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Oklahoma Louis Stokes Alliance for Minority Participation

Annual Evaluation Report

Summer 2022 through Spring 2023

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Introduction

Oklahoma was awarded funding from the National Science Foundation for a five-year continuation of the Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP) program. Oklahoma State University serves as the lead institution for the alliance of 12 universities within the state, and the funding cycle covers August 1, 2019 through July 31, 2024. The participating institutions are Cameron University (CU), East Central University (ECU), Langston University (LU), Northeastern State University (NEOSU), Northwestern Oklahoma State University (NWOSU), Oklahoma Panhandle State University (OPSU), Oklahoma State University (OSU), Southeastern Oklahoma State University (SEOSU), Southwestern Oklahoma State University (SWOSU), University of Central Oklahoma (UCO), University of Oklahoma (OU), and University of Tulsa (TU). This report includes results from the fourth year of the five-year phase, Summer 2022 through Spring 2023.

This period of funding represents Oklahoma's 29th year of participation in the national LSAMP efforts to increase participation and graduation among underrepresented minority (URM) students in STEM disciplines (Science, Technology, Engineering, and Mathematics). For the purposes of the OK-LSAMP program and this evaluation, underrepresented minority students include Black or African American, Hispanic/Latino, American Indian or Alaska Native, and Native Hawaiian or Other Pacific Islander undergraduates.

Purpose of the Evaluation

The OK-LSAMP program has specific goals and objectives that serve as the framework for their activities and efforts throughout the year. The Center for Institutional Data Exchange and Analysis (C-IDEA) at the University of Oklahoma has prepared this annual report to assess the progress of the program toward meeting its goals and objectives. This formative evaluation is an important component of the program as it offers timely feedback about program progress toward meeting its goals, which then allows time for future adjustments to activities, processes, and procedures if needed. The annual evaluation provides information on the activities and accomplishments of OK-LSAMP scholars participating in the program and offers insights into areas of success, as well as others that may need to be improved.

Evaluation Process

This evaluation includes both quantitative and qualitative components using three key sources of data. The results are described in four sections of the report.

- **Section 1:** Data on the activities and accomplishments of students participating in the program were provided by OK-LSAMP Director, Gina Miller, and Grant Coordinator, Darlene Croci. It includes data provided by each participating alliance institution.
- **Section 2:** The Center for Institutional Data Exchange and Analysis prepared two Qualtrics surveys that were emailed to OK-LSAMP scholars using lists provided by the OK-LSAMP program office. This section includes quantitative and qualitative results.
- **Section 3:** National STEM data were provided by the Consortium for Student Retention Data Exchange (CSRDE) at the Center for Institutional Data Exchange and Analysis
- **Section 4:** Overall Report Summary and Recommendations

Section 1: OK-LSAMP Results Based on Data from Program Office

Introduction

The primary goal for this five-year phase of the OK-LSAMP program is as follows:

to increase the recruitment, retention, and graduation of URM students in STEM fields from Oklahoma alliance institutions.

This goal refers to all STEM students at alliance institutions in Oklahoma; however, increased participation of students in the OK-LSAMP program results in more STEM students statewide, thus helping to meet this overall goal. This report addresses the progress of OK-LSAMP students specifically.

The Alliance experienced success in previous years in obtaining its goals of graduating URM STEM students who are prepared to enter graduate studies or industry. This five-year phase is dedicated to continuing these achievements. This section of the evaluation uses data on alliance scholars as provided by the OK-LSAMP program office. We address the four objectives of the program.

- Objective 1: *Recruit, retain, and graduate 25% more URM students in STEM fields from 750 in 2017 as the baseline.*
- Objective 2: *Understand and implement key success factors for recruitment, retention, and graduation of transferring URM students in STEM fields to increase the quality and quantity of students transferring from 2-year to 4-year institutions in Oklahoma.*
- Objective 3: *Increase the number of scholars gaining international experiences by 30% with an emphasis on partnerships with international centers and international research opportunities.*
- Objective 4: *Increase the graduate school participation of URM students in STEM (OK-LSAMP scholars) by 25% above 2017-2018 total of 24 graduate students per year as the benchmark.*

Objective 1

The baseline of 750 noted in Objective 1 refers to all STEM graduates within the OK-LSAMP institutions. This report looks exclusively at the students who participate in the OK-LSAMP program at the alliance institutions. We will report recruitment, retention, and graduation data separately to measure the success of this objective.

Based on reporting results during the previous five-year cycle, recruiting efforts from Summer 2018 through Spring 2019 resulted in 63 new scholars joining the program that academic year. To reach the 25% increase using 63 as the baseline, the Alliance must recruit an average of 79 new scholars to the program each year, for a total of 395 during the five-year period.

Rather than look at a 25% increase for retention, we will instead report the retention rate based on the number of students still in the program at the end of the spring semester each year and expect to see an increase. During the 2018-2019 academic year, there were 267 scholars in the program. Of those, 68 students graduated leaving 199 students eligible to continue past Spring 2019. The program lost 14 students during that academic year, resulting in a 93.0% retention rate (185 of 199 students remained in the OK-LSAMP program at the end of the Spring 2020 semester). If the Alliance increases this rate over the five-year cycle, this part of the objective will be met.

During the previous five-year cycle, 352 OK-LSAMP scholars graduated with a STEM degree. Using this as the baseline, the Alliance must graduate 440 students during this five-year project to meet the goal of a 25% increase. An average of 88 graduates per year—20 percent of the total needed—will keep the Alliance on target to meet this objective.

Objective 2

Success of students transferring from two- or four-year institutions into the Alliance institutions is the focus of Objective 2. The Alliance began collecting transfer student status for the first time during the academic year 2019-2020. Because there was no prior data, we are using results from the 2019-2020 academic year as the baseline to determine how the Alliance is meeting this objective. As with Objective 1, we will report recruitment, retention, and graduation data separately to measure the success of this objective.

The Alliance added 15 transfer students from two-year institutions during the 2019-2020 academic year. If the OK-LSAMP program recruits more than 15 transfer students in subsequent years, they will have met the objective to increase the number of scholars who transfer from a two-year institution.

To determine an increase in retention and graduation, we will report on the progress of all OK-LSAMP scholars who are transfer students from two-year institutions, not only those who transferred to an Alliance institution during the academic year for each evaluation report. For retention, we will look at the percentage of transfer students still in the program at the end of the spring semester each year and expect to see an increase. For graduation, we will report how many transfer students graduated each academic year and anticipate an increase throughout the five-year period.

The Alliance included 31 scholars during the 2019-2020 academic year who had transferred from a two-year institution. During this time, 13 of these 31 scholars graduated, leaving 18 transfer students eligible to continue past Spring 2020. The program lost three of these 18 transfer students during the academic year, resulting in an 83.3% retention rate (15 of 18 transfer students who did not graduate remained in the OK-LSAMP program at the end of the Spring 2020 semester). If the Alliance increases this rate over the five-year cycle, this part of the objective will be met.

Of the 31 transfer students, 13 graduated during the 2019-2020 academic year, resulting in a 41.9% graduation rate. To meet this part of Objective 2, the Alliance needs to increase this percentage during the five-year funding period.

Objective 3

The Alliance plans to increase the number of students who gain international experience by 30%. During the previous five-year funding period, 62 scholars participated in international experiences. Sixty-nine total experiences in 25 countries were reported during that time. To meet this objective, 81 OK-LSAMP scholars during this five-year funding period must have travelled abroad for international internships, study abroad, international research, or international conference presentations during college.

Objective 4

The final objective for this phase of the OK-LSAMP program is to increase the number of scholars entering graduate school by 25%. The benchmark, based on the 2017-2018 data, is 24 graduate students per year. To achieve the desired increase, the Alliance must see an average of 30 graduates per year enter a STEM discipline in graduate school, for a total of 150 during the five-year period.

Alliance-Wide Actions

To maximize the success of students through their undergraduate degree, and to help ensure their success in applying to graduate school, the Alliance determined that it would strive to assist students in many ways. Scholars are paired with faculty mentors to conduct research; the program provides an online GRE prep course and offers help with applying to graduate school; and scholars are provided with financial assistance, workshops, and guidance in obtaining domestic and international internships. In addition, scholars are required to:

- Maintain a minimum cumulative GPA of 3.0
- Attend regular group meetings at Alliance institutions
- Participate in at least one internship experience
- Submit a minimum of three graduate school applications
- Present their research at the annual Research Symposium, hosted by the OK-LSAMP program office, and other professional meetings

Participants

The OK-LSAMP program provides academic, personal, and professional support for its students to help them excel in STEM fields. This report examines the ability of the Alliance to achieve its goals during the period of Summer 2022 through Spring 2023. As previously noted, the program is specifically focused on recruiting underrepresented minority (URM) students: Black or African American, Hispanic/Latino, American Indian or Alaska Native, and Native Hawaiian or Other Pacific Islander undergraduates.

In the program year under review, the Alliance supported 236 students. Table 1 displays participating students by class standing and institution.

