from BCTC than any other Kentucky Community and Technical College System (KCTCS) college.
- In 2014-15, 15% of students earned an associate degree prior to transferring.
- In 2014-15, the average credit hours upon transfer was 40 with about a third transferring with 60 or more hours.
- The number of Hispanic transfer students increased 63% over five years (2010/11-2014/15).
- The retention rate one year after transfer for students who transferred from KCTCS to Kentucky public four-year institutions in 2013-14 was 83.5%.
- Three-year (after transfer) graduation rates for the 2012-13 cohort of transfer students was 24.9%. The four-year (after transfer) graduation rate was 41.4%.
- **BCTC**

- 1,048 students transferred to four-year public institutions in 2014-15.
- Of those, 30% transferred to the University of Kentucky, 9% transferred to Kentucky State University, 3% transferred to the University of Louisville, and 2% transferred to Western Kentucky University.
- Thirteen percent of all BCTC 2014-15 transfer students did so with an associate degree.
- Of the 2011-12 cohort, 24% of those who transferred to public institutions graduated within three years of transfer.
- Of the 2012-13 cohort, 27% of those who transferred to public institutions graduated within three years of transfer.
- **JCTC**
 - 737 students transferred to four-year public institutions in 2014-15.
 - Of those, 62% transferred to the University of Louisville, 5% transferred to Western Kentucky University, 3% transferred to the University of Kentucky, and 2% transferred to Kentucky State University.
 - Fourteen percent of all JCTC 2014-15 transfer students did so with an associate degree.
 - Of the 2011-12 cohort, 26% of those who transferred to public institutions graduated within three years of transfer.
 - Of the 2012-13 cohort, 26% of those who transferred to public institutions graduated within three years of transfer.

(Kentucky Transfer Student Feedback Report August 2017 <http://www.cpe.ky.gov/data/reports/transferfeedbackreport.pdf>)

Transfer statistics for West Virginia include:

- In 2015, 1,299 students enrolled in a bachelor's degree program the fall after having been enrolled at a community and technical college.

(West Virginia Higher Education Report Card 2017

<http://www.wvhepc.edu/governor-tomblin-announces-west-virginias-four-year-campus-community-technical-colleges-to-help-ease-student-credit-transfer-process/>)

Transfer goals for the period of the grant include:

- Increase the number of documented KY-WV LSAMP participants at community colleges who conduct research during the academic year from none to at least three in 2017-18 with a gradual increase to at least ten in 2022-23.
- Increase the number of documented KY-WC LSAMP participants at community colleges who conduct research during the summer from none to at least three in summer 2018 with a gradual increase to at least ten in summer 2023.
- Increase the BCTC transfer numbers from 1,048 to 1,258 (a 20% increase) over the course of the five-year grant.
- Increase the JCTC transfer numbers from 737 to 884 (a 20% increase) over the course of the five-year grant.

To accomplish these goals, KY-WV LSAMP will conduct activities and link with institutional

activities and events in order to help students from underrepresented populations transition successfully and complete their baccalaureate degrees in STEM disciplines.

1. Direct LSAMP Programming.

Several activities that contribute to students' successful transition to four-year institutions are directly funded by KY-WV LSAMP. These activities are housed at the community college partner campuses. At Bluegrass Community and Technical College (BCTC), BLINKS and Super Someday have been led by LSAMP for years. Being new to the alliance and having just received funding, Jefferson Community and Technical College (JCTC) has not, yet, developed LSAMP-funded activities, but JCTC will be developing LSAMP activities in the year to come. In addition to transfer activities, both community colleges, as well as other institutions in the alliance, have activities geared to college readiness and success skills which also contribute to success when those students transfer to 4-year institutions. Some examples of LSAMP activities include, but are not limited to:

BLINKS allows students to transfer from BCTC to Kentucky State University (KSU) with a scholarship that offers full tuition and housing for up to two years. In addition to the financial support, students receive mentoring and learn strategies on how to utilize other resources during college. This is a cooperative effort between BCTC and KSU that was originally supported by the Links and USA Funds. Funding by Links and USA ended five years ago, but the initiative continues to be supported by BCTC and KSU.

Latino Leadership and College Experience Camp provides an intensive college preparation and leadership development experience for Latino youth. Students participate in college-like courses, leadership development workshops, team-building activities, cultural experiences, and social justice awareness sessions. Students interact with professors, current college students, and others. <https://bluegrass.kctcs.edu/news/bctc-among-finalists-for-national-diversity-award.aspx>

Super Someday is a week-long event that is part of a state-wide program to encourage more youth to attend college. The 2018 event targeted STEM careers/majors, and over 400 students participated.

2. Alliance Institution Programming.

Our partnering institutions have already established articulation agreements with other universities within the state and the region. These articulation agreements allow students to transfer to universities of their choice seamlessly with their earned credits. However, it should be noted that the general education core varies between universities. Consequently, transfer students have to work with their new academic advisors in order to maximize their transfer credits. Some institutions have programs designed to ease the transition and create connections between the student and the transfer campus before transfer occurs. Some examples are:

BCTCblue+ is a joint program with the University of Kentucky for BCTC students who intend to

complete an Associate's Degree before transferring to UK. Students enrolled in this program are eligible to take up to 12 credit hours of coursework on UK's campus at the BCTC tuition rate while pursuing the AA/AS degree at BCTC. <https://education.uky.edu/khp/wp-content/uploads/sites/9/2014/11/bctcblue.pdf>

JCTC Transfer Fair takes place each fall semester. Approximately 20 institutions are represented at this annual event. In addition, UofL and UK (alliance institutions) sometimes have special college visit days for STEM students from JCTC. JCTC keeps information about these and other transfer events posted on a website. <https://jefferson.kctcs.edu/current-students/academic-resources/transfer-information/events.aspx>

JCTC Transfer Visits takes students to institutions in the region in order to aid in making connections and a smooth transition. Scheduled visits for Fall 2018 include:

- Tennessee State University, September 1
- University of Kentucky, October 12
- Western Kentucky University, October 19
- Lindsey Wilson, October 26
- Bellarmine University and Indiana University Southeast, November 2
- University of Louisville and Spalding University, November 9

The KCTCS Green and Gold Initiative: Joint Admission/Dual Enrollment between The Kentucky Community and Technical College System and Kentucky State University memorandum of agreement – “to promote the successful undergraduate education of students who are admitted to and enrolled at both institutions. <http://kysu.edu/wp-content/uploads/2017/01/18-ARTICULATION-AND-COLLABORATION-AGREEMENTS.pdf>

KnowHow2Transfer is a Kentucky CPE web tool that students can use to learn about institutions as well as how courses will transfer. Several institutions (including KSU and WKU) have a link to this tool on their institution website. - <http://knowhow2transfer.org/>
<http://www.knowhow2transfer.org/degreepathway.asp>

Transfer Student Scholarships. Institutions within the alliance offer scholarships that are designated for transfer students. Scholarships include, but are not limited to:

- Kentucky State University <https://kysu.edu/2017/05/10/ksu-blinks-help-transfer-students-cross-the-finish-line/>
 - BLINKS
- Marshall University
 - Transfer Scholarship for In-State Students <https://www.marshall.edu/sfa/types-of-aid/marshall-university-scholarships-for-wv-applicants/transfer-student-scholarship-for-in-state-students/>
 - Transfer Student Scholarship for Metro Students <https://www.marshall.edu/sfa/types-of-aid/marshall-university-scholarships-for-metro-applicants/transfer-student-scholarship-for-metro-students/>
 - Transfer Student Scholarship for Non-Resident Students <https://www.marshall.edu/sfa/types-of-aid/marshall-university-scholarships-for-non-resident-applicants/transfer-student-scholarship-for-out-of-state-students/>
- University of Kentucky <https://www.uky.edu/financialaid/scholarship-transfer-students>
 - Distinguished Transfer Scholarship

- Wildcat Blue Scholarship
- Transfer Achievement Scholarship
- Housing Scholarship
- University of Louisville <https://louisville.edu/admissions/apply/transfer/cost-of-attendance/schp>
 - KCTCS Academic Transfer Scholarship
 - UofL Regional Awards
 - National Transfer Scholarship
 - Osher Reentry Scholarship
 - New Beginning Scholarship
- West Virginia University
 - Transfer Scholarship <https://financialaid.wvu.edu/home/scholarships/transfer>
- Western Kentucky University <https://www.wku.edu/financialaid/scholarships/transfer.php>
 - Transfer Base Awards
 - Transfer Targeted Awards

WKU Transfer Academic Plans is an online tool to help students plan their transfer to WKU from BCTC or other 2-year institutions. https://www.wku.edu/academicaffairs/pd/transfer_students.php

3. Articulation Agreements.

Kentucky General Education Transfer Policy allows for the automatic transfer of a block of courses to satisfy general education degree requirements. Students who transfer from one Kentucky public institution to another may be (1) general education category certified, (2) general education core certified, or (3) general education fully certified by the Registrar of the school where coursework was completed. <http://www.cpe.ky.gov/policies/academicaffairs/genedtransferpolicy.pdf>

Project Graduate is a program in Kentucky for those who have completed 80 or more credit hours but did not receive a degree. KY-WV LSAMP institutions (Kentucky State University, University of Kentucky, University of Louisville, and Western Kentucky University) participate in this program. <http://cpe.ky.gov/pg/index.html>

In 2014, the West Virginia Higher Education Policy Commission and the West Virginia Council for Community and Technical College Education signed a joint resolution to “*develop and implement a statewide agreement for alignment of associate programs to be accepted and fully credited to a related baccalaureate degree program.*” At the same time, they are working on a “*reverse transfer policy that facilitates associate degree completion by allowing students who earn their final credits at a four-year institution to have those credits sent back to and credited by the community college where they started.*” <http://www.wvhepc.edu/governor-tomblin-announces-west-virginias-four-year-campuses-community-technical-colleges-to-help-ease-student-credit-transfer-process/>

Institutions within the KY-WV LSAMP alliance have articulation agreements with other 2-year and 4-year institutions. Some of those are listed in the table below.

<p>Marshall University https://www.marshall.edu/admissions/transfer-students/articulation-agreements/</p>	<p>Blue Ridge Community and Technical College; BridgeValley Community and Technical College; Mountwest Community and Technical College; New River Community and Technical College; Ashland Community and Technical College; ACE Institute of Management, Nepal; Chonbuk National University, South Korea; European University of Lefke, Cyprus; Henan College; Kanawha Valley Community and Technical College; Kyungpook National University, South Korea; SolBridge International School of Business – Woosong Foundation, South Korea; St. Mary’s University College, Ethiopia; Zhejiang Normal University; Eastern West Virginia Community and Technical College; West Virginia Northern Community and Technical College;; Southern West Virginia Community and Technical College; Columbia State Community College; Palomar College; Bluefield State College</p>
<p>West Virginia State University</p>	<p>Blue Ridge Community and Technical College</p>
<p>West Virginia University https://admissions.wvu.edu/how-to-apply/transfer-students/transfer-articulation-agreements</p>	<p>Allegany College of Maryland; Blue Ridge Community and Technical College; College of Southern Maryland; Columbus State Community College; Community College of Baltimore County; County College of Morris; Eastern West Virginia Community and Technical College; Garrett College; Hagerstown Community College; Harrisburg Area Community College; Hocking College; INTI University, Malaysia; Lock Haven University; Lord Fairfax Community College; Marietta College; Montgomery College; New River Community and Technical College; Northern Virginia Community College; Pierpont Community and Technical College; Slippery Rock University; Tianjin University of Finance and Economics; Waynesburg University; West Virginia Community and Technical College System; West Virginia State University;</p>

	West Virginia University at Parkersburg; West Virginia Wesleyan College; Westmoreland County Community College; Wheeling Jesuit University
Western Kentucky University	South Central Kentucky Community and Technical College; Kentucky Community and Technical College System (includes BCTC and JCTC); Owensboro Community and Technical College; Elizabethtown Community and Technical College; Central Texas College

APPENDIX D
CAMPUS CONNECTIONS
AND HONORS



CM
18



READ THE FULL ARTICLE FROM PRAXIS ONLINE

"AN ACTIVE CLASSROOM: THE EMERGING SCHOLARS PROGRAM AT WEST VIRGINIA UNIVERSITY"

VOL. 14 ISSUE 4

BTLV/ESP-PRAXIS



Transfer Agreement
Bluegrass Community and Technical College (BCTC)

And

Kentucky State University (KSU)

The purpose of the Agreement is to continue facilitation of the BLINKS transfer Initiative. This collaboration assists BCTC students that have applied and been approved for BCTC BLINKS an opportunity to utilize mentoring, study strategies, and other resources to help them be successful at BCTC and to graduate with an AA or AS or transfer with 30 or more hours to KSU with KSU scholarship. This scholarship is for transferring students with 2.8 or above offered full tuition and housing to KSU for up to 2 years to complete their undergraduate degree. (Some transfer students in programs that have will transfer early to apply for such selective admission programs as nursing at KSU.) If students are in good standing and 1 semester short of graduating after the 2-year timeline, the scholarship may be extended for 1 additional semester only.

The Signatories of this agreement agree to the following:

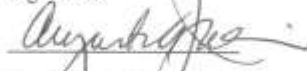
Bluegrass Community and Technical College

1. To recruit and retain eligible students for the BLINKS pipeline
2. Appoint a contact person to administer the BLINKS initiative until transfer
3. Explore opportunities to leverage existing resources such as providing individualized tutoring and books if STEM major is applicable during LSAMP funding
4. Provide career assessment prior to transfer
5. Provide advising, graduation audits, and transcript evaluations before transfer
6. Provide KY State University College visits during the BCTC BLINKS experience.

Kentucky State University

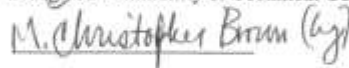
1. Provide personnel to accommodate up to 4 informational visits to campus annually
2. Provide full tuition and housing for up to 10 BCTC BLINKS referred transfer students annually (students must maintain 2.0 average and attend consecutively)
3. Appoint a KSU liaison to be the point of contact for the BLINKS transfer initiative
4. Provide application and housing fee without cost to applicable BLINKS transfers

Signatures:



Dr. Augusta Julian, President
Bluegrass Community & Technical College

11-29-18
Date



Dr. Christopher Brown, President Kentucky State University

11-29-18



Judge Hatchett to deliver keynote address at Kentucky State University Heritage Assembly

Posted on February 4, 2019 in [Campus News](#)

The star of the two-time Emmy nominated nationally syndicated show, *Judge Hatchett*, will deliver the keynote address at Kentucky State University's Heritage Assembly Thursday, Feb. 7 at 11 a.m. in the Carl H. Smith Auditorium of David H. Bradford Hall.

The 2019 Heritage Awards will be presented in academics, access, agriculture, and athletics, respectively to Dr. Betty Sue Griffin, **BLINKS Transfer Enterprise**, Dr. Herman Walston and Mr. Elmore Smith for their dedication and commitment to excellence, leadership and service.

The keynote speaker is widely known for her show, *Judge Hatchett*, now in its 18th season. *Judge Hatchett* won a Prism Award for Best Unscripted Non-Fiction Series. Hatchett is also the author of the national bestsellers *Say What You Mean and Mean What You Say* and *Dare to Take Charge*.

Hatchett's prestigious career includes a federal clerkship in the United States District Court Northern District of Georgia; nearly 10 years at Delta Air Lines as the airline's highest-ranking woman of color worldwide; service as a board member of three Fortune 500 companies (HCA, The Gap Inc. and ServiceMaster Company); an appointment as the chief presiding judge of the Fulton County (Atlanta, Georgia) Juvenile Court (the first African-American chief presiding judge of a state court in Georgia); a member of the National Football League's Atlanta Falcons' Board of Advisors and as a consultant to the National Basketball Association's pressing legal and social issues.

Currently, Hatchett is the founder of The Hatchett Firm, P.C., located in Atlanta. The firm specializes in risk and crisis management and catastrophic police misconduct cases.

Most recently, Hatchett has returned to TV in her new television court series, *The Verdict*. Hatchett is a graduate of Mt. Holyoke College and Emory University School of Law. The event is free and open to the public.



KSU, BLINKS help transfer students cross the finish line

Posted on May 10, 2017 in [Campus News](#), [Community](#), [Other News Stories](#)

FRANKFORT — For the past five years, Bluegrass Community and Technical College (BCTC), The Links organization and Kentucky State University (KSU) have collaborated for the BLINKS transfer initiative, which allows students from BCTC with at least a 2.8-grade point average to transfer to KSU with a scholarship. The scholarship offers full tuition and housing for up to two years. The scholarship allows the students to complete their undergraduate degree.

Students who are selected for the program are identified one year before they transfer. Throughout that year, the student is involved in tutoring and different activities, and the program looks for other grant money that may fund books or other expenses.

The program began with former KSU President Dr. Mary Sias when there was funding for initiatives that linked community colleges and HBCUs. The first few years of the BLINKS program was so successful that it still goes on, even though the funding for it has stopped.

Today, over 20 students have completed the program. “The retention of these students is great. Most of them come out on the honor roll,” said Charlene Walker, vice president for Multiculturalism & Inclusion at BCTC. “Most of the students have that giving spirit and are here for more than just the scholarship.” There will be six students graduating at this year’s commencement on Saturday, May 13 at the Frankfort Convention Center, and they include Harry Momo, Diamond McMullen, Lizbeth Garcia, Melody Spriggs, Amine Turhalli, and Patrick Raymond.

“It’s been a great program. It’s been a great working relationship,” Walker said. “It’s very beneficial to these students, and I would hate for it not to continue because it’s really been so beneficial to so many.”

—*Shantel Booth*

About the HEED Award



The *INSIGHT Into Diversity* Higher Education Excellence in Diversity (HEED) Award recognizes colleges and universities that demonstrate an outstanding commitment to diversity and inclusion. The 2019 HEED Award recipients will be announced in our November 2019 issue. Recipients of the 2019 Health Professions HEED Award will be announced in our December 2019 issue.

What is the HEED Award?

The *INSIGHT Into Diversity* HEED Award, open to all colleges and universities across the U.S. and Canada, measures an institution's level of achievement and intensity of commitment in regard to broadening diversity and inclusion on campus through initiatives, programs, and outreach; student recruitment, retention, and completion; and hiring practices for faculty and staff.

Applications are comprehensive, covering all aspects of campus diversity and inclusion. One of the goals of the application process is to help institutions of higher education assess their diversity efforts in order to build on their success and improve where necessary.

<https://www.insightintodiversity.com/about-the-heed-award/>

Diversity Champions

Diversity Champions exemplify an unyielding commitment to diversity and inclusion throughout their campus communities, across academic programs, and at the highest administrative levels.

A limited number of colleges and universities across the nation have been selected for this honor.

Known for visionary leadership, Diversity Champions are institutions that set the standard for thousands of other campus communities striving for diversity and inclusion. They develop successful strategies and programs, which then serve as models of excellence for other institutions. Diversity Champion schools exceed everyday expectations, often eclipsing their own goals.

Selected institutions rank in the top tier of Higher Education Excellence in Diversity (HEED) Award recipients. The HEED Award is presented annually by *INSIGHT Into Diversity* to recognize colleges and universities that are dedicated to creating a diverse and inclusive campus environment.



2018 Diversity Champions



2018 Recipients



Adelphi University
Amherst College
Anne Arundel Community College
Arkansas State University
Ball State University
Berea College
California State University, East Bay
California State University, Fresno
California State University, Fullerton
California State University, Los Angeles
California State University, Northridge
California State University San Marcos
Case Western Reserve University
Central Washington University
Clark University
Clemson University*
Columbia University in the City of New York*
Cuyahoga Community College
East Carolina University
Eastern Kentucky University
Eastern Washington University
El Paso County Community College District

Saginaw Valley State University
Seminole State College of Florida
Southern Illinois University Edwardsville
Stockton University
Stony Brook University
SUNY Buffalo State College
SUNY Old Westbury
SUNY System Administration
Swarthmore College
Texas Christian University
Texas Tech University*
The University of Alabama at Birmingham*
The University of North Carolina at Chapel Hill
The University of North Texas
The University of Texas at Austin
The University of Tulsa
Union College in New York
University at Albany – State University of New York
University of California, Riverside
University of Central Florida
University of Cincinnati*

Florida State University*
Framingham State University
Georgia Institute of Technology
Greenville Technical College
Indiana State University
Indiana University Bloomington*
Indiana University-Purdue University
Indianapolis
Kansas State University
Kent State University
Metropolitan State University
Metropolitan State University of Denver*
Miami Dade College
Millersville University
Morgridge College of Education
at the University of Denver
Mount Holyoke College
North Carolina State University
Northeastern University
Ohio University
Oklahoma State University*
Old Dominion University
Oregon State University
Pikes Peak Community College
Queens College – CUNY
Raritan Valley Community College
Rochester Institute of Technology*

University of Colorado Boulder
University of Delaware
University of Georgia
University of Houston
University of Houston Law Center
University of Illinois at Chicago
University of Illinois at Urbana-Champaign
University of Kentucky*
University of Louisiana at Lafayette
University of Louisville
University of Michigan – Ann Arbor
University of North Carolina Greensboro
University of North Carolina Wilmington
University of North Florida*
University of Pittsburgh of the Commonwealth
System of Higher Education
University of South Carolina
University of West Florida
University of West Georgia
Virginia Commonwealth University
Virginia Polytechnic Institute and State
University*
West Virginia University
Western Michigan University
Whitworth University
Widener University
William & Mary
William Marsh Rice University (Rice
University)
William Rainey Harper College (Harper
College)
Winston-Salem State University

*Also a 2018 *INSIGHT Into Diversity* “[Diversity Champion](#)”

UofL wins diversity award for second consecutive year

By Eric Matthews -

September 28, 2015

21



For the second year in a row, UofL has won the Higher Education Excellence in Diversity (HEED) award from Insight into Diversity magazine. The award recognizes colleges that demonstrate an outstanding commitment to building a diverse and inclusive environment.

The HEED award cited UofL's introduction of competency requirements for LGBT health in its School of Medicine, becoming the first university in the nation to do so. The award also recognized that many students of color had earned prestigious scholarships and executive student government positions, and that the university's comprehensive diversity plan was tailored to the specific needs of each unit.