Table 1: *Participants by Partner Institution – Summer 2022 through Spring 2023*

Institution	Freshman	Sophomore	Junior	Senior		Total Scholars	% of Total Scholars
Cameron University	2	1	3	3		9	3.8%
East Central University		3	2	4		9	3.8%
Langston University		2	14	29		45	19.1%
Northeastern OK State University		3	3	9		15	6.4%
Northwestern OK State University	1		2	3		6	2.5%
OK Panhandle State University	1		1	2		4	1.7%
Oklahoma State University	1	11	13	47		72	30.5%
Southeastern OK State University		4	5	10		19	8.1%
Southwestern OK State University	1	2	1	9		13	5.5%
University of Central OK			3	4		7	3.0%
University of Oklahoma		3	3	21		27	11.4%
University of Tulsa	1	3	1	5		10	4.2%
TOTAL	7	32	51	146		236	100%
Percentage of Total Scholars	2.9%	13.6%	21.6%	61.8%			

Percentages may not total 100% due to rounding

Although a majority of the students in the program are juniors or seniors, the Alliance also supports freshmen and sophomores to encourage these students to move forward with a STEM degree. Unless otherwise noted, the data in this report includes all students participating in the OK-LSAMP program during Summer 2022 through Spring 2023 regardless of classification.

Results – Graduates

From Summer 2022 through Spring 2023, a total of 67 OK-LSAMP scholars graduated with STEM degrees. The Alliance’s goal to have an average of 88 scholars obtain a bachelor’s degree each year was not met during this reporting period. Figure 1 shows the cumulative results of graduates thus far in this five-year funding period. During the 2022-2023 academic year, 67 students graduated, which is 21 students fewer than the goal for this year. See Figure 1.

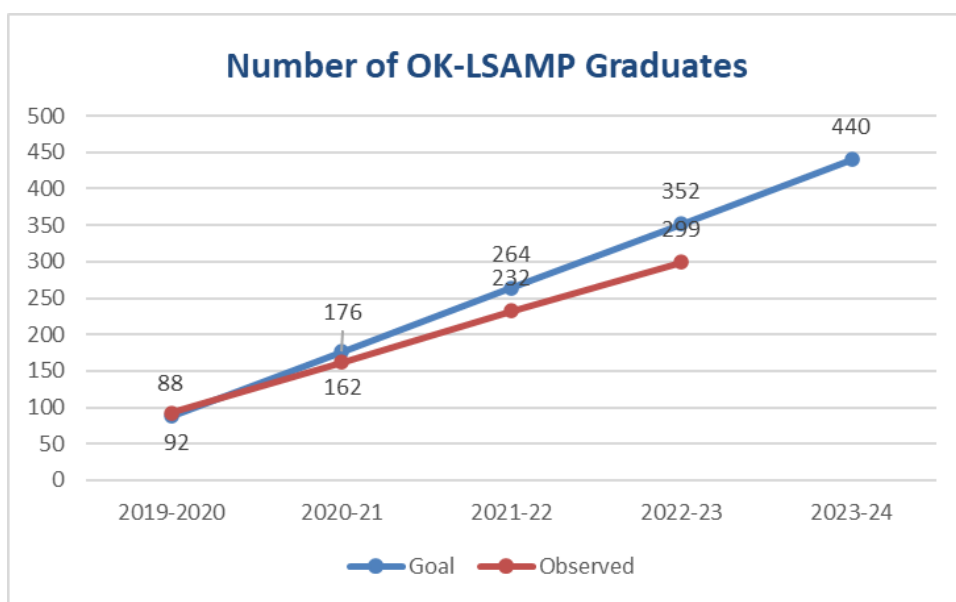


Figure 1: Graduation Counts (Cumulative) – Goal vs Observed

The OK-LSAMP graduates accomplished the following during academic year 2022-2023

- 47% of the OK-LSAMP seniors (67 of 144) graduated during this period and 94% of the remaining seniors (72 of 77) were still in the program at the end of Spring 2023.
- 13.4% (9 of 67) took the GRE
- 49.3% (33 of 67) applied to graduate school
- 24% of all graduates (16 of 67) were accepted into graduate school
- 92.5% (62 of 67) had a GPA of 3.0 or higher
- 88.1% (59 of 67) had a research mentor
- 49.2% (33 of 67) conducted research
- 42% (28 of 67) had at least one summer internship during college
- 50.7% (34 of 67) reported an international experience during college

Based on the GPAs and number of scholars who participated in research and internships, there were many graduates who had the potential to move on to graduate work, but either elected not to do so or were not accepted into graduate programs. Of the 45 graduates who did not apply to graduate school—or were not accepted— 40 (88.9%) had a GPA of 3.0 or greater, 24 (53%) had participated in research opportunities during the 2022-2023 academic year, and 20 (44%) participated in at least one summer internship during college.

Results – All Scholars

Objective 1

The Alliance plans to recruit, retain, and graduate 25% more OK-LSAMP scholars during the five-year funding period. To do this, they must average 79 new scholars each year. During the 2022-2023 academic year, 87 new students joined the OK-LSAMP program. During this reporting period, the Alliance met and exceeded the annual goal. Figure 2 provides the cumulative count of new scholars compared to the goal.

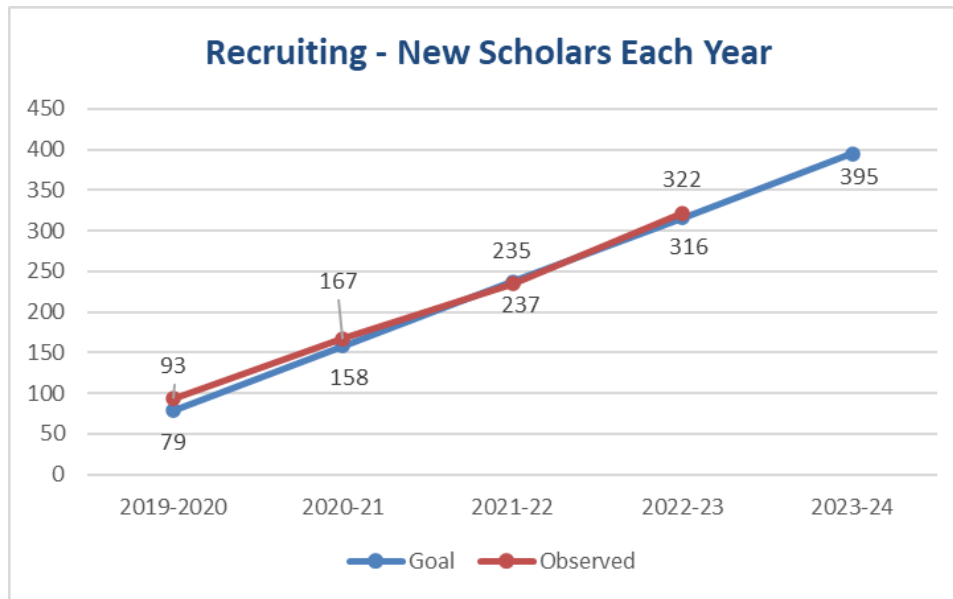


Figure 2: New OK-LSAMP Scholars by Year (Cumulative) – Goal vs Observed

There were 236 scholars in the program during Summer 2022, Fall 2022, and Spring 2023. Of those, 67 students graduated, leaving 169 who could continue past the Spring semester. Twelve students left the program, resulting in a 93% retention rate (157 of 169) for students who remained in the OK-LSAMP program at the end of the Spring 2023 semester. The Alliance successfully retained its students at a matching the baseline of 93.0% from academic year 2018-2019. Figure 3 shows the baseline, plus annual retention rates thus far during this funding period.

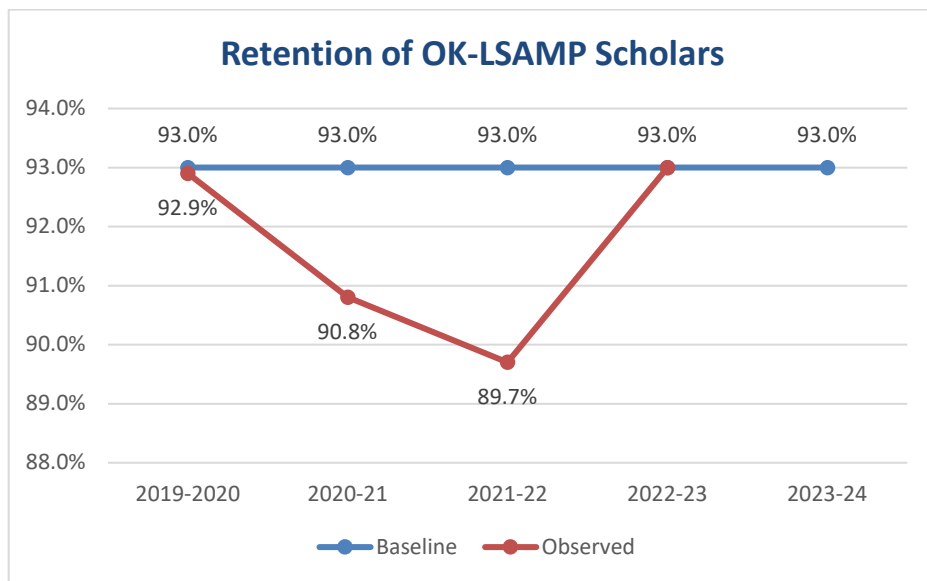


Figure 3: Percentage of Scholars Retained – Baseline vs Observed

Objective 2

The success of transfer students is the focus of Objective 2. OK-LSAMP would need to add more than 15 transfers during the 2022-2023 academic year to realize an increase in recruiting scholars from two-year institutions. As noted earlier in the report, the Alliance began collecting transfer student status during the 2019-20 academic year, so we are using data from that year as the benchmark. Seventeen scholars joined the program during this evaluation period, so this goal was met. See Figure 4 for annual counts compared to the benchmark.

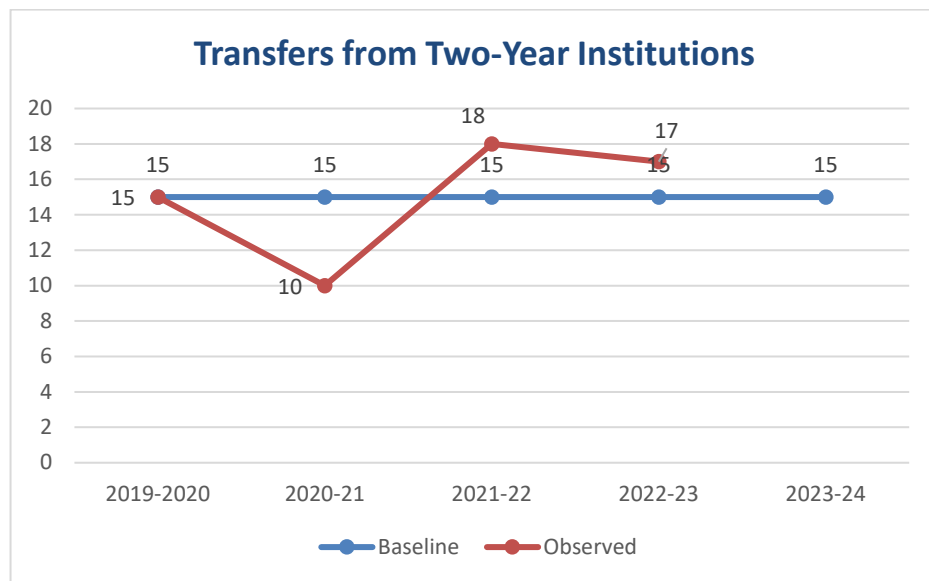


Figure 4: Number of Transfers from Two-Year Institutions– Baseline vs Observed

For retention data, we are looking at the percentage of transfer students from two-year and four year institutions who are still in the program at the end of the spring semester each year and expect to see an increase from the baseline of 83.3%. Of the 236 total 2022-2023 scholars 17 have transferred from a two-year institution. During this evaluation period, four of these 17 scholars graduated. The remaining 38 transfer students who came from other four-year institutions had 13 graduates, leaving 25 total transfer students eligible to continue past Spring 2023. The program lost two of these 25 transfer students during the academic year, resulting in a 92% retention rate (23 of 25 transfer students who did not graduate remained in the OK-LSAMP program at the end of the Spring 2023 semester). The Alliance has increased its retention rate of transfer students this year and exceeded the baseline goal. See Figure 5.

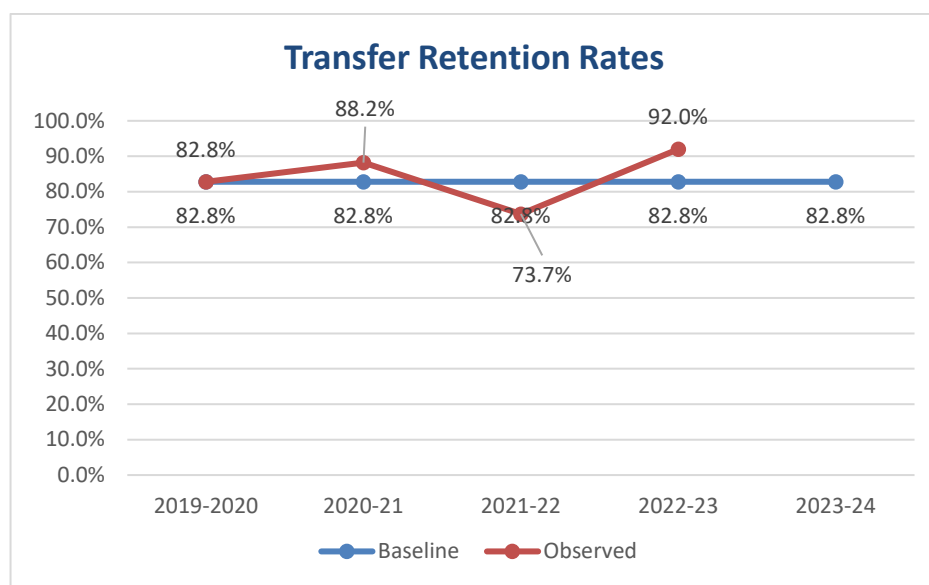


Figure 5: Retention Rates of Transfers from Two-Year & Four-Year Institutions– Baseline vs Observed

Seventeen of the 55 transfer students graduated during the 2022-2023 academic year, resulting in a 31% graduation rate. The Alliance did not increase its graduation rate of transfer students this year. Figure 6 shows the annual graduation rates of transfers compared to the baseline.

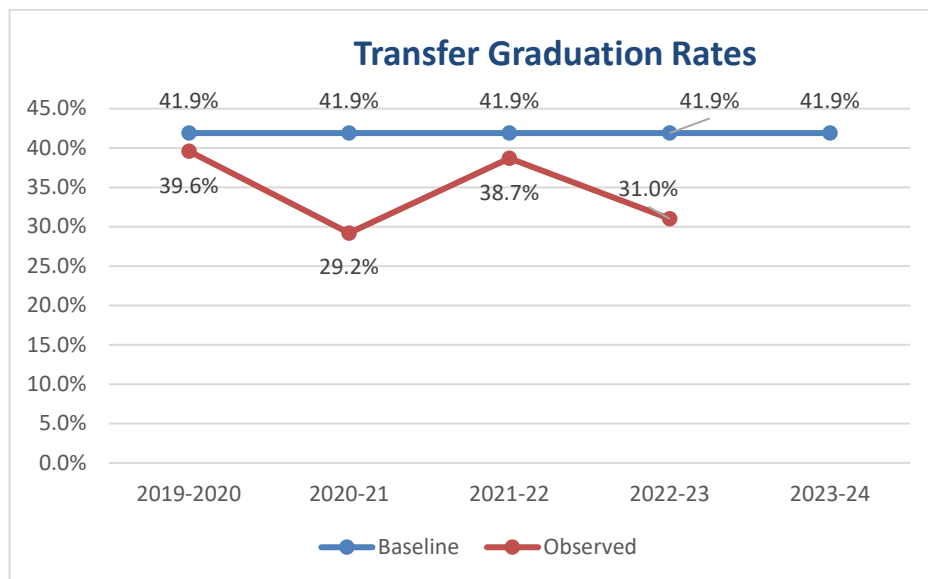


Figure 6: Graduation Rates of Transfers– Baseline vs Observed

Objective 3

Increasing by 30% the number of scholars who participate in an international experience is the goal for Objective 3. To succeed in this goal, 81 students enrolled in the OK-LSAMP program during the five-year period must have travelled abroad for study, international internships, international research, or international conference presentations. To reach 81 students, we have set an annual goal of 16 students, 20% of the five-year goal.

Since 2019-2020 was the first year of this funding cycle, Figure 7 shows 26 students had an international experience that year. This data represents the total number of students in the program that year who had an international experience at some point in their academic career; it does not indicate that 26 students traveled during the last academic year. Each year we will add any new students who join the program to the graph if they have traveled abroad for international internships, study abroad, international research, or international conference presentations during their college career. A total of 35 international experiences were reported by 33 students this year, therefore, the Alliance met the goal.