"We're proud to have won this award because it showcases the achievements and progress we are making toward being a more inclusive university," said Dr. Mordean Taylor-Archer, vice provost for diversity and international affairs.

UofL will be featured alongside 91 other HEED recipients in the November issue of Insight into Diversity.

University of Kentucky Creates a Community of Belonging By and for All

By

Alexandra Vollman

October 24, 2017



Guest speakers and students during student group Poetic Justice’s Accountability Cypher event, a project funded by a UK Inclusive Excellence Program Grant



Diversity Champions exemplify an unyielding commitment to diversity and inclusion throughout their campus communities, across academic programs, and at the highest administrative levels. INSIGHT Into Diversity selected institutions that rank in the top tier of past Higher Education Excellence in Diversity (HEED) Award recipients.

As the largest university in Kentucky — with 30,000-plus students, several thousand faculty and staff, and 20 colleges and schools — the **University of Kentucky** (UK) in Lexington recognizes the importance of involving all of its members in creating what Vice President for Institutional Diversity Sonja Feist-Price calls a “community of belonging.”



“It is very hard for any one individual or any one office to do the work that must be done, so what’s important is creating a synergistic partnership across our campus so that we can effect change not only within the university, but throughout [the surrounding] community,” says Feist-Price.

One way UK facilitates this synergy is by having a chief diversity officer in every college or school. These individuals meet regularly with Feist-Price to share best practices and discuss areas and strategies for improvement. “I often refer to [UK] as a university without walls because we really strive to work across the aisle with diversity in all sorts of ways so that ... we can become the university we want to [be],” explains Feist-Price.



Already with a diverse mix of faculty, staff, and students, UK concentrates its efforts on ensuring that each person feels valued and comfortable being his or her true self on campus. “The pinnacle of what we aspire to have at our institution is a community of belonging such that all of our faculty, staff, and students feel that they belong to the university and that the university belongs to them,” she says. “The richness of our diversity is very important, but ... it’s only when people feel that they are a valued member that they bring themselves in totality to our campus.”

UK strives to build this community through a variety of approaches, including working to continuously improve the campus climate by overcoming biases, offering

everyone a seat at the table, and creating opportunities to examine important diversity-related issues and topics.

Inclusive Excellence Program Grants

With a dual purpose to increase students’ sense of belonging on campus and provide diversity programming, the Office for Institutional Diversity (OID) offers Inclusive Excellence Program Grants. Made possible by a \$6 fee that students pay at the beginning of each semester — which Feist-Price says generates about \$150,000 each semester — the grants allow students, faculty, and staff to develop and execute diversity programming and events.

Every spring and fall, OID has a call for proposals, and individuals submit an application to be considered for an award, the largest of which is \$25,000. A committee of faculty, staff, and students reviews all proposals to ensure that a project meets all qualifications. Not only must plans concentrate in some way on diversity, but they must also be inclusive of different student populations; demonstrate collaborative partnerships between a variety of groups, offices, and student organizations; serve as models for replication across the campus; and expand the success of existing programs at UK, according to the program’s website.

While faculty and staff can also apply for the grant, Feist-Price says the funds must be used to benefit students. Since launching last fall, the program has featured a number of diversity- and inclusion-related events focused on a variety of topics and identities — from LGBTQ-inclusive healthcare, to stereotypes and prejudice, to African culture. “It really takes on different shapes and forms, so it might be diversity through music or diversity through food,” explains Feist-Price. “[It could be] cultural [or] educational.”

In April, student group Poetic Justice — which uses creativity to address societal issues — was awarded a \$10,000 Inclusive Excellence Grant to host what the organization called an Accountability Cypher. The event brought together artists, academics, and community leaders who used their work to encourage conversation around issues affecting marginalized identities.

[Photo above: Guest speakers and students during student group Poetic Justice’s Accountability Cypher event, a project funded by a UK Inclusive Excellence Program Grant]



“Our intent with this event was multifaceted,” says Gabe Tomlin, a member of Poetic Justice. “We wanted to change the format of the usual dry panel discussion to something a little more engaging, show the role of art within activism, and give artists and educators of color the space to be seen, heard, and considered critically while engaging in discussion around important topics.”

At the end of these experiences, organizers must submit a report on what they accomplished. Feist-Price believes this and other aspects of the program help students grow. “It really gives students an opportunity to bring to fruition the things that are most meaningful and most valuable to them,” she explains. “This gives [them] a voice.”

For Tomlin, having opportunities such as that provided by the Inclusive Excellence Program Grant is important and reveals UK’s commitment to its students. “A good way of seeing where an institution’s concerns and priorities are is to look at who and what it invests in, and how it invests in them,” Tomlin says. “Giving the opportunity to students to be active leaders and curators of their own experiences is infinitely important. While planning the event, we felt powerful. We felt like we had the ability to do something, and that’s [critical], too.”

Unconscious Bias Initiative

With a focus on the broader campus community, UK’s Unconscious Bias Initiative (UBI) targets every person at every level, including the board of trustees, senior leadership, faculty, staff, students, and those who serve on faculty search committees.



After UK President Eli Capilouto expressed concerns that some individuals felt they had no voice in the university’s operations, he initiated the development of UBI, which is led by Marietta Watts, executive diversity liaison for OID. Through a partnership with consulting firm Cook Ross and direction from faculty, staff, student, and healthcare subcommittees, Watts and her team developed an interactive curriculum for the training aimed at addressing the needs and challenges of each group on campus.

“We started at the top,” explains Watts. “The president and all of his direct reports, deans and directors of centers, and then our board of trustees all attended at least a one-day training program, and then we began rolling it out to various colleges [and] departments.”

Designed to equip individuals to identify and mitigate their biases, the training is structured as a two-hour session that introduces participants to the concept of unconscious bias, including the ways in which the mind works and the way biases show up in our everyday lives and interactions. Following relevant video clips, participants engage in discussion and exercises.

“We invite them to talk to one another, to think about times when maybe they were perpetrators of unconscious bias or that bias was directed toward them ... to show how our biases work — to normalize it, not to excuse it; to explain that every single person alive has biases,” says Watts. “Some of them are conscious, but [with] others, ... we act but don’t know what is driving [our] behavior.”

Though not required, the training is “strongly recommended,” Watts says. However, the deans of some colleges have made it mandatory for all of their faculty and staff. “For those areas, we anticipate that we’re going to get at least 95 to 98 percent participation,” she says.

As of mid-September, approximately 25 percent of all UK faculty and staff had completed UBI, which began in fall 2016. Training for students kicks off in October as part of the UK 101 class, which is required of all incoming freshmen. Additionally, Watts says that she has received requests from Greek and other student organizations that want to participate.

Although she has no hard data yet on its effectiveness, Watts says anecdotal feedback on UBI has been very positive. Before rolling out the next round of training, she and her team plan to track and assess the first iteration's impact, looking for changes in behavior and a reduction in bias incidents as well as improvements in retention rates. Watts says she may also use that information to inform future trainings.

"I anticipate that there will be an uptick in the number of complaints at first simply because people understand [bias]. Then [we'll see] how long before that begins to level out and people feel empowered enough to have those kinds of conversations on their own," she says. "We'll be looking at all of the pieces that need to be in place so that we can determine whether the behaviors are moving in the direction that we want them to be moving in."

While other institutions have taken steps to address unconscious bias, Watts says that UK is the first university in the country to implement training of this nature organization-wide. "I'm excited because I think that it's a wonderful opportunity for other universities to see how this can be done," she says.

The Center for Equality and Social Justice

In reaction to the unrest occurring on college campuses across the country that began more than two years ago, UK created the Center for Equality and Social Justice to bring together faculty and students researching and engaging in these issues. Its mission is "to promote equality and social justice through collaborative scholarship and education and to help advocate for social justice within our communities, public policies, and laws," according to the center's website.

According to Christia Spears Brown, PhD, director of the center, its efforts focus on three specific areas: scholarship and research, public policy and law, and advocacy and community engagement. "I think of us as the academic arm of all of the other diversity initiatives going on at UK," she says. With faculty affiliates from all 20 colleges and schools represented, Spears Brown hopes that collectively, they will be able to have broader impact.

"We do research, and we do it in our own domains, but really, when you do work on equality and social justice, you want to improve equality and social justice; our topics don't exist in social vacuums. So the center is designed to help faculty and students have a sense of connection with others who do this work and to train [them]... how [to] use their scholarship to impact change in ways that promote equality and social justice," she explains. "That means, how do we take work out of the university and affect communities in positive ways and how can we shape public policy and laws to be more equitable."

The research and scholarship being conducted by faculty and students through the center varies in terms of discipline and approach as well as the group or issue being examined. "We define equality on the basis of race and ethnicity, immigration status, gender identity, sexual orientation, religion, disability level, [and so forth]. [It's] been really remarkable to see how many people in their own ways are working toward equality and social justice. We have people in fine arts. We have people in journalism. We have an economist."

By providing funding, a support network, and avenues for publishing and disseminating research, the Center for Equality and Social Justice serves as a "megaphone for the work that people are doing," Spears Brown says. In addition to opportunities for faculty to publish policy briefs and position papers, fellowships are available for students to do research alongside a faculty mentor. Currently, the center has two such fellows, one of whom is researching how to improve the retention of underrepresented students.

The center also plays the role of connecting other campus units with individuals who have expertise in areas related to equality and social justice — when a speaker is needed for an event, for example. Perhaps most important, though, are the connections it makes with lawmakers. "We're often in contact with state politicians and our federal legislators to make sure they're aware of the research coming out that's relevant for laws that are currently being discussed and to translate it in ways that can be useful," says Spears Brown. "All we can really do is plant that seed."

On UK's campus, the center's work has also taken the form of events and speakers — last year, it hosted a one-day symposium called Black and Blue: Critical Issues in Race and Policing, featuring scholars from across the U.S. — as well as consulting the university on issues regarding diversity and equality. Additionally, Spears Brown says she and her colleagues try to promote the work of other on-campus multicultural programs and centers, such as the Martin Luther King Center.

Because the Center for Equality and Social Justice is still in its infancy, Spears Brown says it is in the process of building its infrastructure, but in the future, she hopes to grow its reputation as a resource for the UK community and beyond. “What I hope is that policymakers, particularly at the state level, will come to us when they have to make decisions,” she says.

In addition to sending a powerful message to individuals of underrepresented and marginalized groups on campus, the center demonstrates UK’s commitment to creating a community of belonging where the concerns of any one group are shared and addressed by all.

“I think [the center] conveys a powerful message that this university cares about equality and social justice,” says Spears Brown. “There’s a lot to be said for that when it comes to fostering a sense of belonging — that this university not only says it but is funding that kind of work.”●

Alexandra Vollman is the editor of *INSIGHT Into Diversity*. The University of Kentucky is a 2017 *INSIGHT Into Diversity* HEED Award recipient.

UK's David A. Brennen, Sonja Feist-Price Named Prestigious ACE Fellows

By **Lindsey Piercy** Wednesday



David A. Brennen, dean of the College of Law, has been selected to participate in the American Council on Education's (ACE) Fellows Program. Pete Comparoni | UK Photo.

LEXINGTON, Ky. (March 27, 2019) — David A. Brennen, dean of the [College of Law](#), and Sonja Feist-Price, vice president for [institutional diversity](#) at the University of Kentucky, have been selected to participate in the American Council on Education's (ACE) [Fellows Program](#), the longest running leadership development program in the United States. Brennen and Feist-Price are two of 39 emerging college and university leaders chosen for the 2019-20 class of ACE Fellows.

David A. Brennen

Brennen joined the UK faculty in 2009. Along with more than 20 years of experience in the classroom, he is regarded as an innovator in the field of nonprofit law as it relates to taxation. Brennen is a co-founder and co-editor of Nonprofit Law Prof Blog, founding editor of Nonprofit and Philanthropy Law Abstracts, co-founder of the Association of American Law Schools Section on Nonprofit and Philanthropy Law and a co-author of one of the first law school casebooks on taxation of nonprofit organizations.

In 1988, Brennen received his bachelor's degree in finance from Florida Atlantic University and received his law degree from the University of Florida College of Law in 1991. In 2002, he was elected to the American Law Institute where he is an adviser on its project titled, "Principles of the Law of Nonprofit Organizations." Brennen has also served in leadership roles with the Society of American Law Teachers and the American Bar Association's Section of Legal Education.

Brennen is looking forward to this new opportunity. "As a scholar of nonprofit organizations, I have a long-standing interest in the inner workings of mission-driven organizations. After years of serving in leadership roles for such entities, including the privilege to serve 10 years as dean at UK College of Law, I look forward to participating in the ACE Fellows Program to learn more about improving institutional effectiveness as a leader in this area," he said. "I am particularly interested in focusing on leadership challenges in higher education so that I can better serve as a student-centered leader who contributes to maximizing opportunities for creativity, innovation and access."

Sonja Feist-Price

Feist-Price joined the UK College of Education faculty in 1992. In 2017, she assumed the position of vice president for institutional diversity. Feist-Price advises the president and provost on all academic, fiscal, programmatic and administrative policy decisions regarding the university's diversity and inclusivity goals. She is the senior administrative officer responsible for promoting collaboration among all members of the campus community including students, faculty, staff and administrators in an earnest pursuit of UK's diversity agenda.

Feist-Price is a licensed psychologist in the state of Kentucky, nationally certified rehabilitation counselor, licensed professional clinical counselor and a trained mediator, all of which complement her leadership abilities. She has an extensive history with externally funded research and has authored numerous scholarly publications. Feist-

Price has been the recipient of numerous awards acknowledging significant contributions to academic research and teaching, including the Rehabilitation Researcher of the Year, Exceptional Researcher of the Year and Teacher Who Made a Difference.

"The ACE Fellows Program is one of the premier leadership development programs in higher education. I am both honored and privileged to have this amazing opportunity," Feist-Price said. "I'm extremely appreciative to President Capilouto for allowing me this growth producing experience, which will allow me to expand my acumen in the areas of fundraising, budget models and student success, just to name a few."

ACE Fellows Program

Established in 1965, the ACE Fellows Program is designed to strengthen institutions and leadership in American higher education by identifying and preparing faculty and staff for senior positions in college and university administration through its distinctive and intensive nominator-driven, cohort-based mentorship model. More than 2,000 higher education leaders have participated in the ACE Fellows Program over the past five decades, with more than 80 percent of fellows having gone on to serve as senior leaders of colleges and universities.

"The ACE Fellows Program epitomizes ACE's goal of enriching the capacity of leaders to innovate and adapt, and it fuels the expansion of a talented and diverse higher education leadership pipeline," Ted Mitchell, ACE president, said. "Each year, I am impressed by how many former fellows are named to prominent leadership roles, which makes it even more exciting to meet each new cohort. I'm left wondering, 'Where will these fellows end up?'"

The program combines retreats, interactive learning opportunities, visits to campuses and other higher education-related organizations, and placement at another higher education institution to condense years of on-the-job experience and skills development into a single year.

During the placement, fellows observe and work with the president and other senior officers at their host institution, attend decision-making meetings, and focus on issues of interest. Fellows also conduct projects of pressing concern for their home institution and seek to implement their findings upon completion of the fellowship placement. At the conclusion of the fellowship year, fellows return to their home institution with new knowledge and skills that contribute to capacity-building efforts, along with a network of peers across the country and abroad.

For more information on the ACE Fellows Program, please click [here](#).

The University of Kentucky is increasingly the first choice for students, faculty and staff to pursue their passions and their professional goals. In the last two years, Forbes has

named UK among the best employers for diversity and INSIGHT into Diversity recognized us as a Diversity Champion two years running. UK is ranked among the top 30 campuses in the nation for LGBTQ inclusion and safety and the Chronicle of Higher Education judged us a “Great College to Work for.” We are ranked among the top 10 percent of public institutions for research expenditures — a tangible symbol of our breadth and depth as a university focused on discovery that changes lives and communities. And our patients know and appreciate the fact that UK HealthCare has been named the state’s top hospital for three straight years. Accolades and honors are great. But they are more important for what they represent: the idea that creating a community of belonging and commitment to excellence is how we honor our mission to be not simply the University of Kentucky, but the University **for** Kentucky.*



Dr. Sonja Feist-Price with Dr. A. James Hicks

University of Kentucky Named to Forbes 2019 Best Employer for Diversity List

By **Ryan Girves** Tuesday



UK ranked best in direct recommendations surrounding the topics of age, gender equality, ethnicity, disability and LGBTQ* inclusion, and the existence of positions and public initiatives responsible for diversity. UK Office for Institutional Diversity



Forbes released its second annual list of the Best Employers for Diversity Jan. 15. UK ranked 41st on the list and is the eighth college listed and the only Southeastern Conference school to be included. Mark Cornelison | UK Photo.



Crystal Wilkinson, associate professor of English in the Master of Fine Arts in Creative Writing Program at UK Department of English. The Forbes list recognizes employers who elevate their commitment to attracting and developing diverse talent.

LEXINGTON, Ky. (Jan. 15, 2019) — The University of Kentucky is among the Best Employers for Diversity in the country, according to a new ranking from Forbes magazine.

Forbes released its second annual list of the Best Employers for Diversity Tuesday. UK ranked 41st on the list and is the eighth college listed and the only Southeastern Conference school to be included.

The list, among other factors, recognizes employers who elevate their commitment to attracting and developing diverse talent and acknowledge diversity as an imperative pillar of success.

“This honor reflects our commitment to creating and sustaining an environment of belonging,” said UK President Eli Capilouto. “More than any other setting, college campuses must be spaces where we instill in young people the skills to absorb, understand and navigate fundamental tensions. We are called to cultivate empathy — the ability and the desire to walk a mile in another’s shoes, to see through someone else’s eyes — to experience what they experience, so that we fulfill our responsibility to one another and the essence of what it means to be human.”

The list was composed by independently surveying a sample of 50,000 employees working for organizations across the United States from a variety of industry sectors. The sample of employees used an online, anonymous access panel to rate their employer on four criteria: direct recommendations, indirect recommendations, diversity among top executives/board and key performance indicators, such as proactive communication of a diverse company culture.

The university ranked best in direct recommendations surrounding the topics of age, gender equality, ethnicity, disability and LGBTQ* inclusion, and the existence of positions and public initiatives responsible for diversity.

"The university takes very seriously our responsibility to prepare students to become global citizens. We strive to lead by example by working to ensure our students, faculty and staff are aware of implicit or unconscious biases and by working to create a community of belonging," said UK Vice President for Institutional Diversity Sonja Feist-

Price. "The university's Unconscious Bias Initiative has played an essential role in helping to achieve this goal. The university now has Affinity Groups that assist with enhancing belonging, which facilitates engagement throughout our campus community. Our Inclusive Excellence Grants support students, faculty and staff to offer programming that appeals to our diverse campus community. Our success is a result of everyone contributing to excellence in diversity and inclusion. We know that when everyone contributes, everyone benefits."

The university works collaboratively across campus to create an environment where staff and faculty of all backgrounds and identities are accepted and embraced. Inclusion and diversity are at the heart of everything the university does and is interwoven into the fabric of UK.

"This is a tremendous honor for UK. It publicly validates the collaborative efforts across the university to build a diverse and inclusive environment for staff, faculty and students," said Kim Wilson, vice president and chief human resources officer.

This is not the first time that the university has been recognized for its diversity and inclusion efforts. For the past two years, UK received the Higher Education Excellence in Diversity Award and was named a Diversity Champion by INSIGHT Into Diversity magazine. In addition, UK was recently declared a "Best of the Best" Top 30 LGBTQ-friendly college by Campus Pride.

UK also was recently recognized by The Chronicle of Higher Education as one of the best employers in higher education.

These recognitions are a testament to the work and commitment of the university community who work to create an inclusive culture and climate, Capilouto said. Although diversity on campus is not measured by awards and accolades, they are a reassuring sign that UK is moving in the right direction and pushes the university to strive for even more inclusivity and diversity on campus.

To learn more about UK's Diversity and Inclusion Strategy, click [here](#).

UK is the University for Kentucky. At UK, we are educating more students, treating more patients with complex illnesses and conducting more research and service than at any time in our 150-year history. To read more about the UK story and how you can support continued investment in your university and the Commonwealth, go to: uky.edu/uk4ky. #uk4ky #seeblue

UK Receives National Honor for Commitment to First-generation Student Success

By [Ryan Girves](#)



Students at UK's First Generation Living Learning Community, a residential experience designed to support first generation students and assist them with their transition from high school into college life at UK. Photo courtesy of UK Student Services.

LEXINGTON, Ky. (May 6, 2019) — The Center for First-generation Student Success, an initiative of the National Association of Student Personnel Administrators (NASPA), recently named the University of Kentucky to their inaugural cohort of First Forward Institutions. The First Forward designation recognizes institutions of higher education who have demonstrated a commitment to improving experiences and advancing outcomes of first-generation college students. Selected institutions receive professional development, community-building experiences, and a first look at the center's research and resources.

UK was recognized for its first-generation student advising. The program supports first-generation students from recruitment all the way to graduation through research-based programs, campus resources, best practices and campuswide support surrounding the needs of students who are the first in their families to go to college. The university advocates for first-generation students within their colleges

and collaborates with the Division of Student and Academic Life, Enrollment Management, the International Center and the Office for Institutional Diversity.

"The center is so pleased to welcome the University of Kentucky into our inaugural cohort of First Forward institutions," said Sarah E. Whitley, senior director of the Center for First-generation Student Success. "Through the application process, it was evident that UK is not only taking steps to serve first-generation students but is prepared to make a long-term commitment and employ strategies for significant scaling and important advances in the future."

"We are honored to be selected as an inaugural member institution of NASPA's elite First Forward program that recognizes the work institutions do on behalf of their first-generation students," said Robert Hayes, director of the Student Services Center at UK. "This honor serves as a reminder for us to continue to seek out innovative ways of serving such an important population of students here at the University of Kentucky."

As a First Forward Institution, select faculty and staff will be afforded multiple opportunities to engage with peer and aspirational institutions who are also creating environments that improve the experiences and outcomes of first-generation students. Selected institutions will send representatives to the First Forward Workshop to be held in Orlando in June and will participate in monthly phone calls, virtual professional development, goal setting, blog development, annual reporting and more. After two successful years in the program, institutions are eligible to apply for the Advisory Leadership designation.

"First Forward is an exciting opportunity for UK to join an elite community of professionals prepared to share evidence-based practices and resources, troubleshoot challenges, generate knowledge, and continue to advance the success of first-generation students across the country. We are excited to see a groundswell of activity from the First Forward cohort and know UK will be a significant contributor," offered Kevin Kruger, president of NASPA.

To learn more about first-generation efforts at UK, visit www.uky.edu/firstgeneration/. To learn more about the Center for First-generation Student Success, visit <https://firstgen.naspa.org>.

NASPA is the leading association for the advancement, health and sustainability of the student affairs profession. Its work provides high-quality professional development, advocacy and research for 15,000 members in all 50 states, 25 countries and eight U.S. territories. The Center for First-generation Student Success is the premier source of evidence-based practices, professional development and knowledge creation for the higher education community to advance the success of first-generation students. Through four strategic priority areas, the center drives higher education innovation and advocacy for first-generation student success.

The University of Kentucky is increasingly the first choice for students, faculty and staff to pursue their passions and their professional goals. In the last two years, Forbes has named UK among the best employers for diversity and INSIGHT into Diversity recognized us as a Diversity Champion two years running. UK is ranked among the top 30 campuses in the nation for LGBTQ inclusion and safety and the Chronicle of Higher Education judged us a "Great College to Work for." We are ranked among the top 10 percent of public institutions for research expenditures — a tangible symbol of our breadth and depth as a university focused on discovery that changes lives and communities. And our patients know and appreciate the fact that UK HealthCare has been named the state's top hospital for three straight years. Accolades and honors are great. But they are more important for what they represent: the idea that creating a community of belonging and commitment to excellence is how we honor our mission to be not simply the University of Kentucky, but the University **for** Kentucky.*



Top 20 Master's Degrees in Health Informatics 2018

By TMHA Staff

There has never been a better time to earn a master's degree in health informatics. Occupational data is currently limited because the field is still so new, but initial indicators are extremely promising. One of the earliest studies, published back in 2012, found that job

postings related to healthcare and bioinformatics rose a whopping 36% from 2007. That's far faster than just about every other job field, in or out of healthcare. And while this boom doesn't show any sign of slowing, it does mean that more and more people will start to gravitate to this lucrative career field. And what better way to make yourself stand out from the crowd than by earning an MS in health informatics?

Ranking the 20 Best Medical Informatics Degree Programs: Methodology

After assembling a list of potential schools with healthcare informatics degrees from College Navigator, we analyzed each program in four areas:

Accreditation

Most of these programs are not accredited by the Commission on Accreditation for Health Informatics and Information Management Education (frankly, very few master's degrees are), but there are a few that have earned this rare distinction or are in the process of seeking it.

Emphasis on Healthcare

You can usually tell what fields of study a university values the most by looking at the size of the resources it devotes to them. We assessed each school's overall emphasis on healthcare by looking at the total number of programs it supports in this field. More programs means more opportunities, choices, and like-minded classmates for students majoring in health informatics.

Comprehensiveness of Curriculum

Although every program's curriculum is different, there are some key topics that help round out any solid healthcare informatics program. These include classes on databases/data storage; statistics and research; healthcare policy, law, and ethics; and cybersecurity. Colleges that incorporate most or all of these topics have a better chance of preparing students for versatile careers.

Contemporary Focus

Healthcare and technology are two of the world's most rapidly evolving industries. To have any chance of success in a career that combines both, professionals must stay up-to-date on all the latest developments. Therefore, we vetted each program's course list to check for opportunities – whether through seminar, selected topics, or journal club classes – that expose students to as much contemporary information as possible.

Only the 20 schools that performed the best in each of the above categories made it onto this ranking of top MS in health informatics programs. Note below that "Average Tuition" refers to the graduate-level tuition rate (averaged only for public schools that offer separate in-state and out-of-state rates) as reported on College Navigator.

20. Harvard University, Cambridge, MA, [Master of Biomedical Informatics](#)
19. Duke University, Durham, NC, [Master of Management in Medical Informatics](#)
18. University of San Diego, San Diego, CA, [Master of Science in Healthcare Informatics](#)
17. University of Wisconsin Milwaukee, Milwaukee, WI, [MS Healthcare Informatics](#)
16. University of Missouri, Columbia, MO, [Master's Degree in Health Informatics](#)
15. University of Pittsburgh, Pittsburgh, PA, [Master's Degree in Biomedical Informatics](#)
14. Medical University of South Carolina, Charleston, SC, [Master of Science in Health Informatics](#)
13. SUNY Downstate Medical Center, Brooklyn, NY, [Medical Informatics Program](#)
12. University of Kansas, Lawrence, KS, [Master of Science in Health Informatics](#)
11. Lipscomb University, Nashville, TN, [Master of Science in Health Care Informatics \(MHCI\)](#)
10. University of Utah, Salt Lake City, UT, [Master's in Biomedical Informatics](#)
9. Indiana University-Purdue University-Indianapolis, Indianapolis, IN, [Bioinformatics Master of Science](#)
8. Medical College of Wisconsin, Milwaukee, WI, [Master of Science in Medical Informatics](#)
7. University of North Carolina-Charlotte, Charlotte, NC, [Professional MS in Health Informatics](#)
6. University of California-Davis, Davis, CA, [Health Informatics Masters Degree](#)



5. Marshall University, Huntington, WV [Master of Science in Health Informatics](#)

Current Marshall undergrads who want to earn a top biomedical informatics master's degree can get started during their senior year.

Marshall's health informatics program has definitely earned its top 5 spot on this ranking, thanks in part to its

dedication to real-world experience. The curriculum even includes a required 400-hour internship, which imparts practical skills while also giving you the chance to make important connections in the industry. Also, current undergraduates at Marshall who intend to pursue an accredited master of science in health informatics should consider the school's "advanced master's degree" program. Ambitious students can earn up to

12 credit hours toward their graduate degree during their senior year, allowing them not only to get a head start on their studies, but to save some money, too!

Average Tuition: \$12,063/yr

4. Nova Southeastern University, Fort Lauderdale, FL

MS in Biomedical Informatics

The affordable medical informatics degree program at Nova Southeastern will set you up to earn valuable industry certifications.

No matter which aspect of informatics interests you, Nova Southeastern's top biomedical informatics master's degree has something that will meet your needs. That's because the program includes coursework in three distinct areas: computer science, clinical informatics, and business and management. The program has additional perks, too: if you're a working professional, you'll appreciate that you can complete nearly all your classes online. Not only that, but the curriculum can put you in a position to earn relevant certifications like the Lean Six Sigma Green Belt and NextGen. Finally, the opportunity to take on a paid internship at one of NSU's clinics should be a big draw for students looking for financial assistance.

Average Tuition: \$17,454/yr

3. George Mason University, Fairfax, VA

Health Informatics MS

Both full- and part-time students can enroll in George Mason's accredited master's degree in health informatics program.

At George Mason University in Fairfax, Virginia, enrollees in the affordable medical informatics degree program can tailor their studies to meet their specific needs and their preferred methods of evaluation. As a grad student in the program, you'll work with an advisor to identify your unique areas of interest and adapt your coursework accordingly; health data analytics, general health informatics, and privacy and security are three popular options. The program is also flexible in that students can choose to complete their requirements through a capstone practicum or a master's thesis (both of which require two semesters), and both part- and full-time scheduling is available.

Average Tuition: \$22,364/yr

2. University of Michigan, Ann Arbor, MI

Master's Degree in Health Informatics

As you pursue a top MS in health informatics at Michigan, you can also participate in important new research initiatives.

Because the MHI program at Michigan requires two full years of on-campus study, it will probably appeal most to students fresh out of undergrad and professionals who are able to take a break from work. The school's accredited master's degree in health informatics examines all subject matter from the perspective of the individual, the community, and

the organization. This well-rounded approach, along with a required internship, ensures that graduates enter the workforce with the ability to solve problems creatively and to use "socio-technical" interventions. Thanks to Michigan's focus on research, you can also participate in cutting-edge initiatives alongside respected faculty members.

Average Tuition: \$31,491/yr

1. University of Washington-Seattle, Seattle, WA Master's Degree in Health Informatics & Health Information Management

UW's affordable master of science in health informatics requires students to attend just one on-campus class each month.

If you already have an established career and want to move into a leadership role, take a look at the University of Washington, which perhaps offers *the* best MS in health informatics for current professionals. First, course scheduling caters to the needs of working adults through a combination of once-monthly on-campus classes and regular evening webinars. Second, the program hosts frequent lectures and panels from area professionals, giving you the chance to hear from industry leaders and forge important connections. And to top off your studies, you'll complete a community-based capstone that demonstrates your competence in a practical area of the field, like training physicians on a new EHR.

Average Tuition: \$22,302/yr

Now that you've read all about the top biomedical informatics master's degrees, all that's left to do is pick your favorite and apply!

Sources:

[Jobs for the Future: Health Informatics Workers in High Demand](#)

[College Navigator](#)

[Commission on Accreditation for Health Informatics and Information Management Education \(CAHIIM\)](#)

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MOSAIIIC 2018

Multicultural Opportunities, Strategies, and Institutional Inclusiveness Conference

The Great White Lie: *A Social Construct that Destructs Society*



"I'm for truth, no matter who tells it. I'm for justice, no matter who it is for or against. I'm a human being, first and foremost, and as such I'm for whoever and whatever benefits humanity as a whole."

- Malcolm X

The Great White Lie: A Social Construct that Destroys Society

The Central Diversity Consortium is excited to present the 2018 Annual MOSAIC. This annual event promises to be the preeminent diversity conversation of the year. This year's theme, The Great White Lie: A Social Construct that Destroys Society, promises to be a timely and worthwhile opportunity for thought and discussion surrounding the atrocities throughout the U.S. today where there is a direct connection between culture, representation and power. Our country generally worships the symbols of authority and celebrates hierarchies. We applaud the wealthy and despise the poor. Without acknowledging human beings as the only one true race, individuals are often judged by their market value rather than their character.

We acknowledge that the construct of "race" has become a divisive weapon that separates us from one another. Dr. John Hodge states, "Our society cannot become a full democracy as long as "racial" thinking is the norm." Yet, we regularly engage in "racial" thinking every time we talk about "race" and use "racial" terms like "white" and "black" without explicitly acknowledging their falseness. At the same time, we must fully recognize the harm that "racial" thinking has caused and create appropriate remedies." In order for this country to thrive, the construct of "race" along with the other "isms" of society including "classism", "sexism", "ageism" and "heterosexism" must be dealt with as an epidemic that must be eradicated.

Charlene Walker

VP Multiculturalism and Inclusion
Bluegrass Community & Technical College



APPENDIX E

2019 KY-WV LSAMP
PROGRAM EVALUATION
SUBMITTED BY
WILLIE PEARSON JR., PhD
ED MARSHALL, MA &
CHERYL B. LEGGON, PhD

KY-WVA LSAMP: 2018-2019 Formative Evaluation

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May 24, 2019

Executive Summary

The KY-WV Alliance for Louis Stokes Alliance for Minority Participation (LSAMP) Program (nsf.gov/lisamp, 2017), funded by the National Science Foundation, aims to enhance the participation of underrepresented racial and ethnic minority (URM) populations in STEM academic majors and careers. Specifically, the current funding cycle seeks to build on the previous success, while addressing unresolved challenges.

Some of the most significant themes emerging from this year's site visits parallel some of those reported during the funding cycle. These themes are grouped into five major categories: (1) fostering greater campus program visibility, (2) building a sense of community both within and across partner institutions, (3) facilitating more research opportunities, (4) clarifying criteria for LSAMP scholar eligibility, and (5) sharing "promising policies and practices". Some of the themes parallel those from last year. Although the three sites visited this year experienced a few performance challenges, it is important to keep in mind that they are operating with limited resources. Some sites reported that they are especially negatively impacted because of significant institutional budget cuts.

Academic year research opportunities occurred at a higher rate than those in the summer, primarily at the home institutions of scholars; however, presentations of research at scientific conferences and the LSAMP Symposium were very low relative to rates of attendance. The lack of summer opportunities continues to be attributed to the lack of available funding and awareness of opportunities external to home institutions. Scholars continue to express concern over the lack of community among LSAMP participants at their respective institutions. While overall ratings of scholar experiences were lower than previous years, nearly all scholars would recommend that a peer participate in LSAMP.

Recommendations tended to vary by stakeholder group. Scholars suggested the following: (1) more campus community-building/bonding activities; (2) timely and consistent messaging from the Alliance office (e.g., institution appropriate, reasonable turnaround times, etc.); (3) professional development workshops (e.g., time management, stress management, etc.); and (4) more career and graduate studies recruiters at the Symposium. Non-scholars called for: (1) more interaction among research faculty and campus coordination across partner institutions; (2) clarification and NSF documentation as to what disciplines (majors) are eligible for STEM designation; (3) rotating the location of the Symposium site; (4) longer turnaround times for requests and (5) more sharing of "promising practices and policies." All stakeholders recommended that the Alliance office facilitate a conversation on strategies to secure funds to supplement the LSAMP budget allocations.

Purpose

The primary purpose of this formative evaluation report is to assess the extent to which the KY-WV Alliance is accomplishing the goals and objectives outlined in its most recent proposal, covering academic years 2018-2023. This report is organized in four sections: (1) *introduction*, (2) *methodology*, (3) *findings*, and (4) *recommendations*.

Introduction

While there continues to be some measurable progress, African Americans, Hispanics and American Indians (underrepresented racial/ethnic minorities or URM) continue to be underrepresented at each stage along the science, technology, engineering and mathematics (STEM) educational pathway and the workforce (Hrabowski and Henderson, 2017; 2019; National Academies, 2018; 2016; National Center for Science and Engineering Statistics, 2017; National Science Board, 2016; Slaughter, Tao and Pearson, 2015; Pearson and Miller, 2012; National Research Council, 2011; Committee on Equal Opportunities in Science and Engineering, 2011; Frierson, Pearson, and Wyche, 2009). Many federal and private foundation efforts have been implemented to increase the participation of URM in STEM disciplines and careers (BEST, 2004; National Research Council, 2005, 2011). There is strong evidence that high-quality undergraduate research experience and mentoring play significant roles in recruiting and retaining URM in STEM disciplines and careers (Leggon and Pearson, 2010; Chemers et al., 2011; Ghee et al., 2014).

Methodology

This formative evaluation plan calls for data collection using a mixed method approach--quantitative and qualitative (Frankfort-Nachmias and Leon-Guerrero, 2015; Babbie, 2014; Berg and Lune, 2012; Neuman, 2011; Frechtling, 2010; Clewell and Fontenberry, 2009; Booth, Colomb, and Williams, 2008; Frankfort-Nachimias and Nachimias, 2008; Posava and Carey, 2007; Gorden, 1987). As was the case last year, in conjunction with the Administrative Director, three public partner institutions of varying Carnegie classifications, geographical location and scholar demographic composition were selected for case studies. Because of the challenges associated with participant anonymity and confidentiality this year, the evaluation report will focus more on the scholar survey component for some institutions. As in previous reports, site visit institutions are identified as A, B, and C. However, out of necessity, the narrative will be extremely general on some topics.

Qualitative data were derived from interviews and focus groups of LSAMP program staff, college or university administrators, faculty mentors, and scholars, while quantitative data were gathered from on-line surveys administered to LSAMP scholar participants. To the extent possible, confidentiality is addressed by identifying the institutions as A, B and C. Campus coordinators spent considerable time and effort to increase the scholars' response rates. As a result, the response rates were improved over the last site visits.

A new component of this current funded cycle involves "research" projects housed at West Virginia University and Kentucky State University. Researchers provided a written report on the status of the Year I goals and objectives as outlined in the proposal. Because Year 1 is primarily planning, the researchers report is available in Appendix A.

All interviewees and focus group participants were informed of their rights as human subjects. All interviewees signed a form giving their consent (or gave verbal consent) for interviews to be audio taped. All tapes were transcribed verbatim without any identifiers by a third-party, professional transcriptionist. The transcripts were analyzed for critical themes by two

experienced evaluators. In compliance with the confidentiality agreement, every effort has been made to avoid the identification of any respondent and partner institution; therefore, some responses are presented in general terms. What follows is a discussion of findings of the case studies.

Findings

I. Case Study Findings

Institution A

Caution should be exercised when reviewing the discussion for this institution. This is a teaching institution with virtually no campus STEM faculty engaged in research or the LSAMP program. Most scholars are first-generation and are employed full-time or part-time in off-campus jobs. The LSAMP program is administered primarily by a campus coordinator with some support from an administrator in the Office of Scholar Affairs. The administrator provides advising and other scholar support services (e.g., tutoring, counseling, career assessment). Neither of these individuals receives compensation from the LSAMP grant. The former is a senior administrator with various administrative responsibilities and direct reports.

Campus Coordinator.

Goals and Objectives. Generally, both the campus coordinator and administrator indicated excellent understandings of the goals and objectives of LSAMP. Both attributed this to their extensive campus experience or longtime involvement with the LSAMP and related campus programs focusing on underrepresented groups.

Recruitment. The campus coordinator identified recruiting eligible scholars as a significant challenge. The coordinator explains:

A lot of the African American students don't take STEM classes. When I look at the list of minority students provided by __ (the administrator in Academic Affairs), none are majoring in chemistry or math. There are far more of them majoring in biology and agriculture. The other issue is that when I do get scholars of color majoring in math or chemistry, they turn out to be Haitian, African or Latino who are not citizens. Therefore, I can't provide any services to those scholars.

Regarding whether there are enough resources to support the LSAMP program, the campus coordinator's initial reaction was 'no'. Based on the number of scholars produced, the campus coordinator said that the amount allocated in the grant is enough; however, the campus coordinator confirmed the need for an assistant. The campus coordinator explains: "When the grant initially started, the president selected a STEM faculty member to help me. Although the faculty was provided release time to work with the program, the individual did something else!"

Retention. This year was described as one of the better ones because of a 75% success rate. Generally, the scholars are not only staying but are engaged. Some scholars switched to non-STEM majors.

Challenge. The challenge is that most of the scholars work and have little or no time to engage in research on or off campus. Perhaps more challenging is the lack of engagement of STEM departments. The campus coordinator comments: “If I could change anything, it would be encouraging the president to get more STEM folks involved, regardless of their ethnicity. We don’t have enough STEM faculty involved. Going forward, we need more STEM departmental involvement.”

Services. The program provides several generalized and individualized services. As regards tutoring, scholars who cannot attend regularly scheduled group sessions may request one-on-one assistance. Unfortunately, the services are underutilized. The campus coordinator would like to expand the program, to include offering more research opportunities and activities on campus. The program provides several social activities for the participants to bond.

Mentors.

The institution’s primary mission is teaching. At the time of the site visit, no STEM faculty was involved in mentoring.

Scholars. Despite several requests and follow-ups to participants, only one scholar appeared for the focus group; therefore, no interview data are presented.

KY/WV LSAMP STEM Alliance. The campus coordinator described the Alliance as more functional with the hiring of the current Director. Specifically, the Director is commended for stronger coordination, organization and communication. Nevertheless, the campus coordinator raised concern that the Alliance continues to be too ‘silo’- oriented. As a result, there remains limited communication between campus coordinators during the year. The campus coordinator contends that most of the interaction is limited to the symposia and the retreats. Consequently, there is limited sharing of “promising” practices and innovative strategies to enhance research opportunities between primary teaching and research partner institutions.

Summary.

Overall, the campus coordinator considered the 2018-2019 academic year to be successful; for example, a 75 percent retention rate. The LSAMP participants were described as engaged. Although most of the scholars work full- or part-time, the campus coordinator reported that they are performing well academically. However, the campus coordinator plans to reinforce students to take advantage of the academic support services as well as social activities sponsored by the office. In terms of improving the program, the campus coordinator is in the process of securing the services of a math instructor (and former LSAMP scholar) to assist with recruiting, mentoring and identifying research opportunities that align with the scholars served by the program. The campus coordinator plans to reach out to partner institutions to enhance collaborations. Additionally, the campus coordinator plans to work with the Director regarding consistent classifications of STEM majors across partner institutions.

Institution B

Campus Coordinator.

Goals and Objectives. The campus coordinator was able to clearly articulate the goals and objectives of the LSAMP Program. The campus coordinator explains the process of assuming the position: “I shadowed the previous campus coordinator who did a nice job of transitioning me. Before I took on the role of the campus coordinator, I attended a couple of meetings of the Alliance. Also, I attended several LSAMP coordinators retreats.”

According to the campus coordinator, the program does not have “any objectives of this many women, men, African Americans, and Hispanics. I would say we have been balanced as far as gender breakdown. We have had more African Americans than Hispanics. But I think that could change. I haven’t set a goal to say, okay, we’ve got one African American and we need to balance that out.”

Recruitment. The campus coordinator asserts that it is difficult to recruit STEM majors because most of the students seem to be more interested in going into professional school programs (e.g., pharmacy, dentistry, physical therapy, and medical school) as opposed to graduate school. The campus coordinator adds: “I do not want to discourage a scholar from participating in LSAMP by saying we really want you to go to graduate school as opposed to dental school. I feel like we do a good job of getting these scholars a *bachelor’s degree in a STEM field*. That’s the first step. I am, however, pushing a little stronger making scholars more aware of the Bridge to the Doctorate Program.” Additionally, the recruitment process is significantly different from the other sites visited this year. The campus coordinator describes the process:

I find faculty mentors who agree to do summer research with a set of scholars—typically *two pre-first year* scholars. Before they take their first class, we have them on campus for 6 weeks in the summer working closely with one of our faculty members. The current scholars work with mentors approximately 8 weeks. Since I have the coordinator, we’ve had two pre-first year scholars every summer. Last summer, we had four current scholars and two pre-first year scholars.

During the summer, the campus coordinator sponsors: (1) picnics for the scholars and mentors and (2) shopping trips to the grocery store. According to the campus coordinator, these activities facilitate community building and bonding, especially for the pre-first year scholars.

Program awareness and institutional support. The campus coordinator indicated that the senior administration is aware and supportive of the program. Specifically, there are news articles about the program on the institution’s website. Furthermore, one of the senior administrators is a former LSAMP mentor.