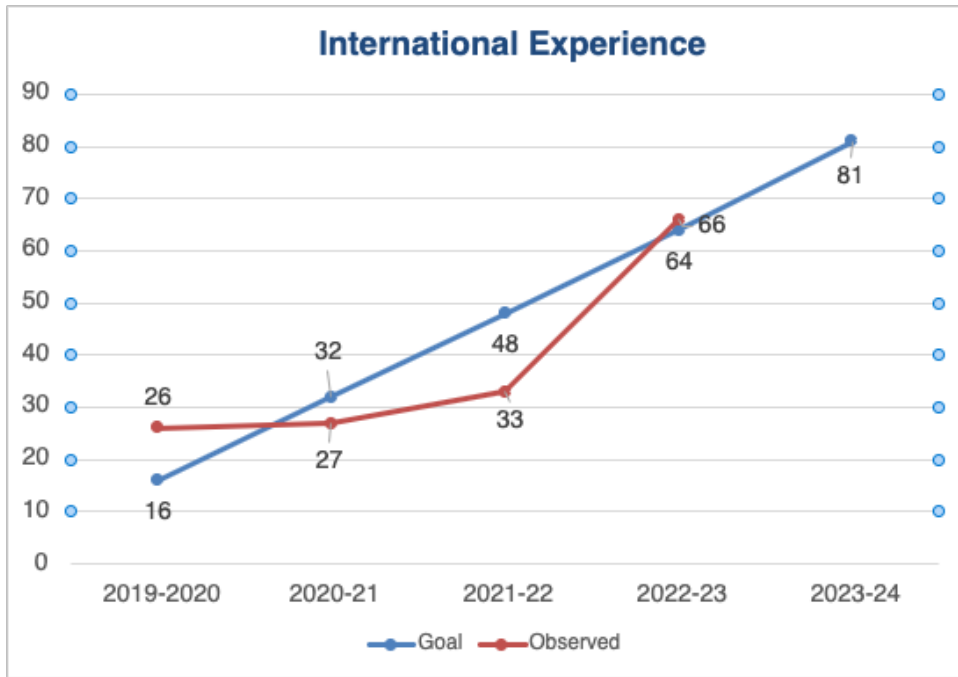


Figure 7: Scholars with International Experience (Cumulative) – Goal vs Observed

Objective 4

The Alliance hopes to increase the number of students who enter graduate school by 25%. To meet this goal, an average of 30 scholars must enter graduate school each year. During the 2022-2023 academic year, 16 scholars who graduated in the OK-LSAMP program were accepted into graduate school in a STEM discipline. The Alliance did not meet this objective for this reporting period. Figure 8 provides the cumulative count of scholars who have been accepted into graduate school in a STEM discipline compared to the annual goal.

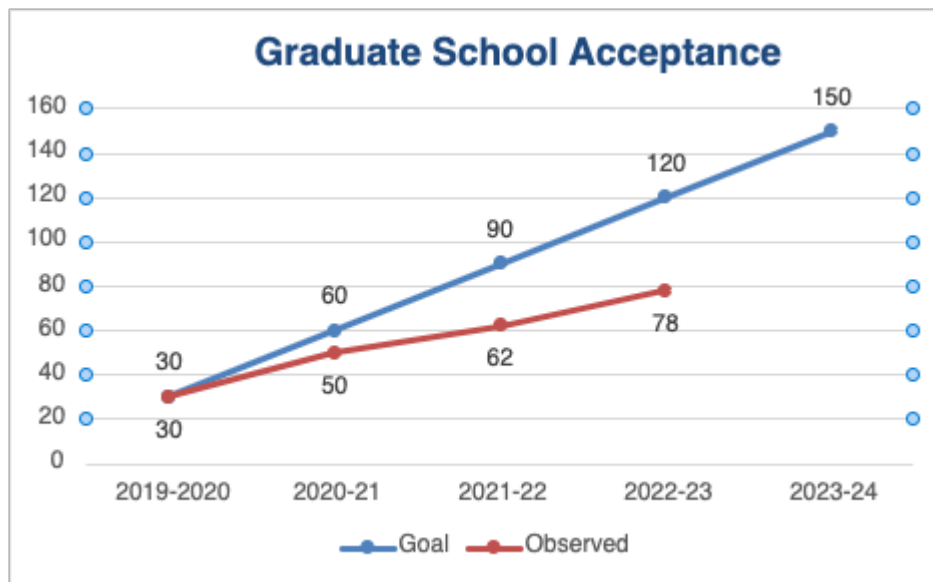


Figure 8: Scholars Accepted into Graduate School (Cumulative)– Goal vs Observed

Graduate School Preparation

Research is a significant component of the OK-LSAMP program that provides an opportunity to develop research skills and build relationships with faculty members. The OK-LSAMP program office regularly sends emails to scholars on the listserv informing them of research opportunities and summer internships, including international experiences. OK-LSAMP participants are encouraged to apply to graduate school and are offered support during the process.

There were 236 scholars in the program during the 2022-2023 academic year. Below are the results of the Alliance-wide efforts in providing opportunities for the participants to be successful in their graduate school applications.

- 6.3% of the senior scholars (9 of 144) took the GRE
- 35.2% of the students who had not left the program before Fall 2022 (83 of 236) conducted research that semester
- 40.3% of the scholars who were in the program during Spring 2023 (95 of 236) conducted research that semester
- 42% of the students (98 of 236) participated in at least one internship during college
- 15.3% of students (36 of 236) have participated in at least one international experience during college
- 38.1% of students who were in the program in Fall 2022 (90 of 236) attended the OK-LSAMP Research Symposium
- 42% of students who attended the OK-LSAMP Research Symposium (38 of 90) presented

Summaries on how each individual Alliance partner contributed to the OK-LSAMP goals can be found in Appendix 1.

Section 2: OK-LSAMP Online Student Survey

The Center for Institutional Data Exchange and Analysis at the University of Oklahoma created two online surveys using Qualtrics and sent an email invitation to all OK-LSAMP scholars with a link to the survey. We obtained the email addresses from Darlene Croci in the OK-LSAMP program office. The addresses contained the names from their listserv, which included scholars currently in the program. The Fall 2022 list included 183 email addresses, and the Spring 2023 list included 192 names. The OK-LSAMP program office sent each student an email notification about the survey beforehand. The evaluator also informed the Campus Program Managers about the survey and asked them to encourage their students to participate. The invitations were emailed to scholars on November 7, 2022 and March 23, 2023. Each group of students received two follow-up emails before the surveys closed on November 18, 2022, and April 13, 2023, respectively.

Eighty-six students responded to the survey in Fall 2022. Ten of these students did not complete the survey, so their responses are not included in these results. The response rate of useable data from the survey was 48.3% (86 out of 183). Students from ten of the twelve institutions were represented in the survey from Fall of 2022. Eighty-six scholars responded to the Fall 2022 survey. The largest response to the survey (28%) came from Langston University. The second largest number of survey respondents came from Oklahoma State University, which has the largest representation of OK-LSAMP scholars in the program, with the responses comprising 24% of the total.

Ninety-two students responded to the Spring 2023 survey. The response rate of useable data from the survey was 44% (80 out of 183).

The largest response to the survey came from Langston University (34% in spring), and the second-largest number of survey respondents came from Southeastern Oklahoma State University and Southwestern Oklahoma State University (8.7% from both) with the responses comprising 17.4% of the total in the spring survey.

Tables 2a and 2b provide the number of students who responded to the fall and spring surveys from each institution. They also include data showing the percentage representation of each institution within the program, as well as the survey participation.

Table 2a: *Student Affiliation of Survey, Fall 2022 Survey Respondents*

Institution	Total Scholars Who Received Survey	% of Total Scholars	# of Survey Respondents	% of Scholars who Responded to Survey	Distribution of Survey Responses	% of Total Scholars who Responded to Survey
CU	9	5%	6	66.7%	7%	3.3%
ECU	5	3%	5	100%	6%	2.7%
LU	42	23%	24	57.1%	28%	13.1%
NEOSU	10	5.5%	4	40%	4.7%	2.2%
NWOSU	3	1.6%	2	66.7%	2.3%	1.1%
OPSU	3	1.6%	0	0%	0%	0%
OSU	55	30.1%	21	38.2%	24.4%	11.5%
OU	23	12.6%	7	30.4%	8.1%	3.8%
SEOSU	12	6.6%	8	66.7%	9.3%	4.4%
SWOSU	7	3.8%	7	100%	8.1%	3.8%
TU	8	4.4%	2	25%	2.3%	1.1%
UCO	6	3.3%	0	0%	0%	0%
Grand Total	183	100.5%	86	47%	100.2%	47%

Percentages may not total 100% due to rounding.

Table 2b: *Student Affiliation of Survey Spring 2023 Survey Respondents*

Institution	Total Scholars Who Received Survey	% of Total Scholars	# of Survey Respondents	% of Scholars who Responded to Survey	Distribution of Survey Responses	% of Total Scholars who Responded to Survey
CU	10	5.2%	6	60%	7.5%	3.1%
ECU	6	3.1%	4	67%	5%	2.1%
LU	43	22.4%	26	60%	32.5%	13.5%
NEOSU	11	5.7%	5	45.5%	6%	2.6%
NWOSU	5	2.6%	3	60%	3.8%	1.6%
OPSU	3	1.6%	0	0%	0%	0%
OSU	54	28.1%	7	13%	9%	3.6%
OU	21	11%	7	33.3%	9%	3.6%
SEOSU	14	7.3%	4	28.6%	5%	2.1%
SWOSU	8	4.2%	7	88%	9%	3.6%
TU	10	5.2%	8	80%	10%	4.2%
UCO	7	3.6%	3	43%	3.8%	1.6%
Grand Total	192	100%	80	42%	100.6%	42%

Percentages may not total 100% due to rounding.