Challenge. The biggest challenge for the program appears to be recruiting the pre-first year scholars. First, the administrator must provide a list of pre-first year scholars by STEM interest. Second, if a scholar expresses an interest in chemistry, a chemistry faculty member must agree to mentor the scholar. Unfortunately, if the faculty member has a sophomore in class with lab experience, the preference is usually for the experienced scholar. Another challenge is that the campus coordinator is forbidden to use the LSAMP program as a recruitment tool before a

student commits to the institution. This tends to be around May 1 which raises a significant challenge. The campus coordinator elaborates: “By this date, he says ‘I’ve got a summer job already lined up’ or ‘We have a family vacation’, and this is our last chance to all be together before I go to college.” Because of the late date, scholars have declined a summer research opportunity. However, there is no problem recruiting scholars currently enrolled at the institution.

Retention. The program is focused on a summer research experience. There is no formal LSAMP sponsored program during the academic year. However, the campus coordinator indicated informally asking participants how their classes were going. The campus coordinator reported that no monthly meetings are held because the scholars are so busy. The campus coordinator had this to say: “all of the scholars who participated as pre-first year scholars or joined later, have all declared STEM majors. If I pick up an LSAMP scholar after they’ve declared a STEM major, they are not dropping out of that STEM major. So far, all pre-first year scholars have graduated in a STEM major.”

NOTE: Caught off guard with one scholar right now who would be a junior this year—maybe she would be a senior this year—but is on academic leave. I think it’s academic leave, for this year. But I’ve talked to her and her faculty mentor and her faculty mentor has talked with her while she’s on leave and said she is doing well and is planning to be back next year. And I feel confident that she will graduate. Every indication is that she will come back and graduate.

Functioning Alliance. The Alliance is functioning much better since ___ became the Director. Previously, there was turnover and disorganization in the Director’s office.

Improving the Program. The campus coordinator concedes that no strong application process is in place for the pre-first year scholars, but one needs to develop in the near-term. The campus coordinator is considering requiring an essay in which scholars must explain why they are interested in the six-week summer research opportunity.

Another improvement would focus on increasing slightly the number of participants. There would likely be more current scholars interested. Moreover, the faculty mentors are not as eager to work with the pre-first year scholars. In general, the campus coordinator indicated that the current budget is reasonable. In fact, the budget allows the program to help scholars defray some of the costs of textbooks (maximum of \$150).

The campus coordinator acknowledged that while the institution has “great facilities and does some great research”, it is primarily a teaching institution. The campus coordinator is in favor of collaborating with one of the partner research universities to provide more research exposure for their scholars. The campus coordinator argues that it is important for their scholars to have research experiences at major research universities so that they will have some idea of how graduate school would be.

LSAMP-compensated Administrators.

Two administrators in the Admissions Office receive limited compensation for their services in support to the Program. Each administrator’s interview is discussed separately.

Administrator I. This official conducts pre- and post-LSAMP scholar surveys and provides an analysis to the campus coordinator. The official indicated that before a scholar begins with their mentor, a survey is administered that asks several questions:

- about their level of understanding of the research project.
- describe what type of research will you be conducting
- about their experience in STEM classes.
- what attracted them to the program
- what they expect to learn through the experience.

The survey is used to determine pre-experience—the baseline of their knowledge coming in. Then a post-survey poses similar but more detailed questions. The survey results allow the campus coordinator to learn more about the depth of scholar learning that occurred in six weeks under the tutelage of their mentor.

Administrator II. This official provides the campus coordinator with a list of potential scholars who meet the criteria of eligibility for the LSAMP program. Because students do not declare a major until the spring semester of the sophomore year, the official must rely on scholar disciplinary interest for the pre-sophomores. According to the official, US students of color comprise approximately “22% of each graduating class with an estimate 15% or less will be in STEM.” The official identifies pre-first year students who are members of underrepresented groups in STEM, U.S. citizens with an expressed interest in STEM. From the list, the campus coordinator decides which two scholars to recruit for the six-weeks, summer research experience.

Both administrators agreed that the campus coordinator does a great job of managing the program, especially recruiting mentors. They asserted that the campus coordinator uses the data that they provide to ensure that the scholars meet their academic obligations. However, the campus coordinator admitted to being caught off guard when one scholar was placed on academic leave.

Mentors.

As was the case with the campus coordinator and two administrators, the mentors possessed a clear understanding of the goals and objectives of the program. Some of the identified goals:

- getting scholars excited about science.
- getting scholars involved in science early to retain them in science.
- building a one-on-one relationship with a faculty mentor.
- giving scholars extensive research experience.
- preparing scholars for acceptance into a high-quality graduate program.

One mentor commented: “My research is very accessible to scholars who don’t have a lot of training. For me, it’s more about increasing STEM and campus diversity.” Another mentor adds: “Actually, I can’t do my research without scholars’ involvement. It’s really been beneficial for me to have that extra scholar on board in the summertime to help with the research. It’s been wonderful having these scholars as part of my team. They have become a part of my lab even beyond summer. We have been able to develop that relationship through multiple projects over the years.” However, one mentor offered this explanation: “My research usually requires someone with at least a year of college experience. I feel an obligation to mentor underrepresented scholars because _ (discipline) is notoriously bad with respect to diversity. I

am strongly committed to increasing diversity in the program and, thereby _ (discipline). _ was a great scholar to have in my lab. In fact, I have another scholar coming this summer.” Several mentors pointed out that the only thing that keeps faculty from taking on more scholars is a disciplinary match. All the mentors agreed that the goals of the LSAMP program dovetail with the institution’s overall goal to diversify its student body.

Symposium. According to mentors, scholars who attended the symposium gained an even greater understanding of the opportunities provided by the LSAMP, including networking with their peers engaged in research at partner institutions. One mentor recalled this incident: “one of my scholars who attended the Symposium said, ‘It was so cool to be with so many other scholars that were like me.’”

Improvement. A major concern raised by most mentors regarding the organization of the program is expressed by one mentor: “...there is some funding for the first two summers but not afterwards. I had a couple of scholars who worked for me for two years, but then without the summer funding for Years 3 and 4, they did something else.” One mentor added: “This has nothing to do with the campus coordinator. The program could be improved if there were four years of funding for scholars. This would allow the scholar the opportunity to continue the research throughout their entire time in college. The pre-first years require more training and attention than the older scholars.” Another mentor agreed: “My pre-first year scholars do not start until the third week of June. That made it a little more difficult in terms of getting _ acclimated to everything. The other research scholars had already been there a few weeks.” One mentor argued: “It’s more about the school’s policy regarding when prospective first-year scholars can be recruited by the program. I had one student who expressed an interest in my lab but declined an offer because a family vacation had already been planned. That was my one negative about the program. The recruitment period remains a serious barrier to sustaining the pre-first year component.”

According to mentors and campus coordinator, _ is a teaching institution. Consequently, very little research is conducted during the academic year. Although a few faculty members conduct research during the academic year, most faculty struggle to do so. During the summer, faculty members receive a very small stipend but not during the academic year. It is noteworthy that during the focus group discussion, it was clear that the mentors were driven by their commitment to diversity and not money. Further, mentors pointed out that for nearly a decade, a former dean’s policy was not to approve teaching releases for research grants. According to the mentors, this policy has changed. Nevertheless, mentors indicated that given the heavy teaching load, it is a major challenge to add research on top of it.

Scholars.

All the scholars were very familiar with the goals and objectives of the program, especially the expectation to pursue a STEM career. This finding confirms the assessments of the mentors, administrators, and campus coordinator. Additionally, the scholars reported that the KY/WV LSAMP Alliance Director’s visit provided even more details about the goals and various conferences and workshop opportunities available through LSAMP. One scholar recalled: “Before joining LSAMP, I was considering just the MD. Through the program, I heard about the MD/PhD degree. I learned about the PhD part which opened my eyes to an entirely different career path.”

When asked about the *greatest* benefits of being a LSAMP scholar, scholars pointed to several significant features. For example, one scholar said: “First and foremost, the research skills. Second, just being notified of all the research opportunities. In the past couple of weeks, I’ve gotten lots of emails about different conferences around the country. If I had not been in the program, I probably would not have learned about the NSF website. The website has a list of REU opportunities. The program has allowed me to attend several conferences. This provided some nice academic accolades. I have learned that my laboratory skills transcend to other projects.”

Several scholars emphasized the financial benefits. For example, one scholar had this to say: “I have been fortunate to attend conferences because LSAMP paid for the transportation and registration. As a first-generation scholar neither my family nor I have the resources to afford these meetings. The removal of financial barriers has allowed me to grow my research capabilities.”

With the assistance of the program, all scholars have participated in research. All reported being satisfied with their research experience. One scholar indicated “I have been doing research with the same faculty mentor my entire career. I’ve been able to grow and gain leadership positions within my research group. That’s been nice. I didn’t imagine myself doing research all four years. Because of these experiences. I’ve just grown to love our research.” The compensation for the summer and social outings were also highlighted.

The scholars were asked to rate several experiential items on a 5-point scale. When asked to rate whether their research experiences enhanced their confidence to do research, scholars assigned a score of 4.6. One scholar speaks to this point: “I feel that I can ask questions independently. Whereas, before, I relied on others and especially when following an experimental procedure. Now, I can problem solve and figure things out on my own without fearing making mistakes.” The scholars rated their research skill as 4.5. A scholar said: “When filling out job or REU applications that ask about skills, I feel that I am competitive because I have these skills that I gained through LSAMP.” Other item responses rates are:

- **confidence to perform well in STEM-related courses (4.3)**
- **prepared to pursue STEM graduate work (4.1)**
- **prepared for upper-level undergraduate courses (4.1)**

When asked about the *least* beneficial aspects of the program, most scholars said they were unable to identify any major problems. One major exception was voiced by a scholar who said: “Before joining the program, I knew I wanted to be a ___ (clinical health professional). Through internships, my interest has been solidified. For me, the emails about the REU stuff and different graduate programs, like the Bridge to the Doctorate, never really applied to me. I know that the emails are very helpful for the other scholars who plan to pursue graduate studies in STEM.”

Improving. There was consensus regarding a lack of campus visibility. One scholar emphasized: “For me, being an LSAMP Scholar also means spreading the word to other people of color thinking about majoring in a STEM field. One thing that could be improved is highlighting LSAMP on campus. A lot of scholars don’t know about the great opportunities that are provided by the program.” Another scholar recalled: “I only learned about LSAMP because somebody else told me about it. While there has been some improvement in advertising the program on campus, much more is needed.”

Several scholars mentioned two specific campus events where LSAMP could enhance its campus visibility:

Expo. At the beginning of each school year, the campus holds this event. Scholar organizations and clubs have display tables where they focus on their activities. Scholars are able to stop by the tables to learn more about the organization.

Research and Internship Showcase. In the fall, this is an event where scholars give presentations about their summer experiences.

Another suggestion involves LSAMP mentors and other STEM professors encouraged to take a few minutes during class (or in private) to give a synopsis of LSAMP. Interested scholars can be informed to contact the coordinator for more information. One scholar recommended having LSAMP scholar ambassadors who would host information and discussion sessions at the Student Center. Specifically, ambassadors would talk about their research experiences and how they have benefitted their academic performance.

Yet, another recommendation focused on more consistent messaging or a standard operating procedure for introducing the program to scholars. According to scholars, some of them heard about LSAMP program the summer before they came to college, while others did not. Some scholars reported accidentally learning about the program from a scholar or mysterious email.

Although the campus coordinator and administrators mentioned the presence of the program on the campus website, some scholars still seemed to be unaware. For example, one scholar offered: “The college is always advertising its programs to its incoming scholars. The college should put LSAMP Program on its website.”

Summary.

Generally, the stakeholders reported that the program is functioning well. The mentors, administrators and campus coordinator pointed out the impact of an institutional policy that prohibits recruiting potential pre-first year scholars to the LSAMP program before May 1. The Admission Office administrators emphasized that policy was in keeping with the professional and ethical standards of the national organization that governs college admissions standards. The policy and resulting practices have led many of the mentors to call for considering a structure that focuses on current scholars. The primary argument is that finding a mentor match after the high school seniors accept is increasingly difficult. Furthermore, mentors recommend a shift from funding from the first two years to all four years. This would not only facilitate but also enhance scholars’ journey along the STEM educational pathway. Scholars also embraced the idea pointing out the value of working in the same campus lab or external labs over four years. Clearly, the program needs to revisit its current structure.

Another issue pertains to the goal of the campus program as it relates to the NSF/LSAMP Program goals. The campus program seems to focus more on producing scholars who earn STEM baccalaureate degrees than research scholars. During the focus group discussions, it was clear that some current and past scholars publicly stated their intentions to pursue clinical health/medical careers. Some scholars acknowledged that this was not a goal of the program.

During the academic year, the program does not offer any formal research activities; however, there does seem to be some support for travel to conferences. According to the campus

coordinator there is informal mentoring for the scholars. The campus coordinator acknowledged surprise to find out that one scholar was on academic leave.

Unquestionably, most scholars were proud of the program and the research opportunities and personal growth that it provided. All suggested that the campus coordinator and mentors be more intentional in collaborating with the campus senior administrators to make the program more visible. Moreover, the scholars and mentors stressed that every dimension of the program is consistent with the institution's commitment to diversity. The KY/WV LSAMP Alliance Director highlighted the need for the institution to be more involved with its partners--especially research universities.

Institution C

Campus Coordinator.

The campus coordinator has an excellent understanding of the goals and objectives of the program. The campus coordinator has been involved with both Alliance and campus program for a long time. "I fully understand the goals and objectives of LSAMP. I have regularly attended the retreats and symposia. Also, I have witnessed the evolution of the Alliance." The campus coordinator pointed out the importance of program assessment because it provides data to improve the services to the scholars. Although the campus coordinator does not receive compensation from the grant, the time commitment is acceptable.

Scholars. According to the campus coordinator, most of the scholars have a "moderate" understanding of the goals of the program; however, the more senior scholars tend to have an excellent understanding. The newer scholars are not as well informed. Because of a lack of resources, the program is unable to provide assistance to new scholars who encounter serious challenges transitioning from high schools, especially in rural areas, to a university. Furthermore, many of the scholars are under prepared for STEM classes, especially in their second year. The campus coordinator emphasizes that many of the scholars must address issues related to racial identity before they can reasonably manage the challenge of STEM classes.

Challenges. The campus coordinator estimates that approximately 70% of the institution's students are from the state. Minority students, however, tend to be from rural areas. The institution provides the campus coordinator with a list of minorities who may be eligible for the STEM program. At the time of the interview, the campus coordinator did not know the specific demographics of the scholars but said the program administrator would provide the information. Retention was a serious problem, especially for first-year scholars because they were less likely to be actively engaged in the program. This is a challenge because of a limited staff.

When asked to assess the academic year implementation, the campus coordinator said "mediocre". The campus coordinator had high expectations going into the year, but the reality of attrition became apparent. Specifically, scholars who struggled in their early STEM courses and did not seek academic assistance comprised the largest group of scholars who left school. The campus coordinator was disappointed that these scholars failed to ask for help until it was too late. Much of the campus coordinator's disappointment was because tutoring is readily available from the STEM departments, the university and the program. Although the campus coordinator was pleased with the academic year performance of scholars engaged in research, there was less

optimism about on-campus summer research. According to the campus coordinator, few scholars are involved in research on campus during the summer because those interested in research tend to pursue those opportunities at other institutions or companies. Because of limited resources, program staff interaction with the scholars, especially first- and second-year, was minimal this year.

Institutional Support. The campus coordinator reported that the president and provost are very aware of the program and its overall goals. The institution continues to provide some resources but those have been reduced because of recent cuts to the institution's budget. The confluences of these cuts and a modest LSAMP budget have had significant negative impact on scholar services.

When describing the operation of the Alliance, the campus coordinator was pleased with the leadership (i.e., Co-PIs) and described them as collegial and cooperative. The Director was singled out for enhancing the functionality of the Alliance office.

Program Administrator.

This administrator is primarily responsible for the day-to-day operation of program as well as several other campus administrative responsibilities. The administrator reported being satisfied with the compensation allocated in the grant but acknowledged that the daily program demands exceed the time and effort in the grant. To address the gap, the program administrator utilizes some of the resources from another position to hire a graduate assistant. The long-time program administrator has an excellent understanding of the program goals and objectives. The program administrator asserted: "Every year, we are doing much better but there is still a long way to go."

Institutional Support. The program enjoys very strong support from the president and provost. In particular, the College of Sciences has provided exceptional support. Not only have the dean, chairs and faculty attended the annual LSAMP orientations, they meet with the program staff to provide critical feedback regarding strategies to better serve the scholars.

Recruitment. To enhance recruiting, the program administrator commented: "we should reach out to high schools with large numbers of minority students. When students matriculate at the institution, many have no knowledge of LSAMP." The program administrator asserts that the program has good participation from both females and males; however, this is contradicted by a staffer and the demographic facts.

Mentors. Generally, the mentors were characterized as extremely supportive and willing to help the scholars. The program administrator pointed out that occasionally, faculty who have had little experience working with undergraduates expect the scholars to approach them for assistance like a grad student. In these situations, the program administrator meets with the faculty member to explain that many of the students come from rural, under-resourced schools with inadequate STEM instruction. The students have performed exceptionally well in their high schools and were not used to seeking academic assistance. Unfortunately, they were ill-prepared for the rigor expected in STEM classes at the institution. In short, they were reluctant or embarrassed to ask for help.

Challenges. The biggest challenge is the scholars' transition from high school to the institution. Many struggled mightily after the first year because they are not well prepared for

the rigor and pace of STEM classes. They have problems with time management of the unexpected numbers of study hours required to do well.

The performance expectations in _ (science course) are very high. For the scholars to do well, they need to have a clear understanding when they begin to under-perform. We tell them this upfront because some chemistry faculty members are challenged when communicating with undergraduates. Fortunately, the program or the department provides exceptional tutors. If a scholar is having serious difficulties, the program administrator or a graduate student will serve as a tutor.

According to the program administrator, the scholars tend to fall into three groups: (1) requires *minimum* tutoring, (2) requires *modest* tutoring and (3) requires *very intensive tutoring*. The latter were characterized as dealing with challenging personal issues, especially regarding their families and personal (partner) relationships. In short, many of them are dealing with compelling personal challenges. Occasionally, a faculty member will contact the staff about a scholar who is underperforming.

Kentucky/West Virginia Alliance. When asked about the functioning of the Alliance, the program administrator indicated that conditions improved dramatically with the hiring of a full-time Director. The Director was described as well-organized and does a great job communicating with the program. The program administrator asserts that the success of “LSAMP” requires someone who has the courage and commitment to care about its mission. The Director was described as exemplar. In terms of improvement, it was recommended that the Alliance office be less ‘last minute’ on some matters. For example, a flurry of emails with short turnaround deadlines, followed almost immediately by requests for responses.

Improvement. In terms of improving the program, the program administration plans to replace the graduate student with someone who better engages the scholars.

Program Staff.

The program receives some support from two staffers. One is largely for responsible communicating with scholars regarding the various opportunities available through the Alliance office and travel to various events, conferences and the annual symposium. The other staffer is very familiar with the goals and objectives. In the past, the staffer was assigned to work with younger scholars, many of whom are dealing with some academic and personal challenges.

Recruitment. One staffer argued that “Once on campus, recruiting the students is not a major problem. During the first Fall orientation, many students sign-up to become LSAMP scholars.” However, the other staffer expressed a different opinion “Getting in contact with them and trying to convince them to join is the hardest part. Sometimes freshmen, they don’t read their emails. When you call them on the phone, they don’t pick up. And when they pick up, they will say they will come to the meeting and they don’t show up.” The other staffer made this observation: “sometimes you have to go that extra mile knowing that many of these scholars are not always going to check their emails. The approach can’t be ‘I emailed you and if you don’t pay attention, that’s the end’”.

Challenges. Although one staffer and the program administrator reported that the 2018-19 implementation was “good” or “very good”, the campus coordinator and the staffer had different assessments—mediocre and not as good as last year. As shown below, the students were more aligned with the latter views. Retention and program engagement are significant

problems for several reasons. One staffer indicated that most of the new scholars have not been very engaged in attending meetings and sponsored activities this year. One staffer commented: “Because of expanded job responsibilities and a reduced budget, I haven’t worked as closely with the new scholars this year. Most of the “troubled” scholars that I worked with dropped out of the program and the new folks seem to be heading down the same pathway.”

During the interview, one staffer provided this example: ““We promised them a \$1000 stipend to present at a conference. Once they presented, we realized there’s just not enough money in the budget. We could only give them half of that... They got mad and left the program. We do not communicate any specific amount.”

Both staffers argue that “fun things” are helpful retention strategies. Their comments are instructive:

- Scholars must go through demanding coursework every single day without getting a break to relax and interact each other in informal setting. The small things we did once a month gave them that sense of community and an opportunity to bond. Because, then, they would meet other scholars who had already taken advanced classes and performed well. Peer tutoring and mentoring can be effective.
- Traveling to meetings together provides an opportunity to share experiences and common interests.
- Scholars would benefit by having office space where they can hang out and socialize with each other

Kentucky/West Virginia LSAMP Alliance.

Overall, the staffers had high regard for the Alliance staff. The Alliance staff was described as professional and personable. Nevertheless, the staffers called for more consistency in messaging because sometimes the deadlines have passed or have a short response time. Some emails were irrelevant to the scholars because some of the opportunities are “state-” or “university-” specific. Responding to some emails can be problematic because of confusion on the replying: Director or graduate student or both.

The staffers suggested it would be beneficial to them if the Alliance office could provide promising practices from partner institutions regarding examples of social activities for scholars. They would like information regarding effective strategies for community building.

Improving. A major priority for staffers is identifying funding sources to reinstate programming for outings to restaurants, movies, museums, bowling, on-campus potluck dinners, etc. Based on program history, both staffers believe that holding a social event at least once a month will increase dramatically the retention rates.

Administrator and Mentors.

NOTE: The discussion that follows will be very limited. Despite pre-site visit calls and emails regarding proper scheduling. The site failed to schedule the proper groups. There was to have been separate focus groups: (1) Non-LSAMP administrators and (2) faculty mentors. Instead, one combined focus group was scheduled (e.g., dean, chairs and faculty). This was problematic because separate interview protocols were designed for each group. Also, the agenda provided of the scheduled focus groups the day before arrival was different upon arrival. Unfortunately, it was too late for the evaluators to cancel the session. The reader is advised to exercise caution in reviewing the brief discussion below.