Students in both the Fall 2022 and Spring 2023 surveys reported transferring from the following institutions: Beloit College (WI), Benedictine College (KS), Bethany College (KS), Bowie State University (MD), Brandon University (MB CA), Cameron University (OK), Community College in Beaver County (PA), Connors State College (OK), Kansas City, Kansas Community College (KS), Langston University (OK), Georgia Southern University (GA), Houston Community College (TX), Lone Star College (TX), Morehouse College (GA), Grayson County (TX), Miles Community College (MT), Murray State College (OK), Northeastern State University (OK), Northern Oklahoma College (OK),

Oklahoma Baptist University (OK), Oklahoma City Community College (OK), Oklahoma Panhandle State University (OK), Oklahoma State University (OK), Oklahoma Wesleyan University (OK), Onondaga Community College (NY), Oral Roberts University (OK), Pennsylvania State University (PA), Pratt Community College (KS), Rose State College (OK), Richland College (TX), Seward County Community College (KS), Southwestern Oklahoma State University (OK), Southwestern Christian University (OK), Stephen F. Austin State University (TX), Tarrant County College (TX), Tulane University (LA), Tulsa Community College (OK), Washburn University (KS), Wharton County Junior College (TX), Wichita State University (KS), Xavier University (OH).

Recruitment is essential to the growth of the OK-LSAMP program. Students reported the top sources for learning about the OK-LSAMP program were professors, campus recruitment, current OK-LSAMP participants, social media, OK-LSAMP website, OK-LSAMP administrative staff, friends, or family. The specific programs mentioned were Student Support Services and Diversity and Inclusion Offices.

Survey Results & Discussion

The OK-LSAMP program has several strategies in place to help ensure that objectives are met, and the scholars receive the support needed to be successful. The questions on the survey were related to the scholars' experiences with the following aspects of the program: 1) group meetings, 2) research mentor support, 3) the Fall 2022 OK-LSAMP Research Symposium and other professional meetings, 4) internship participation, and 5) graduate school preparation. Below are the findings, grouped by category. See Appendix 6 for a complete list of survey questions for both surveys.

Group Meetings

OK-LSAMP scholars are required to attend meetings with program staff. These meetings are organized by each Alliance institution's OK-LSAMP Campus Program Manager. Topics in these meetings typically include time management, presentation ideas, graduate school preparation tips, and other matters related to helping the students succeed in their STEM studies and pursue graduate degrees. Guest speakers are also a common feature of these meetings.

Of the 86 students who answered the question on the Fall 2022 survey related to attendance at meetings, 79% (68 students) attended at least one meeting and 6% (6 students) attended five or more meetings. In the Spring semester, 65% (52 of 80 students) attended one or more group meetings and 10% (8 of 80 students) attended five or more meetings. For students who did not attend meetings, the main reasons given were the lack of meetings, schedule conflicts, or not in the program at the time.

Students were asked about the helpfulness of the group meetings. Responses ranged from 1 to 5 with 5 being the most helpful. Figure 9 shows the scholars' responses to how helpful they felt the meetings were for them. Overall, most respondents found the group meetings to be helpful. The data do not include 18 students (21%) who did not attend meetings in Fall 2022 nor the 28 students (35%) who did not attend meetings in the Spring 2023. Appendix 2 provides a list of survey responses related to group meetings.

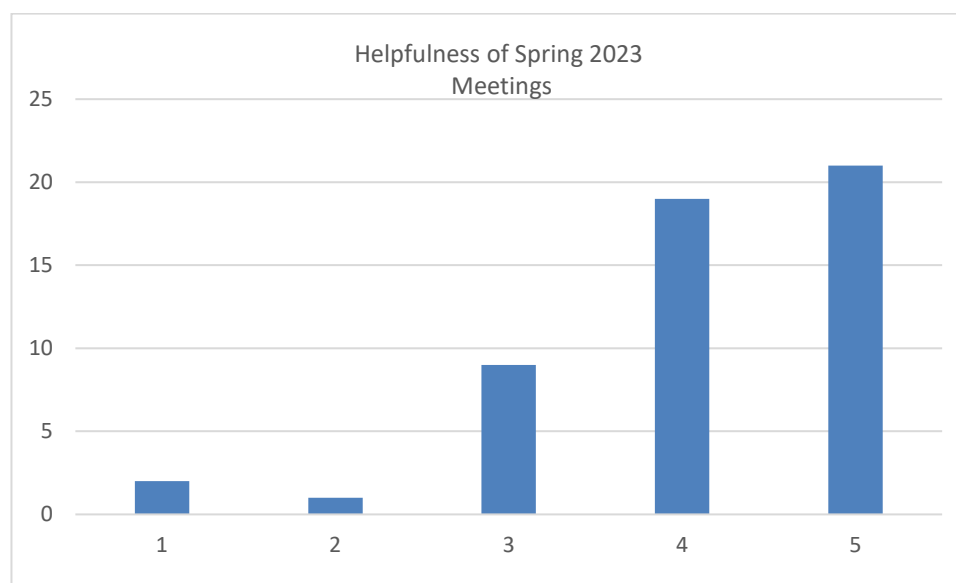


Figure 9: Helpfulness of the Meetings
1=Least Helpful; 5=Most Helpful

Over three quarters of the Fall 2022 survey respondents indicated they participated in at least one meeting during the semester, while more than two-thirds of the Spring respondents did so. The Fall and Spring meetings may have been held in-person and/or virtually. The evaluators do not have data concerning how many of these required meetings were held at each Affiliate institution; however, this response rate is positive and shows that the meetings are being held and the students are attending. However, 18 students 20.9% in the Fall and 16 students (23.5%) in the Spring did not attend any meetings.

In addition to simply attending the meetings, the majority of scholars indicated that the meetings were helpful for them. Based on the open-ended questions related to the meetings (see Appendix 2), the students appreciated hearing about opportunities in research, conferences, and applying to graduate schools. Additionally, scholars identified networking and having an open environment to communicate and learn as helpful to their success. Both semesters, approximately 50% of scholars who did not attend meetings indicated there were no meetings on their campus. Other reasons for not attending included scheduling conflicts, or that they were not in the program at the time. Since this is a required component of the OK-LSAMP program, the evaluator recommends that each Alliance institution hold regular group meetings and communicate about the details as they are shown to be helpful to the scholars.

Research Mentor Support

One important component of support is providing mentoring for the students. Faculty mentors are key in helping OK-LSAMP students succeed. They work with the students on research projects, encourage them to participate in summer internships, and help them with graduate school decisions.

Of the 86 students who participated in the Fall 2022 survey, 74% (64 students) indicated they had a mentor. Of the 80 spring students who responded to the survey, 85% (68 students) indicated they had a mentor in Spring 2023.

Scholars were asked to rate their mentors on how helpful they were, based on an A-F scale. Out of 64 students who had a mentor in Fall 2022 84% (54 out of 64) gave their mentor an “A” rating, 14% (9 out of 64) gave their mentor a “B” rating, 1.6% (1 out of 64) gave their mentor a “C” rating.

Out of 68 students who had a mentor in Spring 2023, 85% (58 out of 68) gave their mentor an “A” rating, 12% (8 out of 68) gave their mentor a “B” rating, and 1.5% (1 out of 68) gave their mentor a “C” rating, there were no responses in the survey below a “C” rating. Student responses to this question can be seen in Figure 10.



Figure 10: Helpfulness of the Mentors Fall 2022 & Spring 2023 Survey

Appendix 3 provides students’ comments related to their research, as well as experiences with their mentors, including how they were helpful and how they could improve. More than 80% of the students stated they had a research mentor in both surveys. Of the 80 students who took the survey, 63 (79%) conducted research in the Spring of 2023.

Most scholars who had a mentor reported that these faculty members were helpful. They mentioned receiving help with, and constructive feedback on, research projects, scholarships, recommendation letters, graduate school applications, preparation for presentations of work, internship opportunities, and grants. When asked how their mentors could improve, most indicated no changes were needed; a few students mentioned the desire for availability, and communication, as well as more guidance with projects. Scholars struggled with “getting started as a new researcher” with further examples such as more detailed written instructions, more frequent check-ins, and needing softer feedback but still provided high scores for their mentors. Based on the positive results seen by scholars with mentors, the evaluator recommends that Campus Program Managers continue to recruit mentors to work with the OK-LSAMP students.

Research Symposium and Other Professional Meetings

Participation in professional meetings is another way that the OK-LSAMP program supports its scholars. Students receive financial support for travel to present at conferences, which offers them experience in a professional setting and opportunities for networking with other STEM students.

The OK-LSAMP Research Symposium is a full-day, statewide symposium held each fall to provide an opportunity for scholars to participate in a professional meeting. Students who had conducted research were required to present either an oral or poster presentation highlighting their research. Scholars could also serve as moderators or volunteers at the event. Attendance at the symposium is required for all

scholars, regardless of whether they are presenting. In the Fall 2022 survey, 76.7% (66 of 86) of the students who responded to the survey attended, and 30.2% (26 of 86) of these students presented. Students who did not attend noted scheduling conflicts (50%), several noted not being finished with research (35%), a very few indicated not knowing about the symposium (10%), and only indicated not being in the program at the time (5%).

Sixty seven percent (58 of 86) of the Fall 2022 respondents attended other professional meetings during the semester. Of those scholars, 55% (32 students) attended two or more professional meetings, 62% (36 students) reported they received financial assistance from OK-LSAMP to attend the meetings, and 55% (32 students) presented at these meetings.

Sixty-four students (80%) reported attending professional meetings during Spring 2023. Of those 64 students, 16 (25%) attended three or more professional meetings, 34 (53%) reported receiving financial assistance to attend the professional meetings, and 45 students (70%) presented at the professional meetings.

OK-LSAMP scholars attended professional meetings during the fall and spring semesters beyond the Research Symposium hosted by the program. This is a positive indicator of the success of the OK-LSAMP program in encouraging its students to do research and present, in preparation for graduate study. This is a requirement of all students, not only scholars presenting their research. Understanding that there are always going to be conflicts and that some of the students may not have been in the program at the time, this is an acceptable representation at the Symposium. Alliance institutions are doing a good job of encouraging their scholars to attend and present, not only at the OK-LSAMP Symposium, but also other venues.

Internship Participation

Another aspect of the OK-LSAMP program that prepares students for future graduate school or industry employment is the opportunity to participate in summer internships. The program requires students to participate in at least one internship experience before graduating.

When asked about their internship experiences, 80.2% of Fall 2022 and 86% of Spring 2023 respondents reported being encouraged to participate in summer internships. When asked how they found out about these opportunities, the majority reported that they received this information from a mentor, their Campus Program Manager, or the OK-LSAMP program office emails. Other sources included professors, websites, and internet searches. Students could choose more than one response if applicable. The results are seen in Figure 11.

Forty-five percent (39 of 86) of the Fall 2022 respondents reported that they had participated in an internship that summer. Of the 80 Spring respondents, 40 scholars (50%) planned to participate in an internship in Summer 2023.

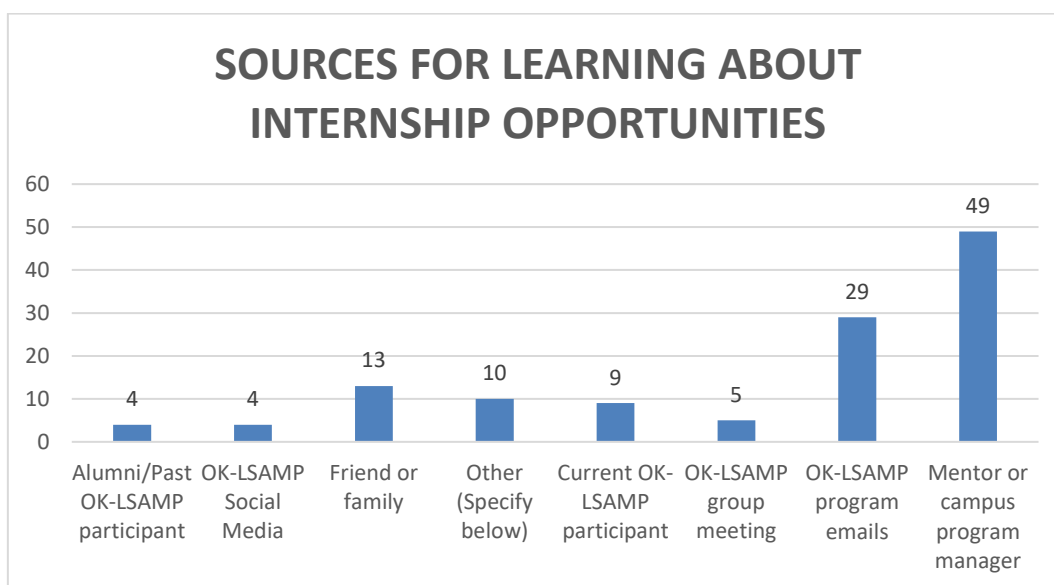


Figure 11: Sources for Learning About Internship Opportunities

Graduate School Preparation

If scholars indicated on the survey that they were a senior, we asked them a few questions related to the GRE. In the Fall 2022 survey, 47% (11 of 23) of seniors reported that they were encouraged to take the GRE; one scholar reported taking the GRE and one scholar reported receiving help from OK-LSAMP program in preparation for the GRE.

Of the 38 seniors who responded to the survey in Spring 2023, 52% (20 out of 38) reported they were encouraged to take the GRE, 1.3% (1 out of 80) received help from the OK-LSAMP program in preparing for the GRE, and 8% (3 out of 38) of the scholars had already taken the GRE at the time of the survey. Appendix 4 provides a full account of student responses to the kinds of help they received to help with graduate school preparation.

Scholars are required to submit a minimum of three graduate program applications, according to the project plan. Of the seniors who responded to the survey, 6 students (26%) in Fall 2022 and 10 students (26%) in Spring 2023 had applied to at least one graduate school. Three (13%) in Fall 2022 and nine students (24%) in Spring 2023 had applied to at least three graduate schools. One senior in the Spring 2023 survey reported applications to 2 graduate school programs.

More than half of the seniors in both fall and spring reported that they had been encouraged to take the GRE. However, less than 20% of both the Fall 2022 and Spring 2023 students had taken the GRE at the time of the survey. The evaluator recommends continued encouragement, GRE preparation, and financial support to the OK-LSAMP scholars to help increase the number of students who attend graduate school as stated in one of the objectives for this funding period.

Overall Satisfaction

The scholars were asked to evaluate their experiences with the OK-LSAMP program in several specific areas, each of which are important components of the program. The score ranking was from 1 to 5 (1=Poor and 5=Excellent). In all areas, the “Excellent” ranking was reported by the highest number of students followed by the “Good” ranking.

In the Fall 2022 survey, 90% of the participants selected either “Excellent” or “Good”. The results

from the Spring 2023 survey were similar. More than 92% of respondents selected “Excellent” or “Good”

Based on these responses, the OK-LSAMP scholars are pleased overall with their support from the program. Figures 12a and 12b provide the counts of responses in each category.

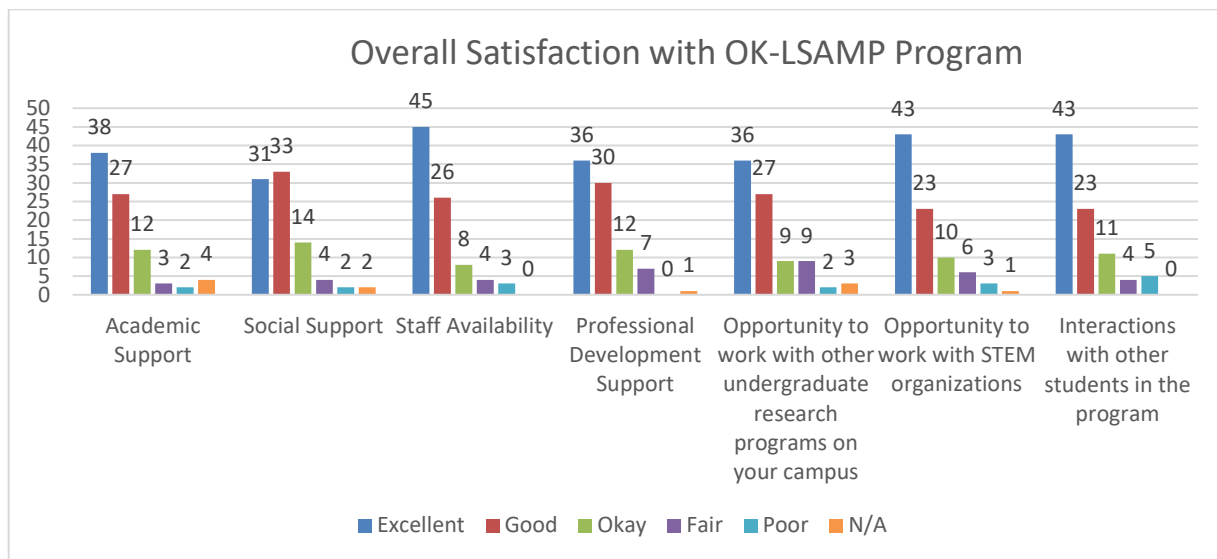


Figure 12a: Number of Student Responses for OK-LSAMP Experiences (Fall 2022)