In general, all interviewees were thoroughly familiar with goals and objectives. They were also strong supporters of the program. Some interviewees raised concern that they did not receive as many requests for support as in previous years. One interviewee captures the discussion “I think we could be asked more. There have been times when they have asked more often. Recently, it’s been a fairly low number of requests from them for us to participate... If you don’t ask for help, it’s not going to fall out of the sky”.

Overall, the interviewees found the program to be exceptionally nurturing. The interviewees described the scholars’ presentations at the annual campus orientations as incredibly motivating. One interviewee recalled the scholars’ enthusiastic discussion of their research experiences and future plans. There was consensus that there was sufficient and high-quality tutoring available to scholars—they need only request it.

One interviewee mused: “I have no idea how well resourced they (program) are for providing scholars with aid in terms of tutoring and travel to conferences.” Another interviewee emphasized that some departments would almost certainly find it helpful if the program provided travel funds for scholars in their labs who wanted to present their findings at a conference. However, at least one interviewee asserted “we have sent LSAMP scholars to professional meetings. We have substantial scholarship funds. All an LSAMP scholar has to do is apply and have the minimum GPA, and they’ll get at least some travel funds.” Further, some faculty members accept a scholar because of insufficient funds for supplies or maybe they already have the maximum number of scholars in the lab. This situation was an outlier. All the interviewees believed that LSAMP program played a significant role in the institution’s quest for enhancing diversity.

Scholars.

NOTE: Similar to situation with the above group, upon arrival to the site, the evaluators were surprised to see an errant agenda. Again, one of the evaluators called and emailed the program team to remind them of the structure and requirements for the scholars’ focus group. Unfortunately, the evaluators were met with utter chaos. There was confusion among the scholars about their scheduled arrival time. The focus group times provided to the evaluators were incorrect. Perhaps more problematic was the composition of the focus groups. One group was supposed to be comprised of juniors and seniors, while the other freshmen and sophomores. Unfortunately, the focus groups were mixed comprising more advanced and early stage scholars. Consequently, most of the scale ratings about the impact of the scholars’ research experience on some indicators were rendered useless. Caution should be exercised in reviewing the brief discussion that follows.

Overall, the scholars were able to articulate the goals and objectives of the program. Below are some brief examples:

- Going to and presenting at conferences
- Networking with other scholars and faculty
- Pursuing graduate studies
- Academic excellence, especially in STEM courses
- Helping other scholars struggling in difficult classes

Despite the focus on STEM careers, some scholars mentioned that they were recruited to the program even though they were committed to health and medical-related careers. In terms of the best features of the program, there was consensus that the entire LSAMP staff cared deeply about them in a wholistic manner. The staff was described as supportive beyond their academic well-being but also socially and emotionally. Regarding the least effective components of the program, the scholars cited: (1) Time commitment, (2) Communication and (3) Finding a mentor.

Several clarified that when they email a potential faculty mentor and fail to receive a response they have to keep trying until they get accepted. However, this was not viewed as the fault of the LSAMP team.

There was consensus that communication was particularly problematic. The scholars pointed out “take the confusion this morning about what time we were supposed to be here for the focus group.” Another relevant comment: “...like the symposium. Literally, we got an email the day before that we are supposed to meet at this place for a conference. We could have been told a week prior which would have less stressful.” The communication problems were mostly internal. However, there was consensus that if something really did need to get done, the program administrator would make certain that it was done.

When asked about recommendations to improve the program, scholars offered the following:

- Institute an advisory board
- Implement study skill and time management workshops
- More informal meetings
- More intentional program advertisements
- More outreach out to younger minority students

Summary.

It was a challenge ascertaining an accurate picture of the functionality of this site. Interestingly, no one on the leadership team knew the demographics of the scholars. Despite calls and emails by a member of the evaluation team to the leadership team regarding the requirements for the site visit, upon arrival there was considerable confusion concerning the agenda and the composition of the focus groups. In particular, the agenda provided by the LSAMP leadership team to evaluators the day before arrival was not the same as that provided upon arrival to conduct the focus groups. For example, there were to be two scholar focus groups: (1) freshmen and sophomores, and (2) juniors and seniors. They were to have been scheduled for separate time slots. However, there was considerable disorganization regarding the time slots as well as the composition of the groups. Scholars arrived only to discover that the

time and composition of the original agenda had changed without notice. As a result, more advanced scholars and the most recent scholars were in the same group. This created various methodological problems when it came to self-ratings and familiarity with the program activities. In fact, some new scholars did not know all the staff members. Some scholars had to leave and return because the scheduled time had changed.

There was no separate faculty mentor focus group. For some unknown reason, the scheduled focus group was comprised of STEM chairs, two faculty members and the dean. These individuals were longtime supporters of the program and spoke glowingly about the merit of the program as well as the dedication of the senior leadership. Unfortunately, the firsthand accounts of mentors/scholars relations were not forthcoming. This is unfortunate because scholars who had participated in research for one full year or more were very complimentary of the experience.

Scholars indicated that there was considerable program miscommunication during the academic year. Much of this was explained by the presence of a new graduate assistant (GA). Questions were raised about how well the GA was trained by the program administrator, especially in terms of the social and academic backgrounds of the scholars. Furthermore, there were differing assessments among the leadership team regarding the successful implementation of the academic year programming. The scholars' assessment was more aligned with those leadership team members describing the implementation as less than good (especially in comparison to last year). As discussed above, the program administrator plans to hire a new GA next year.

Despite the missteps, there were some positive outcomes. The scholars put forth a number of solid recommendations to improve the performance of the program. Importantly, the scholars were willing to take ownership of several activities, including serving as campus ambassadors for the program, reaching out to tutor struggling young scholars, assist the staff in organizing social activities, etc. Both the scholars and staff embraced the value of social activities as a mechanism for building a sense of community among scholars and supporters. The challenge is securing the funding in an ever-restricted institutional budget. Moreover, the STEM administrators found the scholars' testimonies at the orientation to be motivational and as evidence of the value of the program. They argued that the values of the program were highly aligned with the mission of the institution as regards diversity.

Conclusions.

In Year I of the new funding cycle, the three institutions experienced differing levels of success in implementing certain components of its LSAMP Program. Although the underlying explanations varied in degree, they shared meaningful similarities. In general, all parties struggle to build a sense of community among LSAMP Scholars, due in large measure to few (if any) meetings during the academic year. Examples of potential causes of the lack of connectedness include most of the scholars at Institution A working during the day, Institution B's program being held primarily in the summer with minimal activities during the academic year, and Institution C's lack of supportive funding for social events, where in previous years funds were provided by the institution and LSAMP. Some key similarities among programs are highlighted below.

Visibility. The LSAMP Program's campus presence was described as minimal. Across institutions, scholars reported that few of their campus peers were aware the program actually existed. Some scholars attributed the lack of visibility to the absence of campus advertising and visible recruiting. Scholars recommended several strategies, including self-organizing to collaborate with mentors and the program staff in order to enhance the campus visibility (See the Recommendation section).

Recruitment. This was a challenge across the sites. Each institution indicated that the pool of eligible underrepresented minority students was small. Institution C reported that many of its incoming underrepresented minority students were graduates of low performing rural schools with inadequate STEM curricula. At Institution A, the challenge was citizenship status. The campus coordinator reported that few US citizens of color majored in an eligible STEM discipline listed by the LSAMP Alliance.

Retention. This was a problem at Institution C where several first- and second-year scholars failed to transition to third year or switched from a STEM to non-STEM major. Staff indicated that many of the students failed to take advantage of the tutoring resources in a timely manner.

Orientation. Most mentors reported not having a formal orientation regarding the goals and objectives of LSAMP. On occasion, an LSAMP mentor was unaware that a student in the lab was a scholar. However, some faculty mentors did report recommending that students apply for the LSAMP program. In addition, some mentors suggested that a formal faculty group orientation would be beneficial in networking with like-minded individuals committed to diversifying the STEM workforce.

Communication. As was the case in previous years, communication and miscommunication continue to be identified as a problem. Scholars in Institution C pointed to serious internal miscommunication that resulted in unnecessary stress. For example, the confusion around the time for their focus group session with the external evaluators and untimely emails (e.g., short turnaround times). Institution A did not report any major communication problems. Scholars at Institutions B reported limited communication during the academic year but no major issues.

Scholar research engagement. Except for Institution A, most scholars reported some level of research engagement during the academic year. At Institution B, the research was almost exclusively during the summer. A relatively small number of scholars reported presenting their research at a conference. Most campus coordinators strongly encouraged conference participation by offering some travel support.

Community building. Overall, scholars were critical of the lack of activities that facilitated bonding, networking and other forms of community building. Because Institution B's program focus is primarily during the summer, there are virtually no formal gatherings during the academic year. Institution A did report some community building activities during the academic year. In the case of Institution C, scholars bemoaned the precipitous decline in community building activities (especially monthly) from the 2017-2018 academic year. Regardless of site, scholars saw the workshops, pizza parties, dinners and bowling as effective retention events. Scholars at Institution C reported that previous monthly meetings facilitated the nurturing of young scholars by more advanced scholars who had performed well in the most

challenging gateway STEM classes. However, a staffer attributed the decline in social activities to a severe budget cut of institutional funds and no dedicated funds from the LSAMP budget.

Mentor and Personnel Evaluation

Few scholars reported evaluating their mentor experiences (internal or external) or the LSAMP personnel. Some scholars did report that the program coordinator would ask informally about their research experiences. There was consensus that they should report their level of satisfaction with the research experience.

II. Scholar Survey Findings

Demographics. There were 49 (74% response rate) respondents to the scholar survey with approximately two-thirds self-identifying as female. Most respondents racially identified as Black/African-American (61%) or as White (26%), with the remainder being Asian (7.5%). No respondent identified as American Indian. It should be noted that the racial category of Whites has been combined with that of Asian and is depicted as White/Other, primarily because both classifications are not considered under-represented minorities (non-URMs) within STEM fields. Black/African-American females accounted for the largest group of respondents at 37%, followed by White/other females (29%), Black/African-American males (24.5%), White/other males (8.2%). In terms of ethnicity, 24% of respondents self-identified as Hispanic, with 58% being women, 33% male and 8% choosing not to identify as either.

As depicted in Table 1, the majority of the respondents were sophomores, followed by freshmen (33%). Juniors and seniors were equally distributed at 20% each. White/Others comprised a majority of the freshmen (67%). Black/African Americans (81%) comprised a majority of the sophomores, most of whom were females (70%). All of the respondents were United States Citizens or Permanent Residents, 12% of whom were foreign-born in 6 different countries. Most of the foreign-born respondents self-identified as White/Other (67%) or non-Hispanic (67%). Racially, 63% of respondents reported having at least one parent with a bachelor’s degree, the majority of whom were Black\African American (59%). Ethnically, 27% of respondents reporting having at least one parent with a bachelor’s degree identified as Hispanic.

	Black or African American	White/Other	Total
Freshman Male	1	1	2
Freshman Female	3	7	10
Sophomore Male	4	1	5
Sophomore Female	9	2	11
Junior Male	4	1	5
Junior Female	3	2	5
Senior Male	3	1	4

Senior Female	3	3	6
Total	30	18	48

*One respondent chose not to identify by gender

College major. **Tables 2 and 3** illustrate intended and current college majors by race and gender. Prior to entering college, slightly more than 9 in 10 respondents intended to major in a STEM field, mostly life sciences (49%) and chemistry (18%). Approximately 6% of respondents had an intended major of engineering. Racially, Black/African-American females dominated the life sciences, representing 45% of respondents in the intended majors, followed by White/Other females at 36%. Black/African-American females represented 44% of the intended chemistry majors, but a majority (57%) changed majors to another NSF field category. Hispanics had the greatest percentages of intended majors occurring in life sciences (58%) and chemistry (25%). The majority of respondents with intended majors of mathematics, computer science and engineering majors were male (70%).

Nearly 35% of respondents changed their major once matriculating in college. Most males usually changed from one STEM field to another. Of the respondents who switched fields, nearly 65% did so in their sophomore year. Racially, Blacks/African-Americans changed majors at the highest rate (55%), with that of Whites\Others being almost half that at 28%. Ethnically, Hispanics changed majors at a slightly lower rate (33%) than did non-Hispanics (36%).

	Black/African American				White/Other		
	N/A	Male	Female	Total	Male	Female	Total
Agricultural Sciences		0	0	0	0	0	0
Chemistry		2	4	6	0	3	9
Computer Science		3	2	5	0	0	5
Engineering*	1	1	0	1	1	0	3
Environmental Science		0	0	0	0	0	0
Life/Biological Sciences		3	10	13	1	10	24
Mathematics		1	0	1	1	0	2
Other		1	3	4	1	0	5
Physics/Astronomy		0	0	0	0	0	0
Social Science		1	0	1	1	0	2
	1	12	19	31	5	13	18

*One respondent who was an engineering major did not choose to identify racially

Table 3: Current Major by Race and Gender (N=49)							
	Black/African American				White/Other		
	N/A	Male	Female	Total	Male	Female	Total
Agricultural Sciences		1	1	2			
Chemistry		1	2	3		2	2
Computer Science	1	3	1	5			
Engineering*		2	1	3		1	1
Environmental Science							
Life/Biological Sciences		5	11	16	3	9	12
Mathematics						1	1
Other			1	1		2	2
Physics/Astronomy							
Social Science			1	1			
	1	12	18	31	3	15	18

Activities and Support Services. When asked how they learned about the Kentucky/West Virginia LSAMP, most reported from a professor (25%) or peer (27%), with advertisements being the lowest at 17%. **Table 4** indicates respondent involvement in select LSAMP-related activities overall, as well as by race and ethnicity. Overall the highest participation rates were for STEM-related Career Advisement (45%), followed by tutoring (35%), with the lowest rate being 6% for both visits to graduate schools and study groups. Racially, the highest participation rate for Black/African American was in tutoring (45%) followed by STEM-related Career Advisement (42%), while for White/Others the highest participation rate was in STEM-related Career Advisement (50%) followed by mentoring (22%), which was the same as the rate for Black/African-American. Thirty-five percent of respondents did not participate in any of the indicated LSAMP activities. Ethnically, for Hispanics, the highest participation rate for indicated LSAMP activities was also for STEM-related career advisement at 75%, followed by tutoring and mentoring with identical rates of 42%.

Table 4: Participation in LSAMP Sponsored Activities (N=49)

Activity	Overall		African-American		Hispanic	
	Percent	Number	Percent	Number	Percent	Number
Tutoring	35%	17		14		5
Visits to graduate schools	6%	3		3		2
STEM Career advisement	47%	22		13		10
Study groups	6%	3		3		1
Mentoring	20%	10		7		5
None of the above	37%	17		10		1

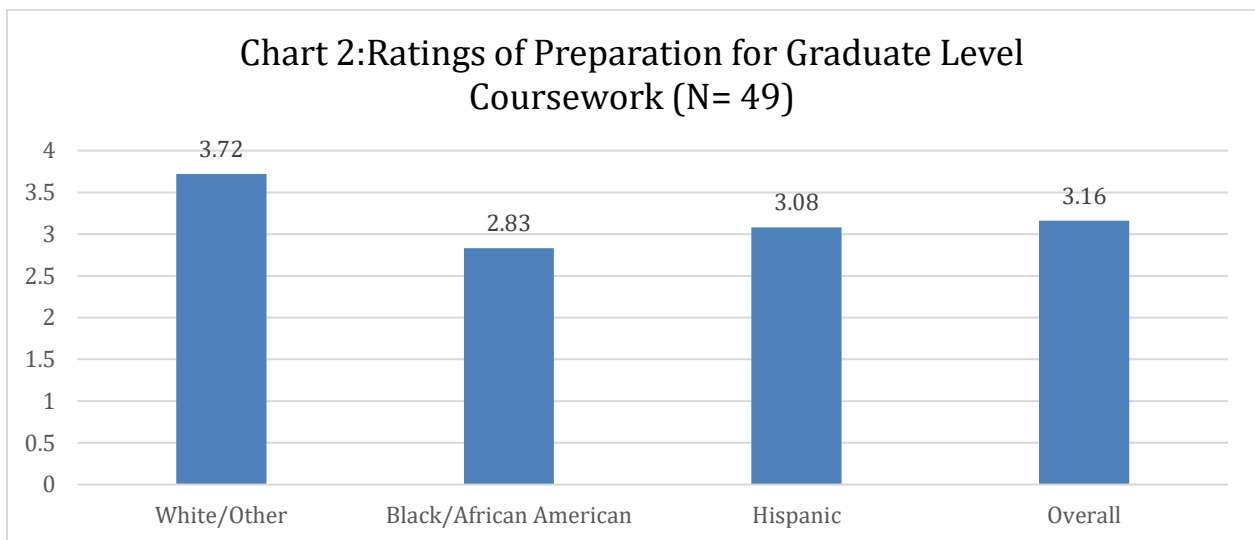
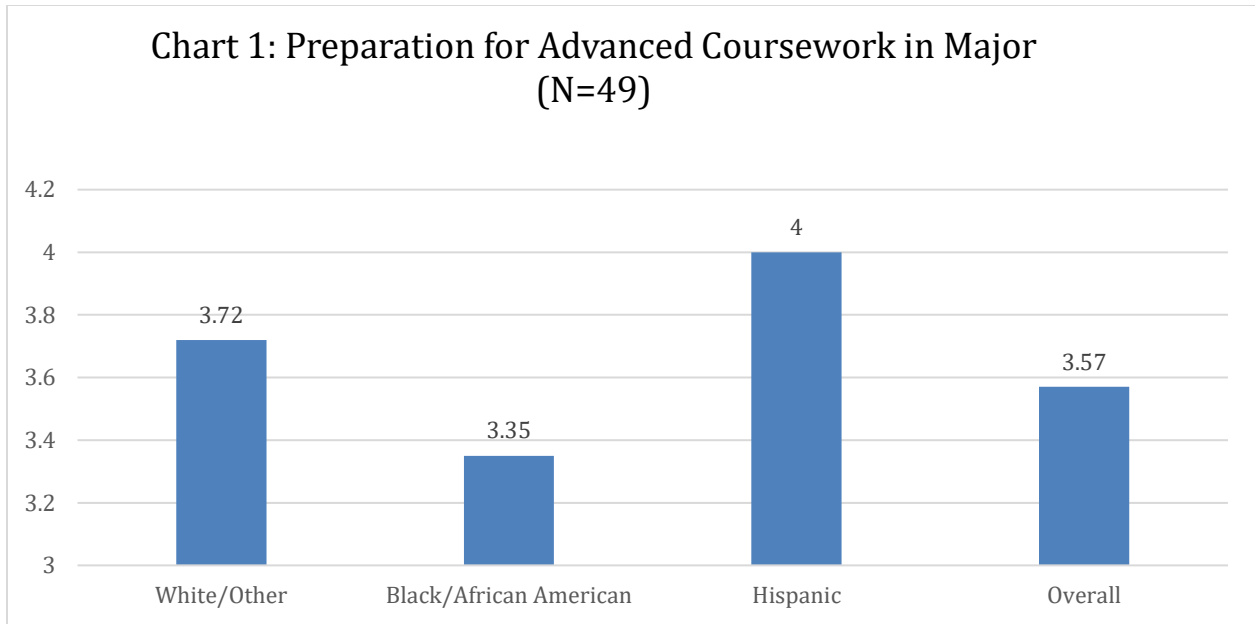
Table 5 ratings indicate the perceived benefit of the respective LSAMP activities by respondents. The perceived benefit of mentorship was most highly rated as “beneficial” or “very beneficial” at 76%, followed by STEM career advisement at 70%, with visits to graduate school being the lowest at 48%. Financial support was received from 65% of the respondents, with 75% indicating that they were “*satisfied*” or “*very satisfied*” with the amount. Across two institutions, all respondents indicating association with an additional support program indicated participation in TRiO Student Support Services.

Table 5: Benefit of LSAMP activities. (N=49)

Activity	Very beneficial		Beneficial		Did not participate	
	Percent	Number	Percent	Number	Percent	Number
Tutoring		13	0	6	0	16
Visits to graduate schools		9	0	3	0	24
Career advisement		14	0	14	0	9
Study groups		8	0	5	0	23
Mentorship		18	0	7	0	16

Academic Experiences. It was indicated that 57% of respondents were “satisfied” or “very satisfied” with their overall academic performance this year. Approximately half of the respondents taking science courses and 32% taking math courses indicated that they were “*satisfied*” or “*very satisfied*” with their academic performance in them. **Chart 1** provides average ratings of how prepared respondents perceive themselves to be for advanced coursework in their major on a scale of 1 to 5 with 5 being the highest, generating an average overall rating of 3.57. Racially, White/Others rated themselves highest in advanced coursework preparation at 3.72 and Black/African-Americans the lowest at 3.35, with Hispanics providing the highest average ethnically at 4.0. As noted in **Chart 2**, when asked to provide a similar rating in terms of preparation for graduate level coursework, respondents gave an average overall rating of 3.16. Racially, White/Others rate themselves highest in preparation for advanced coursework at 3.72

and Black /African Americans the lowest at 2.83, with Hispanics rating the lowest ethnically at 3.08. When asked about their level of satisfaction with the academic support they received from their LSAMP for success in their courses, 57% indicated that they were “*satisfied*” or “*very satisfied*.”



Research Experience. During the 2017-18 academic year, 31% of respondents participated in research during the academic year, of whom, 53% were Black/African American, 47% White/Other and 40% Hispanic. Among Black/African-American respondents, 50% were male, with one respondent not identifying in terms of gender. Two thirds of Hispanic respondents participating in academic year research were female. Overall, 80% of respondents

participating in research were “satisfied” or “very satisfied” with their academic year research experience.

A substantial majority (87%) participated in academic year research at their home institution, with a majority being seniors (53%), followed by freshman and sophomores equally represented at 20% and no juniors participating in academic year research. In sharp contrast, only 12% of the respondents participated in a 2017 summer research experience, of whom 83% were female. The distribution of respondents participating in summer research Black/African American, White/Others and Hispanics was similar at 50%, with all respondents reporting that they were “satisfied” or “very satisfied” with their summer experience. All respondents conducted summer research at their home institution, showing equal representation among freshman, sophomores and seniors, with no representation of juniors. Overall, just 12% of respondents participated in research during both the academic year and summer, increasing to 23% when disaggregated for students participating in research. As presented in **Table 6**, respondents cited faculty members as having played the most significant role in securing research experiences, followed by themselves (20%).

Table 6: Person Most Significant in Securing Research Experience				
	Academic Year (N=15)*		Summer (N=6)*	
	Percentages	Count	Percentages	Count
LSAMP staff	13.3	2	33.3	2
Faculty member at your college	53.3	8	50	3
College Administrator (non-LSAMP)	0	0	0	0
Self	20	3	16.6	1
Peer	0	0	0	0
Other	13.3	2	0	0

At 2% (n=1), respondents indicated low attendance at scientific conferences in the summer, significantly increasing to 36% in the academic-year. During the summer, all scientific conference attendees were Black/African American. Racially, Black/African Americans made up the majority of conference attendees during the academic year at 77%.

During the summer, no respondents attending scientific research conferences presented, increasing to just 14% during the academic year presented, with 57% being Black/African-American and 14% Hispanic. At the 2019 KY-WV LSAMP Annual Research Symposium, 44 % of the respondents were in attendance, with those presenting being lower at 14%.

Postsecondary Plans. Some 70% of respondents reported plans to apply for graduate school (60% in science and 22% in engineering). **Table 7** indicates the degree aspirations for respondents, with the highest rate being for a Masters (31%), followed by an MD (25%).

Hispanics had the highest percentage of respondents intending to stop at a Masters (42%), followed by Black/African Americans at (35%). Whites/Others who were non-Hispanic were the only group that did not intend to stop at the Bachelors level, but also indicated the lowest intention to stop at a Masters (9%) and highest rates for MD (36%), PhD (27%) and MD/PhD (18%).

Degree	All Respondents (N=49)	White/Others, Non-Hispanic (N=11)	Racial URMs (N=31)	Hispanic (N=12)
Bachelors	6%	0%	7%	8%
Masters	31%	9%	35%	42%
MD	25%	36%	19%	17%
MD/PhD	14%	18%	13%	8%
PhD	20%	27%	23%	17%
Other	4%	9%	3%	0%

Table 8 provides average ratings of respondents' LSAMP experiences. Overall, respondents rated their LSAMP experience as 3.92, with the average being slightly higher (4.17) for Hispanics, but slightly lower for Black/African-American (3.90). In terms of gender, female (4.05) respondents rated their overall LSAMP experience higher than males (3.67). Black/African-American males provided the lowest overall rating at 3.67.

Across all groups, females rated their overall LSAMP experience higher than males. The lowest overall rating (3.77) was for LSAMP meeting needs in a timely manner, particularly for Hispanic males (3.0). Nearly all (95%) respondents reported that they would recommend the LSAMP Program to a peer. After graduating from college, approximately 87% indicated a willingness to complete a survey relevant to LSAMP and their college experience.

Experience				Racial URM			Hispanic		
	Overall	Male	Female	Overall	Male	Female	Overall	Male	Female
Overall LSAMP Experience	3.92	3.70	4.05	3.90	3.67	4.05	4.17	4.0	4.22
LSAMP meeting needs in a timely manner	3.77	3.83	3.72	3.77	3.83	3.72	3.72	3.0	3.89
Support from LSAMP staff	4.12	4.0	4.27	4.16	4.0	4.27	4.27	4.0	4.11
Quality of instruction in major courses	3.85	3.83	3.55	3.65	3.83	3.55	3.55	3.33	4.44
Overall education received at current institution	3.83	3.92	3.44	3.61	3.92	3.44	3.44	3.33	4.33
Resources received from LSAMP	3.88	3.90	3.87	3.89	3.9	3.87	3.87	3.67	4.12

Travel assistance received from LSAMP	4.26	4.33	4.30	4.34	4.33	4.30	4.30	4.33	4.62
School and research supplies received from LSAMP	3.84	3.89	3.83	3.86	3.89	3.83	3.83	3.67	4.14

Summary

Demographically, respondents were comprised primarily of Black/African American females and sophomores. Significantly more than half of the respondents were not first-generation-to-college, a majority of whom were Black/African-American. Upon entering college, almost all respondents had an intended major in a STEM field, almost half of whom were Hispanic. In terms of gender, females composed most of the life-science and chemistry majors, whereas males dominated in the quantitative fields of mathematics, chemistry and computer science. While most respondents changing majors transferred from one STEM field to another, half of the females who changed majors had an original intended major that was non-STEM. A majority of respondents changed majors in their sophomore year, with the highest rate being among Black/African-Americans which was double that of White/Others.

Respondents primarily learned of LSAMP via faculty and their peers, with few indicating that they became aware through advertising. Participation rates were low across LSAMP activities, especially with study groups and graduate school visits, with rates being the highest for Hispanics. The highest participation rates were in STEM career advisement and tutoring; however, a noticeable number of respondents participated in no activities at all. Mentorship and STEM career advisement had the highest perceived benefit among the LSAMP services. Across two institutions, all respondents indicating association with an additional support program indicated participation in TRiO Student Support Services.

Satisfaction with performance in science and math courses was not high, nor were self-ratings on the ability to do advanced coursework in majors, particularly among Black/African-Americans. Research participation rates were low, significantly so in the summer; however, satisfaction was high in terms of research experiences. The majority of research participants were female, with no participation by respondents classified as juniors. Almost all research experiences took place at home institutions, with faculty primarily helping to secure the opportunity. Attendance at scientific meetings was almost non-existent in summers, and although the rate was higher in the academic year, research presentation rates at such meetings were very low, a pattern that was similar with respondents attending the 2019 LSAMP Research Symposium. White non-Hispanics had the highest rate of pursuing MD degrees as well as PhDs and MD/PhDs. Alarmingly, just slightly more than half of respondents reported being satisfied with their overall LSAMP experience, with Hispanics rating their overall experience the highest and Black/African-Americans the lowest. Nevertheless, the lowest ratings related to LSAMP experiences were related to meeting LSAMP participant needs in a timely fashion. Nearly all respondents indicated that they would recommend LSAMP to a peer.

Recommendations

- A more enhanced STEM-focused graduate school and job recruitment fair should be implemented as part of the KY/WV LSAMP Symposium. Ideally, through both recruitment fairs and campus visits, relationships should be formed with graduate school programs participating in the NSF Bridges to the Doctorate initiatives.
- To help ensure basic comprehension of the KY/WV LSAMP Alliance and the LSAMP goals, a uniform orientation format should be developed and posted on the Alliance website.
- In order to aid in funding research experiences and social activities, faculty with eligible grants or proposals should be encouraged to apply for diversity supplements or REUs that support hosting scholars.
- Improve the timeliness, appropriateness and consistency of communication within and across sites. Concern was expressed that some of the posted opportunities for scholars are state- or institution- specific.
- Improve advertising LSAMP on campuses: develop and implement standard operating procedures to introduce the program to students. e.g., have scholars act as ambassadors for the program. Previous evaluations suggested Alliance t-shirt or sweat-shirt competitions. This would engage scholars and provide some campus visibility when scholars wear the shirts.
- Develop and share strategies to secure more resources to build and enhance a sense of community among program participants. This includes providing scholars with dedicated office space to socialize with each other.
- Develop strategic plans with faculty mentors to secure funds to support scholar travel to conferences.
- Campus coordinators are encouraged to discuss holding the Symposia at institutions other than Marshall and the University of Kentucky.
- The Alliance office must secure documentation from the National Science Foundation/LSAMP office regarding which disciplines (i.e., majors) are designated STEM eligible.
- The Alliance office must be more intentional in post “promising practices and policies.” Stakeholders continue to request information on effective recruiting and retention activities. Predominantly teaching institutions continue to call for more opportunities for their scholars to engage in research opportunities at research partner institutions.

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Evaluation Appendix A

Research Description

Brief summary or abstract of your research project:

LSAMP students' interest, motivation and preparedness depend on both their cognitive and non-cognitive skills (Duckworth, Peterson, Matthews, & Kelly, 2007). Variables representing cognitive skills have predicted entrance into college (e.g. GPAs and ACT/SAT scores); however, they only partially predict academic success (Harper, 2010; Tinto, 1993). Although less directly related to intellectual achievements, many studies have shown the impact of non-cognitive skills (soft skills) such as self-efficacy, self-regulation, identity, and belonging on the success of students (ACT, Inc., 2014; Chang, Sharkness, Hurtado, & Newman, 2014; Cromley, Perez, & Kaplan, 2016; Dweck, Walton, & Cohen, 2011). These findings suggest that research is needed to further examine the importance of both cognitive and non-cognitive skills in the success of retaining underrepresented (URM) students in STEM and thus, changes in non-cognitive factors as a result of LSAMP participation are a major focus of the proposed study.

The KY-WV LSAMP will conduct a study of the contribution made by non-cognitive factors to the success of LSAMP as a result of non-traditional classroom teaching and participation in select LSAMP activities. West Virginia University has instituted Emerging Scholars Program (ESP) calculus classes, and Kentucky State University has instituted Peer Led Team Learning (PLTL) supplemental academic instruction sessions. In addition, other alliance campuses have non-LSAMP supplemental instruction (such as Excel at University of Louisville and Math Excel at University of Kentucky) as well as LSAMP and non-LSAMP services such as tutoring and academic and professional coaching and development. While time and resources will not allow for a study of all LSAMP and supplemental instruction activities, other activities including the peer mentoring speaker series and the graduate school preparation sessions will also be examined.

The research project will examine the change in LSAMP students' non - cognitive factors related to academic success, including academic motivation, academic STEM self- efficacy, grit, or traits that may predict academic success, sense of academic belonging in STEM education, STEM academic identity, STEM attitudes, and experiences of racial micro-aggressions over the course of their matriculation in the program relative to their non-LSAMP peers (Anderson-Butcher & Conroy, 2002; Brown, Henderson, Gray, Donovan, & Sullivan, 2013; Chang, Eagan, Lin, & Hurtado, 2011; Deemer, Smith, Thoman, & Chase, 2014; Duncan & McKeachie, 2005; Eagan & Sharkness, 2010; Duckworth, Peterson, Matthews, & Kelly, 2007; Duckworth & Quinn, 2009; Eagan, Hurtado, Garibay, & Herrera, 2012; Pintrich, Smith, Garcia, & McKeachie, 1991, 1993; Stake & Mares, 2001; Vallerand et al., 1992; Wilson et al., 2015). Changes in non-cognitive factors will be assessed by 1) survey response data collected from all LSAMP participants and

matched controls, 2) interview response data collected from both groups, and 3) observational data of a subset of LSAMP students.

The project is guided by Tinto's theory of retention and further informed by Lent, Brown, and Hackett's Social Cognitive Career theory (SCCT) (Lent, Brown & Hackett, 1994, 2000; Tinto, 1975, 1993, 2007). Lent et al.'s SCCT incorporates Tinto's non-cognitive factors known to be important in retaining URM students and expands them for use in URM groups in STEM. Tinto's sense of academic belonging has important implications for student populations underrepresented in STEM; SCCT refines this aspect and identifies several major obstacles affecting URM student degree completion (Lent, Brown, & Hackett, 1994, 2000) each of which is exacerbated by institutionalized environmental barriers, including the wide-spread occurrence of micro-aggressions at every level of academia (Alexander & Hermann, 2016; Burt, McKen, Burkhart, Hormell, & Knight, 2016; Cutright, Williams, Coats, & Puskas, 2015; Estrada et al., 2016). Racial micro-aggressions describe subtle, often automatic and nonverbal put-downs of people of color (Pierce, 1970, 1974; Pierce, Carew, Pierce-Gonzalez, & Wills, 1977) to explain a persistent form of racism that greatly negatively impacts their lives (McGee, Robinson, Bentley, & Houston, 2015). Micro-aggressions often arise from assumptions about admissions and the academic abilities of specific student groups (Alexander & Hermann, 2016; Burt, McKen, Burkhart, Hormell, & Knight, 2016; McGee & Martin, 2011). Part of the goal of the current project is to alleviate the perception that students in LSAMP and other similar programs "need extra support"; rather, the purpose of such programs is to level the playing field in an environment of institutionalized barriers to URM student success.

Research Design. The project is a mixed methods quasi-experimental sequential design study of the cumulative impact on Scholars of engagement in the LSAMP activities relative to matched cohorts of students across the five years of the study. Comparisons between LSAMP and matched control groups will use an annually repeated measures cohort-survey design to assess over-time trajectories. The project consists of three major components: (1) A quasi-experimental study including sequential survey data, in which changes in responses to measures of non-cognitive factors related to academic success from LSAMP participants and matched controls will be compared and contrasted to examine the cumulative impacts on LSAMP students of these measures (2) a qualitative sequential case study of LSAMP and matched non-LSAMP students to gauge the contribution made by the same variables to the success of LSAMP students relative to matched peers; and (3) a sequential qualitative observational study conducted by LSAMP faculty and students during several activities annually, including the peer mentoring and speaker series, the professional development and graduate school preparation sessions, PLTL, and ESP. Observational data from activities at all other sites will also be collected based on site lead needs. All data will be utilized to aid in contextualizing the experiences of students in LSAMP STEM activities.

Research Questions (RQs). 1) How does student participation in LSAMP activities impact retention and graduation rates relative to non-LSAMP matched peers and to all STEM students at

each institution? 2) How do non-cognitive factors related to academic success (academic motivation, academic self-efficacy, grit, sense of academic belonging in STEM education, STEM academic identity, STEM attitudes, and experiences of racial micro-aggressions) evolve for LSAMP participants over the course of their participation relative to non-LSAMP matched peers? 3) Do changes in non-cognitive factors account for success in either group? Does duration of participation mediate these factors for either group or for subsets of each group? 4) Which LSAMP activities are most effective in retention and graduation and for which LSAMP students are they most effective? Is effectiveness a function of participation duration and/or location? 5) Do LSAMP and non-LSAMP students report experiencing institutionalized racial micro-aggressions? What are the sources of micro-aggressions: peers, faculty, administration, or university staff? Do reported experiences differ at different sites? 6) How do LSAMP activities impact 1) STEM course grades and 2) non-cognitive factors? Are some activities more effective in increasing each than others?

Sampling Procedures and IRB Protocols. Survey measures and interviews will be completed by approximately 250 KY-WV LSAMP participants annually (n = 1250) during Phase III implementation. Students in other URM STEM programs, as well as URM STEM students not enrolled in such programs at each site will be contacted via email and will serve as a control group, matched on Scholastic Aptitude Test (SAT) or American College Testing (ACT) math score at university sites and program specific demographics at all institutions (n = 14000). A purposive subsample (n = 180) of matched controls from LSAMP sites will be interviewed as well. An additional control group will be obtained from STEM-R student survey data (n = 10000) in the current project, as many UK students are first generation from the Appalachian region, as is the case at WVU. Finally, institution-wide STEM graduation and retention data only will be collected for all years at each institution. All research participants will be informed of the research evaluation of the program and those who agree will be contacted to participate in follow-up activities for the duration of their enrollment as part of their consent to participate.

Data Sources. This project will collect data at three levels. Level 1 will use data on student university retention and graduation. Level 2 will incorporate class data (test and homework scores, attendance) requiring instructor and/or student consent, but little additional data collection effort. Level 3 will incorporate the results of an extensive set of research validated surveys of a students' non-cognitive factors related to academic success, as well as interview responses and observation data, which will require additional resources to administer. Students will complete all pre- and post-survey measures annually to assess changes in the variables of interest; some surveys may be administered more frequently as part of LSAMP activities.

Level 3 Measurement Instruments. Research-validated, pre-existing instruments will be used to assess non-cognitive factors. Items have been adapted and scales were shortened or combined as needed for practical purposes. Existing instruments used are attached and include:

Academic Motivation: Academic Motivation Scale (Vallerand et al., 1992).

Academic STEM Self-Efficacy: The “Self-Efficacy for Learning and Performance” subscale of the Motivated Learning Strategies Questionnaire (MLSQ) focuses on self-efficacy within a class and has been modified in the current project to capture STEM self-efficacy (Duncan & McKeachie, 2005; Pintrich, Smith, Garcia, & McKeachie, 1991, 1993).

Grit: Duckworth’s Short Grit Scale (GRIT–S) (Duckworth, Peterson, Matthews, & Kelly, 2007; Duckworth, & Quinn, 2009).

STEM Belonging: Wilson et al.’s STEM belonging instrument adapted for STEM undergraduates from Butcher and Conroy’s youth development programs belonging scale (Anderson-Butcher & Conroy, 2002; Wilson et al., 2015).

STEM Identity: An instrument modified from a STEM identity factor developed by researchers at the Higher Education Research Institute (HERI) at UCLA to operationalize Carlone and Johnson’s (2007) framework for science identity using items from the Cooperative Institutional Research Program’s (CIRP) Freshman Survey and Your First College Year (YFCY) survey (for detail on both surveys, see Keup and Stolzenberg, 2004 and Sax et al., 2004), also used by Chang, Eagan, Lin, and Hurtado (2011), Eagan, Hurtado, Garibay, and Herrera (2012), and Eagan and Sharkness (2010).

STEM Attitudes: Subjective Science Attitude Change Measures (Stake & Mares, 2001) adapted for university students (Deemer, Smith, Thoman, & Chase, 2014).

Racial Micro-Aggressions: Racial micro-aggressions items from Brown et al.’s (2013) scale.

Analyses. All quantitative analyses will control for demographic and background characteristics, will be disaggregated by gender and race/ethnicity, and will include appropriate effect size and confidence interval calculations with proper corrections for violations of assumptions to tests as needed (Cumming, 2014; Ioannidis, 2005; Rosnow & Rosenthal, 1989; Wilkinson, 1999). Course grades (RQ 6) will be standardized for analyses. Qualitative analyses will employ member checking, triangulation, thick description, peer reviews, and annual external review by the project evaluation team and external Advisory Board to help ensure the validity of findings (Creswell & Miller, 2000). Qualitative inquiry in this study assumes that reality is socially constructed; therefore, reality is what participants perceive it to be. LSAMP students will actively participate in observing, coding and computing intercoder reliability, and narrative construction of their LSAMP peers to 1) accurately represent participants’ realities and 2) acquire qualitative research skills as part of the project’s commitment to providing high quality undergraduate research experiences for LSAMP students (Campbell, Quincy, Osserman, & Pedersen, 2013; Creswell & Miller, 2000).

Research Mentoring and Data Collection Activities Plan. LSAMP student research mentoring activities at each site will be coordinated by the site lead. Site leads at each institution will work with their site’s supporting staff to administer, collect, and enter data.

Year 1 goals and objectives and current status (accomplishments); What are the plans going forward? Summer? Next AY?

Project Goals: CITI training completion by all senior personnel; obtain IRB approval at all sites.

All senior personnel have successfully completed training. IRB approval has been obtained at University of Kentucky; West Virginia University and Kentucky State University, IRB Authorization Agreements (IAAs) are pending approval. IAAs for remaining sites will be obtained in the next reporting period.

Component 1 Goals: Draft and administer surveys.

During the reporting period, Michaluk drafted instrument items from instruments listed above and with senior personnel revised them specifically for LSAMP programs. Michaluk posted the final version of the survey to Qualtrics and we have begun collecting data from UK (the only site at which we currently have IRB approval) during finals week. Data collection for matched controls has not yet begun and will start when IRB approval has been obtained at all sites.

Component 2 Interview Goals: No interviews of LSAMP scholars have been conducted due to lack of IRB approval. Interview questions will build on survey responses and will be drafted with input from all senior research team members and LSAMP participant researchers.

Component 3 Observation Goals: No observations have taken place due to lack of IRB approval. During the current reporting period, senior personnel completed a training workshop in observational methods conducted by Michaluk. In the next reporting period, Michaluk will attend the Annual Research Symposium to conduct semi-structured group and individual interviews with LSAMP participants from each site. Other interviews may be conducted by phone or teleconference.

Research plans:

1. Get IRB approval at all other sites.
2. At UK: Identify 18 LSAMP students to interview about the LSAMP survey they completed in Spring 2019. We will also interview 18 students at each site when approval is received.
3. Identify 250 matched control URM students at all other sites, matched on SAT or ACT math scores.
4. Get institution-wide STEM graduation and retention data from each site beginning with the 2018-2019 school year, if possible. If not, we will start with 2019-2020.
5. Michaluk will get additional control group survey data (2000) from the STEM-R project being collected at WVU.
6. Identify LSAMP students who will work with site leads on observation, have them complete CITI training, and train them in observational data collection.

7. Enter data at all sites. Collect, clean, combine, and analyze annual data.

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The researchers noted that a major challenge in Year 1 would be obtaining IRB approval for sites other than University of Kentucky. The approval process was delayed because of untimely death of an official in the University of Kentucky IRB office. At the time of preparing the Year 1 formative evaluation report, the evaluation team was informed by the LSAMP Director that both Kentucky State University and West Virginia University were approved by the University of Kentucky IRB office. With the IRB approval, the researchers will move forward expeditiously to begin data collection activities.