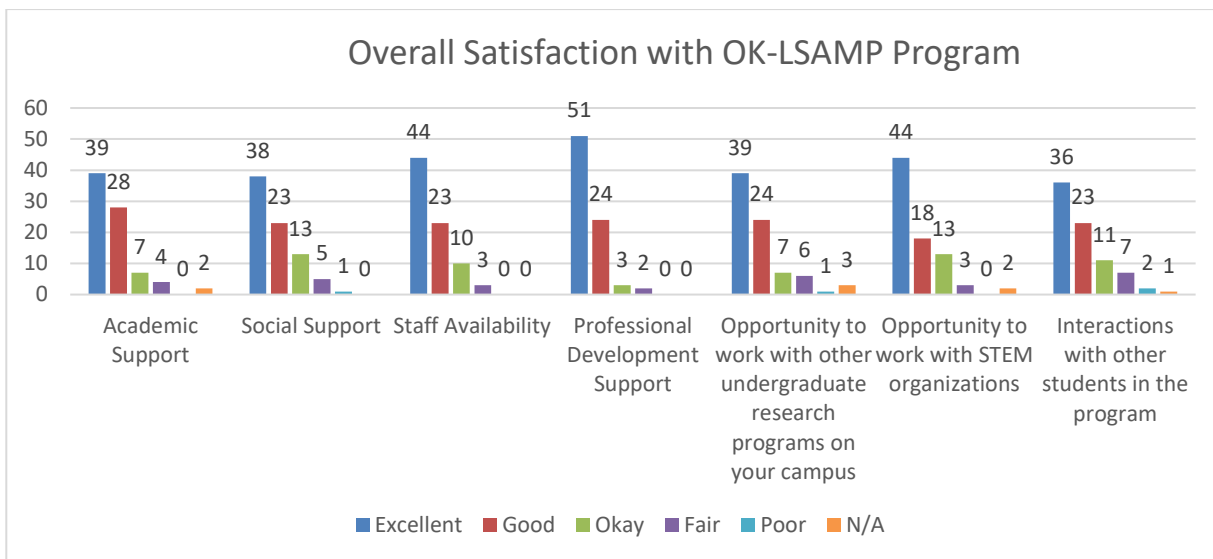


Figure 12b: Number of Student Responses for OK-LSAMP Experiences (Spring 2023)

In addition to the specific areas noted above, the students rated their overall satisfaction with all areas of the OK-LSAMP program on a scale of 1 to 5, with 5 being the most satisfied. More than three-fourths of the scholars 77 out of 86 students (90%)—who completed the Fall 2022 survey gave a score of 4 or 5. In the Spring 2023 survey, 93% (74 out of 80) of the students reported the highest two satisfaction levels.

Using the same 1-5 scale, students were also asked to rate how the program helped their academic career. Sixty-three students (73%) in the Fall 2022 survey reported a score of 4 or 5, and 68 out of 80

students (85%) gave a score of 4 or 5 in the Spring 2023 survey. See Tables 3 and 4 for the responses.

Table 3: Overall Satisfaction with the OK-LSAMP Program

Fall 2022 Survey

Spring 2023 Survey

Score	Count	%
1	1	1.2%
2	4	4.7%
3	4	4.7%
4	34	39.5%
5	43	50.0%
Total	86	100.0%

Score: 1= Not Satisfied; 5=Very Satisfied

Score	Count	%
1	1	1.3%
2	0	0.0%
3	5	6.3%
4	33	41.3%
5	41	51.3%
Total	80	100.0%

Score: 1= Not Satisfied; 5=Very Satisfied

Table 4: Helpfulness of OK-LSAMP Program on Academic Career

Fall 2022 Survey

Spring 2023 Survey

Score	Count	%
1	2	2.3%
2	7	8.1%
3	14	16.3%
4	28	32.6%
5	35	40.7%
Total	86	100.0%

Score: 1= Not Helpful; 5=Very Helpful

Score	Count	%
1	0	0.0%
2	4	5.0%
3	8	10.0%
4	21	26.3%
5	47	58.8%
Total	80	100.0%

Score: 1= Not Helpful; 5=Very Helpful

Overall Satisfaction

The overall response from the scholars showed that the OK-LSAMP program is succeeding in supporting its students in many areas: academic support, social support, mentoring, graduate school preparation, internships, working with community organizations, interacting with other students in the program, and more. These are all crucial components that can help lead to successful graduation of scholars, and eventual graduate school attendance. The students are pleased with their mentors, feel supported by the program, attend meetings for support and guidance, and are doing research and presentations. Appendix 5 lists open-ended responses from scholars relating to the overall success of the program.

Limitation of Online Student Survey

Two student surveys were conducted this academic year; the response rates were 47% and 42%, respectively. Although more participation is always preferable, their response rates were very good. The students who participated in the survey were representative of the OK-LSAMP population from their respective surveys. The survey response rate may have been negatively influenced by the length of the survey. The OK-LSAMP evaluation survey consisted mostly of multiple-choice items and took approximately 10-15 minutes to complete. After finishing the survey, respondents were asked if they wanted to also complete the OK-LSAMP Research survey, which took about 15 minutes to complete. The results of that portion of the survey are not included in this report.

Section 3: The National STEM Retention and Graduation Data

In April 2022, the Consortium for Student Retention Data Exchange (CSRDE) published the annual national STEM retention study, *2021-22 CSRDE STEM Retention Report*. The CSRDE is coordinated by the Center for Institutional Data Exchange and Analysis at the University of Oklahoma. This report is based on survey data collected from 129 colleges and universities in the U.S. and Canada. In past years, data for each of the Oklahoma public institutions were provided for the annual STEM report by the Oklahoma State Regents for Higher Education. The Regents did not submit the data for this reporting period; however, data from Cameron University (CU), Oklahoma State University (OSU), and The University of Oklahoma (OU) were submitted directly from the institutions and are included in the national report.

The survey data were collected on first-time, full-time, baccalaureate degree-seeking freshman cohorts of 2011 through 2020 who indicated intent to major in a STEM field. The Classification of Instructional Programs (CIP) codes used to identify the majors were selected in cooperation with the National Science Foundation when this survey was developed in the late 1990s and have been updated periodically over the past two decades.

In capturing the retention and graduation rates of these STEM students, we used the following approach. First, we collected the retention and graduation rates of these STEM cohorts in any major at their institution. If students initially indicated an interest in majoring in a STEM discipline, but later changed their major to a non-STEM field, they were included in this section of the survey, along with those students who remained in a STEM major. Next, the survey captured the rates at which the cohorts continued and graduated within STEM fields at their institution. This dual tracking allows us to see within a campus the migration of STEM majors out of STEM fields and into other majors. It also allows us to see the general departure rate of students.

The CSRDE also publishes an annual national retention report that provides data on all first-time, full-time, baccalaureate degree-seeking students, regardless of major. The following summary provides the status of STEM retention and graduation data as well as retention and graduation data of all first-time students at the 129 institutions observed in the 2021-22 CSRDE retention reports, regardless of major. These reports include data from Cameron University, Oklahoma State University, and The University of Oklahoma.

Graduation Rates

In the following discussion, three types of graduation rates are provided for the Total cohorts and the underrepresented minority (URM) cohorts:

- **All Majors:** All Majors identifies the percent of first-time, full-time students who began and graduated within six years in **all majors** at their institution.
- **Any Major:** Any Major identifies the percent of students who began as freshman STEM majors and graduated within six years in **any major** at their institution.
- **STEM Major:** STEM Major identifies the percent of students who began as freshman STEM majors (the same cohort of students as the Any Major category) and graduated within six years **specifically within a STEM field** at their institution.

In Table 5, the six-year graduation rates are provided for the 2015 cohorts of all students in the national study, as well as CU, OU, and OSU. The data for URM students are shown as well. In the CSRDE STEM report, underrepresented minority students include Black or African American, Hispanic/Latino, and American Indian or Alaska Native students.

Table 5: *Six-year Graduation Rates – 2015 Total and URM Cohorts*

Category	Total	URM
All Majors		
National	68.5%	58.6%
OU	75.7%	73.0%
OSU	65.7%	54.9%
CU	33.0%	32.3%
Any Major		
National	71.6%	60.3%
OU	73.9%	70.0%
OSU	67.9%	58.1%
CU	36.0%	50.0%
STEM Major		
National	53.2%	38.8%
OU	50.3%	46.2%
OSU	52.5%	41.5%
CU	27.2%	35.0%

As seen in Table 5, the overall graduation rates for all students—both the Total and URM cohorts—who began college with an intent to graduate in a STEM major (Any Major category) were higher than those who began college in any major (All Majors category).

To better understand how the three Oklahoma institutions are doing compared to similar institutions nationally, Table 6 provides data based on institutional selectivity. The table shows the six-year graduation rates for the following 2015 URM cohorts by selectivity: 1) students in all majors, 2) students who begin as a STEM major and graduate within any major at the institution, and 3) students who begin as a STEM major and graduate within STEM majors. Selectivity as defined in the CSRDE research is a categorization of institutions based on the average ACT or SAT admission test scores of incoming students. OU and OSU are included in the Highly Selective category. Cameron University is included in the Less Selective category.