APPENDIX F
NSF CIP CODES

Agricultural Sciences	01.09	Animal Sciences
Agricultural Sciences	01.10	Food Science and Technology
Agricultural Sciences	01.12	Soil Sciences
Agricultural Sciences	01.99	Agriculture, Agriculture Operations and Related Sciences, Other
Architecture	04.02	Architecture
Biological Sciences	26.01	Biology, General
Biological Sciences	26.02	Biochemistry, Biophysics and Molecular Biology
Biological Sciences	26.03	Botany/Plant Biology
Biological Sciences	26.04	Cell/Cellular Biology and Anatomical Sciences
Biological Sciences	26.05	Microbiological Sciences and Immunology
Biological Sciences	26.07	Zoology/Animal Biology
Biological Sciences	26.08	Genetics
Biological Sciences	26.09	Physiology, Pathology and Related Sciences
Biological Sciences	26.11	Biomathematics, Bioinformatics, and Computational Biology
Biological Sciences	26.12	Biotechnology
Biological Sciences	26.13	Ecology, Evolution, Systematics, and Population Biology
Biological Sciences	26.15	Neurobiology and Neurosciences
Biological Sciences	26.99	Biological and Biomedical Sciences, Other
Business and Management	52.13	Management Sciences and Quantitative Methods, Other
Computer and Information Sciences	11.01	Computer and Information Sciences, General
Computer and Information Sciences	11.04	Information Science/Studies
Computer and Information Sciences	11.07	Computer Science

Engineering	14.01	Engineering, General
Engineering	14.02	Aerospace, Aeronautical and Astronautical Engineering
Engineering	14.03	Agricultural Engineering
Engineering	14.04	Architectural Engineering
Engineering	14.06	Ceramic Sciences and Engineering
Engineering	14.07	Chemical Engineering
Engineering	14.08	Civil Engineering
Engineering	14.09	Computer Engineering, General
Engineering	14.10	Electrical, Electronics and Communications Engineering
Engineering	14.11	Engineering Mechanics
Engineering	14.12	Engineering Physics
Engineering	14.13	Engineering Science
Engineering	14.14	Environmental/Environmental Health Engineering
Engineering	14.19	Mechanical Engineering
Engineering	14.20	Metallurgical Engineering
Engineering	14.21	Mining and Mineral Engineering
Engineering	14.22	Naval Architecture and Marine Engineering
Engineering	14.23	Nuclear Engineering
Engineering	14.24	Ocean Engineering
Engineering	14.25	Petroleum Engineering
Engineering	14.27	Systems Engineering
Engineering	14.28	Textile Sciences and Engineering
Engineering	14.32	Polymer/Plastics Engineering
Engineering	14.37	Operations Research
Engineering	14.40	Paper Science and Engineering
Engineering	14.41	Electromechanical Engineering
Engineering	14.42	Mechatronics, Robotics, and Automation Engineering
Engineering	14.43	Biochemical Engineering
Engineering	14.44	Engineering Chemistry
Engineering	14.45	Biological/Biosystems Engineering.
Engineering	14.99	Engineering, Other
Engineering Technologies	15.15	Engineering-Related Fields
Engineering Technologies	15.16	Nanotechnology

Interdisciplinary Studies	30.01	Biological and Physical Sciences
Interdisciplinary Studies	30.06	Systems Science and Theory
Interdisciplinary Studies	30.08	Mathematics and Computer Science
Interdisciplinary Studies	30.1	Biopsychology
Interdisciplinary Studies	30.19	Nutrition Sciences
Interdisciplinary Studies	30.27	Human Biology
Interdisciplinary Studies	30.3	Computational Science
Interdisciplinary Studies	30.32	Marine Sciences
Mathematics	27.01	Mathematics
Mathematics	27.03	Applied Mathematics
Mathematics	27.05	Statistics
Mathematics	27.99	Mathematics and Statistics, Other
Natural Resources and Conservation	03.01	Natural Resources/Conservation, General
Natural Resources and Conservation	03.01	Natural Resources Conservation and Research
Natural Resources and Conservation	03.02	Natural Resources Management and Policy
Natural Resources and Conservation	03.03	Fishing and Fisheries Sciences and Management
Natural Resources and Conservation	03.05	Forestry
Natural Resources and Conservation	03.06	Wildlife and Wildlands Science and Management
Natural Resources and Conservation	03.99	Natural Resources and Conservation, Other
Physical Sciences	40.02	Astronomy and Astrophysics
Physical Sciences	40.05	Chemistry
Physical Sciences	40.06	Geological and Earth Sciences/Geosciences
Physical Sciences	40.08	Physics
Physical Sciences	40.10	Materials Science
Physical Sciences	40.99	Physical Sciences, Other

APPENDIX F

KY-WV LSAMP ALLIANCE
RETREAT



Top Row: Charlene Walker, BCTC; Tierra Freeman-Taylor, KSU; V. Faye Jones, UofL; Raúl Torres, UK; David Miller, WVU; Hannah Payne, WVSU; TJ Rogers, BCTC
 Bottom Row: John Wilson, Centre; Kazi Javed, KSU; Charles McGruder, WKU; Johné Parker, UK; Katie Leslie, UofL; Fara Williams, UK



Not Pictured:
 John Wilson,
 Centre;
 Fara
 Williams, UK



KY-WV LS&MP
ALLIANCE RETREAT
Blue Licks Battlefield State Resort Park
 Carlisle, KY, June 14-15, 2018



APPENDIX H
CONTINUED FUNDING
NEWS RELEASES

KY-WV LSAMP Program Receives \$3.5 Million to Diversify STEM Graduates

By **Jenny Wells** Oct. 5, 2018



Photos:
KY-WV LSAMP students at the 10th annual research symposium in March 2018. Photo courtesy of KY-WV LSAMP.
Sarah Hodges, a UK chemical engineering major and student research scientist at the UK Center for Applied Energy Research (CAER), is a participant in the KY-WV LSAMP program. Photo courtesy of UK CAER.
Student presenters at the KY-WV LSAMP research symposium in March 2018. Photo courtesy of KY-WV LSAMP.

LEXINGTON, Ky. (Oct. 5, 2018) — The [Kentucky-West Virginia Louis Stokes Alliance for Minority Participation \(KY-WV LSAMP\)](#) consortium, spearheaded by the University of Kentucky, has received \$3.5 million in renewed funding over the next five years by the National Science Foundation (NSF). The award will assist the alliance's 10 institutions of higher learning from across the two states to continue its efforts in increasing the number of underrepresented students completing degrees in the fields of science, technology, engineering and mathematics (STEM).

Though the representation of groups such as black and Hispanic Americans is increasing in society, these groups are still underrepresented in the STEM fields. Programs such as LSAMP

help to increase the numbers by recruiting, supporting and preparing highly qualified students from these underrepresented populations.

In addition to UK, the alliance includes the Bluegrass Community and Technical College, Centre College, Jefferson Community and Technical College, Kentucky State University, Marshall University, the University of Louisville, West Virginia State University, West Virginia University, and Western Kentucky University.

"At the University of Kentucky, we know that working collaboratively is the best way to achieve meaningful and lasting change; that's why we are proud to lead this alliance of outstanding public and private institutions in our region," said UK President Eli Capilouto, who serves as principal investigator (PI) on the project. "The LSAMP initiative reflects our land grant mission and provides exciting opportunities for underrepresented students to explore STEM fields. This underscores our commitment to building our workforce and creating a brighter future for our state and region."

Coordinated by Capilouto, director Fara Williams and co-PI and [UK College of Engineering](#) Associate Professor Johné Parker, UK has led the KY-WV LSAMP program since it was created in 2006, and this new grant represents a third phase of the project, continuing through 2023. Over the last 12 years, the program has achieved and surpassed its goals of enrolling and graduating more underrepresented students in STEM. Alliance-wide, the institutions granted 1,177 degrees (including 362 from UK) from 2013 to 2018 — exceeding the goal of 1,000 total. During that same time period, an average of 2,306 underrepresented students were enrolled per year in STEM degree programs — topping that goal of 2,000.

"With the new funding, KY-WV LSAMP adds Jefferson Community and Technical College to the alliance, and new activities include an exchange of participants with other LSAMP alliances for summer research, increasing program outreach activities with K-12 institutions, and increasing the number of opportunities for participants to have international experiences, including summer research," Williams said. "KY-WV LSAMP also now qualifies to apply for graduate student funding through the LSAMP Bridge to the Doctorate initiative. The alliance will also conduct a research study on the effectiveness of program activities. This research will be led by West Virginia University."

New goals for this third phase include increasing degrees to an average of 380 per year, and have at least 50 percent of LSAMP graduates pursue graduate programs.

UK's LSAMP program currently has about 40 participants, and in the last two years, the alliance has had over a dozen international experiences for its students, including three LSAMP scholars from UK. The number of UK students enrolled in STEM majors has increased 259 percent since KY-WV LSAMP was initiated in 2006, and the number of STEM bachelor's degrees awarded to underrepresented students has increased 348 percent in the same time period.

Additional co-PIs on the NSF grant include Kazi Javed, associate professor of chemistry at Kentucky State University; David Miller, professor of mathematics at West Virginia University; and Lynnette Michaluk, research assistant professor at West Virginia University.

National studies show that underrepresented students enroll as STEM majors at the same rate as their counterparts, but graduate at significantly lower rates. The LSAMP project abstract asserts that the key to retention will be the provision of timely and effective individual support as needed, based on real-time tracking and both faculty and peer mentoring.

The NSF LSAMP program began in 1991 with six alliances, and now includes over 40 alliances and six regional centers. The program provides funding to alliances that implement comprehensive, evidence-based, innovative and sustained strategies that result in the graduation of well-prepared, highly qualified students from underrepresented groups who pursue graduate studies or careers in STEM. The program defines underrepresented groups as black, Hispanic, Native American and Pacific Islander.

UK is the University for Kentucky. At UK, we are educating more students, treating more patients with complex illnesses and conducting more research and service than at any time in our 150-year history. To read more about the UK story and how you can support continued investment in your university and the Commonwealth, go to: uky.edu/uk4ky. #uk4ky #seeblue

WVU part of 10-university alliance improving diversity in STEM

[West Virginia University](#) continues to be part of a multimillion dollar effort across a 10-university alliance to support STEM education for underrepresented students in Appalachia.

Funded for a third phase by a five-year, \$3.5 million National Science Foundation grant beginning fall 2018, the [Kentucky-West Virginia Louis Stokes Alliance for Minority Participation](#) will examine underrepresented students' perceptions of science, technology, engineering and mathematics disciplines and careers and work to improve recruitment, retention and graduation rates of these students.

Focused on undergraduate underrepresented students, the grant will continue to support experiential learning, stipends, workshops and other activities at the alliance institutions.

Alliance-wide goals for the third phase include increasing the number of STEM bachelor's degrees earned by underrepresented students to an average of 380 per year and have at least 50 percent of LSAMP graduates pursuing graduate programs.

The alliance has the potential to significantly impact the lives of up to 5,000 underrepresented undergraduate students in the two Appalachian states. Programs continue to be developed at the member institutions to attract greater numbers of diverse students to the STEM fields and increase retention.

“In keeping with the goals of our statewide West Virginia Forward initiative, we are committed to building a dynamic, diverse STEM workforce in our state,” said Joyce McConnell, provost and vice president for academic affairs at WVU. “We know that the jobs of the future will require STEM skills, and we also know that young people from all backgrounds deserve to be part of the talent pipeline that feeds those jobs. Our participation in this alliance will help us ensure these students' access and success.”

As part of the first phase of LSAMP, which began in 2006, WVU offered three-week college algebra and pre-calculus courses for transitioning high school students and supported study abroad opportunities and summer undergraduate research.



David Miller, professor and director of undergraduate studies in the [Department of Mathematics](#), is a co-principal investigator on the grant and WVU's campus coordinator. In phases one and two, Miller developed an Emerging Scholars Program focusing on inquiry-based learning techniques, in which he teaches calculus classes using group learning and problem-solving as an alternative to lectures. LSAMP has also funded students to participate in WVU's [Summer Undergraduate Research](#)

[Experience.](#)

“I promoted conceptual learning in the ESP classes by having students understand the conceptual underpinnings of each of the topics by going through the derivations to reinforce the theory. When they complete these activities, they are going through the concepts of how to come up with the formulas so that they don't just memorize. They understand the ‘why,’” Miller said. “I tell students all the time that everything in mathematics has a why. If you understand why the mathematics works, then more than likely you can go through the process again in your mind to come up with the formula.”

To expand ESP, Miller has worked with three other mathematics professors and two graduate teaching assistants to teach the ESP calculus courses.

Since phase two began, KY-WV LSAMP institutions granted 1,177 URM STEM degrees and enrolled an average of 2,306 students per year, surpassing their goals by 17.7 percent and 15.3 percent, respectively.

“At the Eberly College of Arts and Sciences, we cultivate and hone critical thinking and analytic problem-solving skills,” said Gregory Dunaway, dean of the Eberly College of Arts and Sciences. “The third phase of this grant will continue to have a tremendous impact on creating more educational and career opportunities for students from diverse backgrounds.”

Lynnette Michaluk, a research assistant professor in WVU's [Center for Excellence in STEM Education](#), is the research co-principal investigator on the grant at WVU. In phase three, she will study how LSAMP is affecting underrepresented students' beliefs, identities, attitudes and perceptions of the STEM disciplines as well as their experiences with racial microaggressions on campus alliance-wide.

“Non-cognitive factors including positive STEM attitudes and perceptions are important predictors of academic success in STEM,” Michaluk said. “What we want to know is how LSAMP programming is related to those non-cognitive factors and whether and how they impact students' success and ultimately their retention.”

Led by University of Kentucky President Eli Capilouto, the principal investigator of the grant, the alliance of 10 higher education institutions includes WVU, University of

Kentucky, Kentucky State University, University of Louisville, Western Kentucky University, Centre College, Marshall University, West Virginia State University, Bluegrass Community and Technical College and, new for phase three of the program, Jefferson Community and Technical College.

The NSF LSAMP program began in 1991 with six alliances, and now includes over 40 alliances and six regional centers. The program supports sustained and comprehensive efforts to increase the retention and graduation rates of underrepresented students. The program defines underrepresented groups as black, Hispanic Americans, Native Americans and Pacific Islanders.

APPENDIX I
FACULTY AND STAFF
HIGHLIGHTS AND
PROFESSIONAL DEVELOPMENT

(/medicine)



Department of Pediatrics

Home (<https://louisville.edu/medicine>) / Departments (<https://louisville.edu/medicine/departments>) / Department of Pediatrics (<https://louisville.edu/medicine/departments/pediatrics>) / News and Information (<https://louisville.edu/medicine/departments/pediatrics/news>) / UofL associate vice president V. Faye Jones to be honored for focus on diversity and health equity

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Navigation



UofL associate vice president V. Faye Jones to be honored for focus on diversity and health equity

Inclusive Equity Award recognizes UofL professor's efforts to provide inclusive education in health-care professions

Louisville Central Community Centers, Inc. (LCCC) will honor V. Faye Jones, M.D., Ph.D., M.S.P.H., associate vice president for health affairs/diversity initiatives at the University of Louisville Health Sciences



(<https://louisville.edu/medicine/departments/pediatrics/news/uofl-associate-vice-president-v-faye-jones-m-d-to-be-honored-for>

<https://louisville.edu/medicine/departments/pediatrics/news/uofl-associate-vice-president-v...> 2/11/2019

APPENDIX J
CONFERENCES AND
SYMPOSIA



Cherokee College Preparatory Institute
 Northeastern State University
 Tahlequah, Oklahoma
 July 14-20, 2018



College Representatives/CCPI Faculty & Cherokee Nation Foundation Staff

Bottom row: Monica Newland, Notre Dame; Rachel Smith, Rogers State University; Steve McLaughlin, Duke; Julian Tamayo, Yale; Jennifer Sandoval, CNF; Brenna Heintz, Swarthmore College; Hailey Thomas, NSU; Kortney Dry, Duke Student/CNF Intern; Marissa Hambleton, CNF

Top Row: Copan Combs, Oklahoma State University; Justine Medina, UCLA; Natalie Zamora, Penn; Erica Huerta, Pomona College; Fara Williams, KY-WV LSAMP; Issac Arredondo, University of Central Oklahoma; Rebecca Hammar, Stanford

Not Pictured: Janice Randall, CNF; Jarrod Tahsequah, University of Oklahoma

Louisiana State University France International REU



Asare Nkansah,
UK Scholar

Dr. Eduardo
Santillan-
Jimenez,
UK Mentor

Ky'Achia Atkins,
WVSU Scholar

Lloyd Bartley,
UofL Scholar

Taylor Fisher,
UofL Scholar

2018 France Workshop Toulouse, France, June 28-29

STEAM ACADEMY

2018





Women of Color STEM Conference

Detroit Marriott at the Renaissance Center
October 11-13, 2018



Black Engineer of the Year Award

(BEYA) Conference

Washington, D.C.

February 7-9, 2019



APPENDIX K
INDIVIDUAL
SCHOLAR and ALUMNI
HIGHLIGHTS

Noela Botaka

2019 Fulbright Scholar

Noela Botaka has earned a **Fulbright Research Award** to study the modification of lipid groups in Belgium.

The **U.S. Student Fulbright Program**, a federally sponsored international, educational and cultural exchange, recognizes academic merit and leadership potential. The program promotes mutual understanding between U.S. residents and people in more than 155 countries worldwide. Fulbrights are among the most prestigious awards in higher education



NOELA BOTAKA

"As an African American woman navigating a field that lacks representation, I hope to encourage others to channel their work and talent and leave behind an irreplaceable, unforgettable legacy! No matter the odds, acknowledge them and then defy them."

Collegiate experience

- **Areas of Study:**

- Graduated May, 2019, from the College of Arts & Sciences with a degree in biology

- **Additional Awards:**

- Martin Luther King (MLK) Scholar, Woodford R. Porter Scholar.

2019 Outstanding Senior Student Award at the UofL's Student Awards Ceremony for active engagement and leadership on campus.

Inspired By

Receiving the Fulbright Scholarship would not have been possible without the help and encouragement from **Dr. Mark Running**, **Dr. Bethany Smith**, and **Dr. Charlie Leonard**. Dr. Running is my favorite professor and current research mentor who has helped in shaping my understanding of research, finding my research mentor in Belgium, and pushing me to be confident in myself throughout the application process. Dr. Smith and Dr. Leonard manage applicants interested in Fulbright and other national and international scholarships. They have been a tremendous help in providing feedback and revisions of my app, holding a mock interview in preparation of my actual interview, and helping me to be a competitive applicant. I am truly thankful for the amount of time the three of them have invested in me throughout the application process and cannot thank them enough!

Hometown information

- **Hometown:**

- Lexington, Kentucky

- **High school:**

- Bryan Station High School (2015)

- **Parents:**

- Bob and Elodie Botaka of Lexington, KY



West Virginia University **Summer Undergraduate Research Symposium 2018** **Category Winners and Runner Ups**

Agricultural & Environmental Sciences Category (10 posters)

Winner: *Synthetic methionine use in organic meat-type chickens improves production not health.* **Katy L. Sines**, Angela E. Lamp and Joseph S. Moritz (Katy, an Animal and Nutritional Sciences major at WVU from Morgantown, WV, was a participant in the SURE program.*)

Biological Sciences Category (17 posters)

Winner: *Generating bioluminescent Gram-negative bacteria to improve visualization of bacterial pathogenesis.* **Annalisa B. Huckaby**, Emel Sen-Kilic, Kelly Weaver, Catherine Blackwood, F. Heath Damron and Mariette Barbier (Annalisa, a Chemistry major and Honors student at WVU from Morgantown, WV, was a participant in the SURE program and was funded via an NSF LSAMP KY-WV Mid-Level Alliance Phase II grant.)

Runner Up: *Consumption of Silver Carp (*Hypophthalmichthys molitrix*) sarcoplasmic protein on bone health.* **Kathryn Taylor**, Derek Warren, Chris Skinner, Kristen Matak and Janet C. Tou (Kathryn, a Biochemistry major at WVU from Cross Lanes, WV, was a participant in the SURE program.*)

Engineering Category (18 posters)

Winner: *Fabrication of Kirigami based structures for flexible electronics applications.*

Muriithi-David Githui Kem, Sierros Konstantinos A and Derrick Banerjee (David, a Mechanical and Aerospace Engineering major at WVU from Kennesaw, GA, was a participant in the SURE program and was funded via an NSF LSAMP KY-WV Mid-Level Alliance Phase II grant.)

Runner Up: *Simulation and economic optimization of an autorefrigerated alkylation process.*

Ronald Alexander, Rebecca Kim and Fernando V. Lima (Ronald, a Chemical Engineering major at WVU from Cumberland, RI, was a participant in the SURE program.*)

Health Sciences Category (17 posters)

Winner: *HNSCC invasive potential in cortactin-null cells.* **Joshua L. Taylor**, River A. Hames, Benen W. Papenberg, Jessica L. Allen, Robert E. Hickey, Steven M. Maxwell and Scott A. Weed (Joshua, a

Biology major and Honors student at WVU from Kearnsyville, WV, was a participant in the SURE program.*)

Runner Up: *Myeloid-derived suppressor cells effector gene expression in murine model of neonatal sepsis.* **Jordan Vance**, Travis Rawson and Cory Robinson (Jordan, an Immunology and Medical Microbiology major and Honors student at WVU from South Charleston, WV, was a participant in the SURE program and was funded by the Department of Microbiology, Immunology, and Cell Biology.)

Human Engagement Category (9 posters)

Winner: The role of intergroup anxiety and intergroup contact in prejudice.

Eva M. MacFarland and Natalie J. Shook (Eva, a Psychology & Biology double major and Honors student at WVU from Bridgeport, WV, was a participant in the SURE program.*)

Nanoscience Category (12 posters)

Winner: *Effect of additives on capillary nonogel electrophoresis.* **Courtney Kristoff**, Cassandra L. Crihfield and Lisa A. Holland (Courtney, a Chemistry major from Waynesburg College, was a participant in the NSF-Funded Nano REU program.)

Runner Up: *Characterization and exposure assessment of silver nanoparticles in sanitizer spray product.* **Sarah O'Boyle**, Alycia Knepp, Lauren Bowers and Aleksandr B. Stefaniak. (Sarah, a Chemistry major from Messiah College, was a participant in the NSF-funded Nano REU program.)

Neuroscience Category (8 posters)

Winner: *Examining dopaminergic neuron differentiation in the hypothalamus of genomic screen homeobox-1 mutant zebrafish.* **R. Madison Riffe**, Zoë A. Dobler, Regina L. Patrick, Rebecca A. Robich and Sadie A. Bergeron (Madison, a Biology major and Honors student at WVU from Charleston, WV, was a participant in the SURE program.*)

Physical Sciences Category (18 posters)

Winner: *Influence of second coordination sphere boranes on rhodium(I) oxidative addition of aldehydes.* **Maxwell S. Reese**, Brian R. Nichols, Novruz G. Akhmedov, Jeffrey L Petersen and Brian V. Popp (Maxwell, a Chemistry major and Honors student at WVU from Bethel Park, PA, was a participant in the SURE program.*)

Runner Up: *Kinetic investigations of the gas phase reaction between the CH radical and cyclopentadiene.* **Zachery N. Donnellan**, Kacee L. Caster, Talitha Selby and Fabien Goulay (Zachery, a Chemistry major and Honors student at WVU from Chapmanville, WV, was a participant in the SURE program.*)

*Funding for the 2018 Summer Undergraduate Research Experience (SURE) program, which administers the symposium, was provided in part by (i) the West Virginia Research Challenge Fund through a grant from the Division of Science and Research, Higher Education Policy Commission, (ii) the WVU Office of the Provost, and (iii) the Davis College of Agriculture, Natural Resources and Design; the Eberly College of Arts and Sciences; the Statler College of Engineering and Mineral Resources; the Honors College; the Health Sciences Center; the Colleges of Business and Economics, Creative Arts, and Physical Activity and Sports Sciences; the Departments of Biology and Chemistry; and the Office of Undergraduate Research.

Category winners and runner ups from the 2018 Summer Undergraduate Research Symposium held at West Virginia University on July 26, 2018. More information about the annual summer symposium, including the 2018 abstracts, can be found at: <https://undergraduateresearch.wvu.edu/present-publish/present-your-research#Summer%20Undergraduate%20Research%20Symposium>

Student Support Services, CARES Provide Students a 'Home Away From Home'

By **Jenny Wells** Thursday



Students gather in Student Support Services office for a Valentine's Day lunch. Photo by Jenny Wells-Hosley.

LEXINGTON, Ky. (April 4, 2019) — Student and academic support is at the heart of the University of Kentucky's mission, and two departments on campus are aimed at doing just that, while also providing students a "home away from home."

[Student Support Services \(SSS\)](#) and the [Center for Academic Resources and Enrichment Services \(CARES\)](#), both housed under UK's Office for Institutional Diversity, are well known on campus for their tutoring and advising services. But their students say the community and sense of family they provide are what make them truly special.

"One of the goals of SSS is to provide students the opportunity to become involved and create a support system for themselves with their peers," said Lydia Wims, director of SSS, which works primarily with students who are first generation, low income or have disabilities. "One way of accomplishing this is with strategic social/cultural activities. This aids in students having a sense of belonging on a large campus. Oftentimes, these social/cultural events are where students can begin connecting and develop friendships — many times, lifelong friends."

After learning that many students often only eat one meal a day, or not at all, the SSS office decided they could provide some assistance. This spring, they began hosting monthly lunches for students, encouraging them to stop in, enjoy some free food and chat with other students.

"Even though we frequently refer students to [UK's Big Blue Pantry](#) as well as other community resources, we see our monthly 'Soup & Sandwich Lunch' as a way to more immediately assist our students," Wims said. "The students come out and enjoy each other and the staff, and they love the family atmosphere this brings to the office."

In February, SSS hosted a Valentine's Day-themed lunch. **Ndye Thiaw**, a former first generation transfer student from Bluegrass Community and Technical College, was in attendance. Thiaw joined SSS on her first day at UK in 2015, and is now a recent graduate preparing for graduate school. She is still involved with SSS as a tutor.

"SSS has provided a home away from home with their welcome and lovely office that is always open to students regardless of their backgrounds," Thiaw said. "The staff has always been open to me and has supported me in many levels whether its academic advising, career choice advising or simply emotional support. I am glad there is a place such as SSS at UK because the office has truly made UK feel like a community that I belong to."

While similar in its mission, CARES is aimed at serving students from underrepresented groups to increase their retention and graduation rates. Toni Thomas, director of CARES, says the center takes a holistic approach to work with the students they serve.

"One of CARES' major areas of focus is to ensure our students feel connected, and know that they are valued at UK," Thomas said. "The programs and activities we plan are intentional in design with the intended outcome being that our students have a strong sense of belonging here at UK. They must feel that UK is home and that they are supported."

CARES recently hosted Self-Care Week, offering students opportunities to unwind and take a break from midterms. They offered yoga, Koru meditation, massages, painting and DIY "homemade essentials" including stress balls, hand and body scrubs, and lip balm.

"We have worked with many students who were stressed out — school and life were overwhelming them," Thomas said. "We wanted to do something to say, 'slow down and take a quick break just to clear your head.'"

Gabriella Melendez, a junior architecture major, participated in the Koru meditation.

"I felt like it helped me to be more present," Melendez said. "I feel like if I continued to practice meditation, it would help me, so I decided to sign up for weekly sessions at UK's Counseling Center."

Aliyah Austin, a sophomore majoring in integrated strategic communication, also participated in several of the Self-Care Week events, including trap yoga, the DIY projects and "Mocktails with a Twist." She said these events not only helped her relax, but also provided much needed exercise and a creative release.

"The Self-Care Week definitely helped me press pause on my stressful week that included classes, exam review, tutoring and work," Austin said. "That week was a great 'live in the moment' experience that I needed. It allowed me to take a break and relax my mind, so when I did return to my studies I was more clear-headed."

Austin says it is because of CARES that she has excelled both academically and socially at UK.

"I personally love CARES; they take you in and make sure that you are aware of everything that is available to you on campus," she said. "They will even go that extra mile and make you feel like family. That extra attention and care made my college experience easier going forward."

"We are a university striving to create a community where everyone — regardless of identity or perspective — feels a sense of belonging," said Sonja Feist-Price, UK's vice president for institutional diversity. "As educators and mentors, we must guide them, instruct them and also learn from them, as they build bridges of understanding and belonging."

To learn more about these programs and how to become involved, visit www.uky.edu/ss/ and www.uky.edu/cares/.

The University of Kentucky is increasingly the first choice for students, faculty and staff to pursue their passions and their professional goals. In the last two years, Forbes has named UK among the best employers for diversity and INSIGHT into Diversity recognized us as a Diversity Champion two years running. UK is ranked among the top 30 campuses in the nation for LGBTQ inclusion and safety and the Chronicle of Higher Education judged us a "Great*

*College to Work for.” We are ranked among the top 10 percent of public institutions for research expenditures — a tangible symbol of our breadth and depth as a university focused on discovery that changes lives and communities. And our patients know and appreciate the fact that UK HealthCare has been named the state’s top hospital for three straight years. Accolades and honors are great. But they are more important for what they represent: the idea that creating a community of belonging and commitment to excellence is how we honor our mission to be not simply the University of Kentucky, but the University **for** Kentucky.*

UK Researchers Use Sustainability Challenge Grant program to study biomass products

March 29, 2019

Researchers from the University of Kentucky departments of Chemistry, Food Science, Biosystems and Agricultural Engineering (BAE), as well as the Center for Applied Energy Research (CAER) were recently awarded funding from the UK Sustainability Challenge Grant program in order to demonstrate an integrated approach to replace coal and petroleum-generated products with sustainable, biomass-based products. Ideally, the research will lead to jobs for rural Kentuckians suffering from the slowing coal industry as well as help the United States reduce its dependence on foreign oil.

The team, led by Drs. Justin Mobley (Chemistry) and Rachel Schendel (Food Science), has partnered with Buffalo Trace Distillery in order to exhaustively utilize agricultural residues (corn stover and spent distillers grains) generated by Kentucky’s bourbon industry and produce value-added products. In order to do this, the corn stover must first be fractionated into cellulose (the carbohydrate component) and lignin (the aromatic component). This will be achieved using a technique developed by Dr. Jian Shi's lab in Biosystems and Agricultural Engineering (BAE).

Once fractionated into lignin and cellulose, the cellulose fraction will be transformed by Dr. Sue Nokes's team (BAE) via saccharification and fermentation into alcohol-based biofuels. The lignin component will then be broken down using a state-of-the-art catalyst system developed by Dr. Mark Crocker's team (Chemistry/CAER). The catalyst system is capable of producing high levels of monomeric products suitable for the replacement of petroleum-based fine-chemicals.

Residual oligomeric and polymeric materials will be used by Dr. Mark Meier (Chemistry) and Dr. Matt Weisenberger (CAER) for the production of high-value resins and carbon fibers/activated carbons, respectively. The grain fraction (harvested prior to delignification) of the biomass will be utilized by Buffalo Trace Distillery and distilled into bourbon. Prebiotic arabinoxylan oligosaccharides will be enzymatically isolated from the spent distiller's grains by Dr. Rachel Schendel's team (Food Science), and the residual grains used as animal feed.

Along the way, biomass and bio-product samples will be sent to Drs. Bert Lynn and Justin Mobley (Director of the UK Mass Spectrometry Facility and Director of the UK Chemistry Nuclear Magnetic Resonance Center, respectively) for analysis. Thus, a cradle-to-grave approach will be demonstrated with the potential to reduce our dependence on fossil fuels, decrease our carbon footprint, and add economic value to under-utilized waste streams in Kentucky.

The team is partnering with the UK Honors College, as well as the KY-WV LSAMP (Kentucky - West Virginia Louis Stokes Alliance for Minority Participation) and the researcher's home departments in order to recruit undergraduates complete each of the projects.

Seen below are picture of the team from a recent trip to Buffalo Trace Distillery. During the trip, researchers met with the Master Distiller of Buffalo Trace Distillery, Harlen Wheatley, to discuss the bourbon byproduct spent distillers grains (SDG). While the current value-added product produced from spent distillers grains is animal feed, there are limits to the amount of SDG feed you can give livestock. As the bourbon industry continues to expand, we will quickly out-pace the amount of SDG that can be fed to livestock in Kentucky. The team hopes to develop new value-added products and well paying jobs in the state.

The KY Integrated Biorefinery Team would like to give a special thanks to Buffalo Trace (Specifically Harlen Wheatley, Matt Higgins, and Freddy Johnson) for providing a detailed and enlightening tour and to Dr. Seth DeBolt (Horticulture) for acting as a liaison and tangential advisor.



Left to right: Dr. Jian Shi, Dr. Justin Mobley, Makua Win Nnajiolor, Rilwan Oyetunji, Harlen Wheatley, Dr. Matt Weisenberger, Jarrad Gollihue, Vianna Le, Glenna Joyce, Stephanie Sorensen, **Julia Parker**, Dr. Czarena Crofcheck, Freddy Johnson.



Tags: [chemistry](#), [center for applied energy research](#)

Sweet déjà vu: UofL scholars rack up prestigious scholarships

By Cindy Hess -
May 31, 2018



*Scholars who attended a campus celebration in their honor. From L-R: Lee Sims, Katie Maurer, James May, Devin Brown, Tasneem Karim, **Karen Udoh** and Praneeth Goli. Sims, Maurer and Udoh are Fulbrights. May is the 2017 James J. Mitchell Scholar. Brown and Karim are Critical Language Scholars and Goli was an honorable mention for the Barry Goldwater Scholarship.*

For more than a decade, UofL scholars have been winning big when it comes to academia's most coveted scholarships.

Happily, **2018 is a repeat performance** with students and alumni earning 10 Fulbrights, five Critical Language Scholarships, three Boren Scholarships, two Public Policy and International Affairs Program Fellowships and one Rotary Global Grant Scholarship.

"This is certainly exciting news for our institution," UofL President Neeli Bendapudi said. "But what's even more important, these prestigious awards are a perfect example of how our campus community puts students first. If you read the web page profiles on these award-winning scholars, you will see many examples of how our faculty, staff and administrators have inspired and

mentored students on their academic journey. That’s something that really sets UofL apart from other institutions.”

Recent graduate **Karen Udoh**, who earned a Fulbright, said UofL’s culture supports students who seek academia’s top awards.

“UofL introduced me to research opportunities,” said Udoh. “Being in the honors program — they let you know what opportunities you can pursue. They helped me believe in myself.”

Another Fulbright winner and recent graduate, **Emma Jacobs**, said her first meeting with **Dr. Patricia Condon**, who heads the national and international scholarship program, was when Jacobs was a sophomore.

“Ever since then, she has given me straightforward and honest advice on how to improve my application. It is evident she cared for my and other students’ dreams as she consistently organized and led workshops for Fulbright throughout the year,” Jacobs said.

Including this year, there have been 120 UofL Fulbright scholars since 2003 — more than all other Kentucky public institutions combined. The university set a record in 2016 with 15 scholars, besting the previous record of 14 scholars in 2010 and again in 2011.

During an event to celebrate the 2018 scholars, Acting Provost Dale Billingsley told attendees that students are the “beneficiaries of the steadily higher arc of performance” in the scholarship program. He thanked Condon and her colleagues Bethany Smith and Dr. Charlie Leonard for their many hours of work to help scholarship applicants.

“We have an incredible team at this university,” said Condon. “Without the help of Bethany and Charlie and the ongoing support of the honors program, university administrators, and the specialized faculty mentors, we simply couldn’t have had such resounding success.”

Here are a few interesting tidbits about this year’s honorees:

- All of the winners are from Kentucky.
- Six scholars were named as Fulbright alternates. That means they could still receive the prize if more funding becomes available or if a finalist declines the award.
- Fulbright winners Christian Bush, Robert Gassman and Kyle Hilbrecht have a lot in common: they are all **McConnell Scholars** from Louisville, were college roommates, political science majors and will teach in Asia as part of their award.

- Three of the Critical Language Scholars — Tasneem Karim, Lance Gibson and Nada Kaissieh—credit Professor **Khaldoun Almously** for igniting their interest in Arabic. Almously was recognized in 2016 for inspiring four students to study Arabic and earn a CLS award.

Full profiles of UofL’s 2018 scholars are [available online](#).

Lyman T. Johnson Awards Announced

By **Meredith Weber** Nov. 2, 2018



The 2018 recipients of Lyman T. Johnson Awards.

LEXINGTON, Ky. (Nov. 2, 2018) — Awards and an endowed scholarship fund announcement highlighted the 28th annual Lyman T. Johnson Torch of Excellence Awards Dinner on Friday, Oct. 19, at the Woodford Reserve Club at Kroger Field.

The University of Kentucky Alumni Association Lyman T. Johnson African American Alumni Group honored students and alumni during the awards ceremony as part of the 2018 Lyman T. Johnson Homecoming Celebration.

UK's academic colleges and units select one African-American alum whose faith, hard work and determination has positively affected the lives of people on the UK campus, the city, state or nation. These individuals received the Lyman T. Johnson Torch of Excellence Award. These units also choose an African-American student within their respective colleges/departments whose academic achievement and ability to impact the lives of others would warrant them to receive the Lyman T. Johnson Torch Bearer Award.

The group's establishment of the Lyman T. Johnson Endowed Scholarship Fund was also announced. The scholarship, which has an initial fundraising goal of \$70,000 by the 70 Years Reunion that will be held during Homecoming 2019 to honor the 70 years of integration at the University of Kentucky, will provide minority students financial assistance in their pursuit of higher education.

William H. Wilson, a retired educational television and higher education leader, emceed the event. Lyman M. Johnson, son of Lyman T. Johnson, was the evening's keynote speaker. The UK Black Voices Gospel Choir, under the leadership of President Sterling Crayton and direction of Monique Shanks, provided entertainment.

In addition, UK President Eli Capilouto, UK Vice President for Institutional Diversity Sonja Feist-Price and Lyman T. Johnson African American Alumni Group President Lee Jackson all spoke.

"The Lyman T. Johnson Torch of Excellence Awards Dinner is in its 28th year and continues to serve as an important opportunity for the University of Kentucky's colleges and units to recognize the significant achievements of its African-American students and alumni," Jackson said. "This year's event was particularly special because of the partnership between the Lyman T. Johnson African American Alumni group, the UK Alumni Association and the UK Office for Institutional Diversity. Through these partnerships, and with the support of many of UK's colleges and units, this special night honored Lyman T. Johnson's legacy at the University of Kentucky and acknowledged the many men and women of color who work every day to continue carrying the torch of diversity and inclusion on our campus, in our local community and across the world."

The UK Office for Institutional Diversity, UK Provost's Office and the UK Alumni Association, along with a number of colleges and campus units, were honored to partner on this awards program.

"Institutional Diversity was proud to partner with the UK Alumni Association and the LTJ Alumni Group to expand the size and prominence of UK's annual LTJ Banquet," Feist-Price said. "With participation from many UK colleges, UK HealthCare and UK Athletics, we were able to highlight the extraordinary accomplishments of outstanding African-American alumni and student leaders who make our university and Commonwealth stronger."

Award winners were:

College of Agriculture, Food and Environment

Torch Bearer: Carley Fort

Torch of Excellence: Quentin Tyler

College of Arts and Sciences

Torch Bearer: Cassie Bradley (humanities), [*Isaiah Brown \(math and natural sciences\)*](#) and Kortni Dubose (social sciences)

Torch of Excellence: Arnold Farr

Gatton College of Business and Economics

Torch Bearer: Lauryn McNair

Torch of Excellence: Samuel Delaney

College of Communication and Information

Torch Bearer: Maria Jones

Torch of Excellence: Shawn Long

College of Dentistry

Torch Bearer: Lisa Kwarteng

Torch of Excellence: Dr. Zindell Richardson

College of Education

Torch Bearer: Angelo Lacoude

Torch of Excellence: MiKeiya Morrow

College of Engineering

Torch Bearer: [*Chelsea Elizabeth Robinson*](#)

Torch of Excellence: Taunya Phillips

College of Fine Arts

Torch Bearer: David Foster

Torch of Excellence: Terry Adkins (posthumously)

College of Health Sciences

Torch Bearer: Kennedy Guess

Torch of Excellence: Andy Duclos

College of Law

Torch Bearer: Christian Rice

Torch of Excellence: T. Fitz Johnson

UK Libraries

Torch Bearer: Javoughn Brown

College of Medicine

Torch Bearer: Eseosa Ighodaro

Torch of Excellence: Dr. Wendy Jackson

College of Nursing

Torch Bearer: Nana Ntodi

Torch of Excellence: Alalia J. Mack

College of Pharmacy

Torch Bearer: Kirstyn Hill

Torch of Excellence: Adebayo Ogunniyi

College of Public Health

Torch Bearer: Tsage Douglas

Torch of Excellence: Timothy N. Crawford

College of Social Work

Torch Bearer: Daniel Beasley

Torch of Excellence: Doris Wilkinson

The Graduate School

Torch of Excellence: Nigel Vinegar

Lewis Honors College

Torch Bearer: Maya Woolfolk

Torch of Excellence: La Tasha Buckner

For information, contact Hannah Simms at 859-257-7174 or email Hannah.Simms@uky.edu.

The UK Alumni Association is a membership supported organization committed to fostering lifelong engagement among alumni, friends, the association and the university. For more information about the UK Alumni Association or to become a member, visit www.ukalumni.net or call 800-269-2586.

UK is the University for Kentucky. At UK, we are educating more students, treating more patients with complex illnesses and conducting more research and service than at any time in our 150-year history. To read more about the UK story and how you can support continued investment in your university and the Commonwealth, go to: uky.edu/uk4ky. #uk4ky #seeblue

UK Chapter of MANRRS is No. 1 in Nation Again

By **Aimee Nielson** Friday



UK's MANRRS chapter has earned its seventh consecutive national award.

LEXINGTON, Ky. (April 12, 2019) — For the seventh consecutive year, the University of Kentucky MANRRS chapter was named National Chapter of the Year at the 34th annual Minorities in Agriculture, Natural Resources and Related Sciences conference. The chapter is housed in the UK College of Agriculture, Food and Environment.

Mia Farrell, interim director of the college's Office of Diversity and chapter advisor said seven in a row has nothing to do with luck.

"Our students work hard to achieve this national recognition," she said. "We are committed to helping promote and advance members of ethnic and cultural groups that are underrepresented in agriculture and related sciences. Our students are dedicated to making our chapter the very best, and it shows year after year as they are recognized nationally for their efforts."

Farrell, co-advisor Ashley Holt and more than 50 UK MANRRS delegates made the trip to the national conference in Overland Park, Kansas, and many brought home awards.

Jericho Curry, a senior majoring in community and leadership development, received the prestigious U.S. Department of Agriculture Farm Service Lead Agent Award. He is one of just five members in the nation to win the award.

"I don't do what I do for UK MANRRS for accolades, but I do it to make sure I give back to those coming after me like the ones before me did," Curry said. "I always tell myself that I'm not winning until my whole team is winning. Therefore, receiving this award among five other scholars across the nation means a lot. It shows that my hard work and dedication doesn't go unnoticed."

Farrell was elected the 2019-2020 National MANRRS president-elect. Ayanna Wright, a senior business management major and UK MANRRS president, was elected the National MANRRS Region 3 undergraduate vice president.

Shannah Marshall, a junior majoring in career and technical education, was named a top 20 Farm Credit VIP Scholar.

Francisco Beltran, a junior at Carter G. Woodson Academy in Lexington, placed second in the Jr. MANRRS research poster competition. Dorian Cleveland, a senior at Carter G. Woodson, placed third.

UK MANRRS students also received awards in a few case study categories. The chapter picked up first place in the 2019 International Bunge Case Study — winners included Yesenia Moreno, a junior studying agricultural economics; **Fabian Leon, a senior in agricultural and medical biotechnology;** Kiernan Comer, a senior majoring in forestry; and Elijah Faulkner, a sophomore majoring in agricultural and medical biotechnology.

UK students also picked up first, second and third places in the 2019 Cargill Case Study competition. The first-place team included Moreno; Haley Jones, a sophomore majoring in human nutrition; Khylie Caldwell, a sophomore pre-nursing student. The second-place team included Brandon Jones, a senior majoring in equine science and management, and Djenayba

Diallo, a junior majoring in psychology. The third-place team included Deanna Williams, a senior majoring in natural resources and environmental sciences, Shekaylah Martin, a junior majoring in kinesiology, and Taylor Pratt, a sophomore majoring in biology.

“It seems each year, our organization just gets stronger,” Farrell said. “I am proud of what our current members are accomplishing, and I look forward to the future. Kentucky is making a difference in diversity nationwide.”

The University of Kentucky is increasingly the first choice for students, faculty and staff to pursue their passions and their professional goals. In the last two years, Forbes has named UK among the best employers for diversity and INSIGHT into Diversity recognized us as a Diversity Champion two years running. UK is ranked among the top 30 campuses in the nation for LGBTQ inclusion and safety and the Chronicle of Higher Education judged us a “Great College to Work for.” We are ranked among the top 10 percent of public institutions for research expenditures — a tangible symbol of our breadth and depth as a university focused on discovery that changes lives and communities. And our patients know and appreciate the fact that UK HealthCare has been named the state’s top hospital for three straight years. Accolades and honors are great. But they are more important for what they represent: the idea that creating a community of belonging and commitment to excellence is how we honor our mission to be not simply the University of Kentucky, but the University **for** Kentucky.*