- *Highly Selective institutions:*
ACT scores above 24.0 or SAT scores above 1180
- *Selective institutions:*
ACT scores from 22.5-24.0 or SAT scores from 1125-1180
- *Moderately Selective institutions:*
ACT scores from 21.0-22.4 or SAT scores from 1080-1124
- *Less Selective institutions:*
ACT scores below 21.0 or SAT scores below 1080

Table 6: *Six-year Graduation Rates by Selectivity – 2015 URM Cohort*

Category	Highly Selective	Selective	Moderately Selective	Less Selective	All URM
All Majors					
National	70.0%	55.0%	47.7%	50.1%	58.6%
OU	73.0%				
OSU	54.9%				
CU				32.3%	
Any Major					
National	70.8%	55.9%	46.7%	46.4%	60.3%
OU	70.0%				
OSU	58.1%				
CU				32.3%	
STEM Major					
National	49.5%	34.1%	26.7%	24.4%	38.8%
OU	46.2%				
OSU	41.5%				
CU				35.0%	

Table 6 indicates that the graduation rates for underrepresented minority students are positively related to the selectivity of the institution for the cohort in all three categories, with one exception. Students attending Less Selective institutions graduated at a higher rate than those at Moderately Selective institutions in the All Majors category. We also see that more than half (60.3%) of URM students who began as a STEM major graduated within any major in their institutions, STEM or non-STEM.

The University of Oklahoma’s six-year graduation rates are above the average for all URM students in all three categories. Oklahoma State University’s six-year graduation rates are above the average of all URM students in two of the three categories (STEM Major). However, when compared to other institutions within the Highly Selective group, the graduation rates of OSU’s URM students are below the national average in all three categories (All Majors, Any Major, and STEM Major) while OU is only below average in two of the three categories (Any Major, STEM Major). Cameron University’s six-year graduation rates were below the average for all URM students in each category as well as when compared to other Less Selective institutions.

Table 7 provides the six-year graduation rates for all majors, within any major, and within STEM majors for the Total 2015 cohort by selectivity.

Table 7: Six-year Graduation Rates by Selectivity – 2015 Total Cohort

Category	Highly Selective	Selective	Moderately Selective	Less Selective	Total
All Majors					
National	77.3%	62.2%	54.1%	54.7%	68.5%
OU	75.7%				
OSU	65.7%				
CU				33.0%	
Any Major					
National	78.7%	63.9%	53.1%	52.4%	71.6%
OU	73.9%				
OSU	67.9%				
CU				36.0%	
STEM Major					
National	61.3%	44.5%	34.1%	31.1%	53.2%
OU	50.3%				
OSU	52.5%				
CU				27.2%	

In Figures 13-15, the national data for the 2020 URM cohort and the Total cohort are provided for comparison, based on the percentages listed in Tables 6 and 7. Figure 13 shows the graduation rates for all students, regardless of their major when they began college. Figure 14 shows the data for students who began as a STEM major at the institution and graduated in any major at the institution. Figure 15 provides the rates for students who began as a STEM major at the institution and graduated within a STEM discipline.

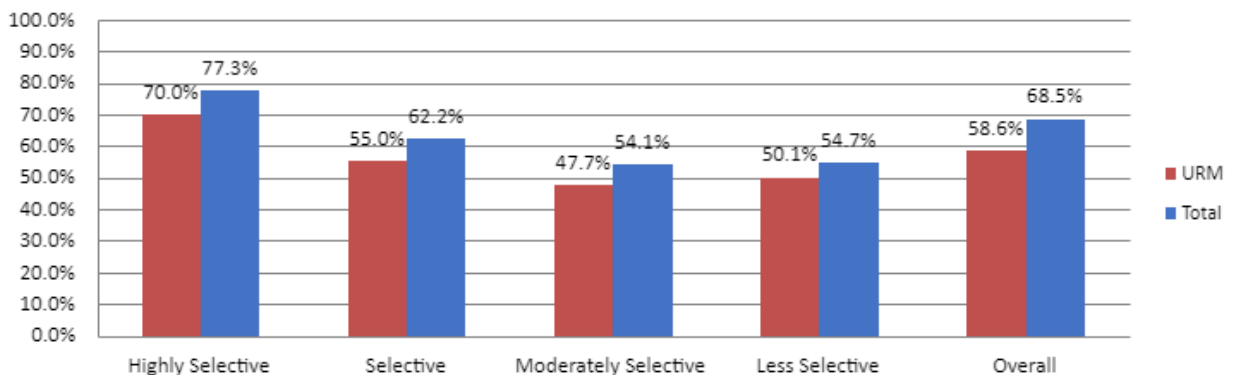


Figure 13: Six-year Graduation Rates for 2015 Total and URM Cohorts by Selectivity – All Majors

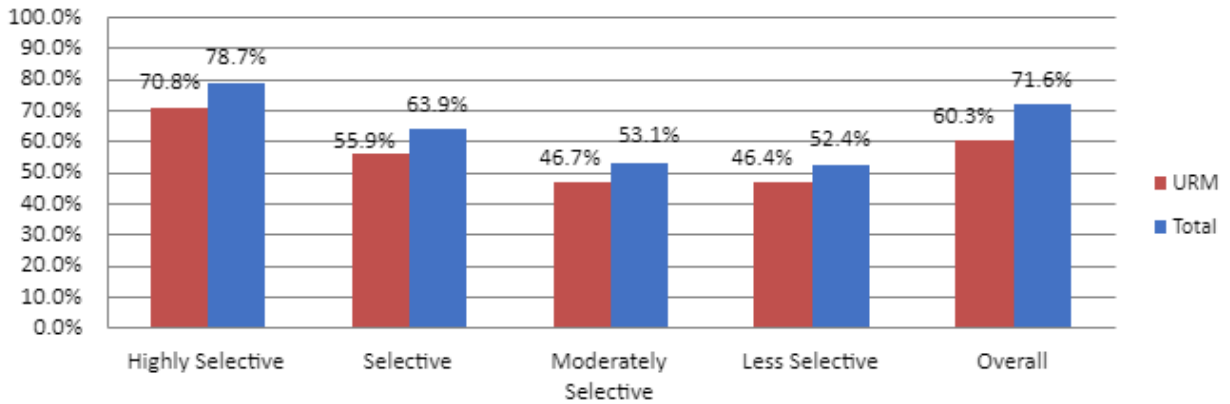


Figure 14: Six-year Graduation Rates for 2015 Total and URM Cohorts by Selectivity – Any Major

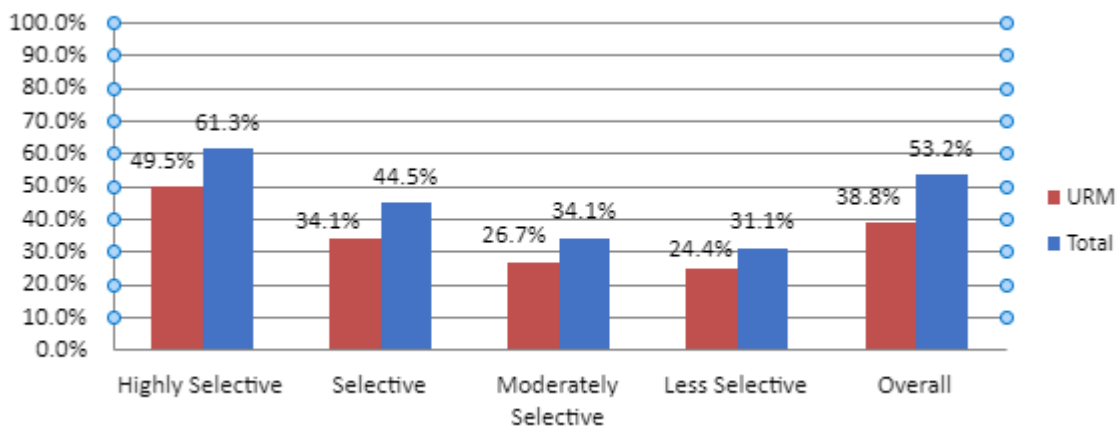


Figure 15: Six-year Graduation Rates for 2015 Total and URM Cohorts by Selectivity – STEM Major

As seen in Tables 6 and 7 and Figures 13-15, the graduation rates of the Total cohort of students decreases as the selectivity of the institution decreases. URM students in Less Selective institutions graduate at a higher rate than the URM students at Moderately Selective institutions in the All Majors category. The gap between the graduation rates for URM students and the Total cohort of students is considerable in all institutions.

Retention Rates

Retention is defined as the rate at which the first-time, full-time fall cohort of students return to the institution the following fall. The first year is a critical period in the success of students, and typically this is the point at which departures occur most frequently at many institutions across the country.

In the following discussion using the CSRDE national STEM data, as with the graduation tables, there are three types of retention rates provided for the Total cohorts and the URM cohorts:

- **All Majors** – All Majors identifies the percent of first-time students who began in all majors and continued to the second academic year at their institution.

- **Any Major** - Any Major identifies the percent of students who began as freshman STEM majors and continued to the second academic year in **any major** at their institution.
- **STEM Major** - STEM Major identifies the percent of students who began as freshman STEM majors (the same cohort of students as the Any Major category) and remained **specifically within a STEM field** at their institution as they moved into their second academic year.

In Table 8, the first-year retention rates are provided for the 2015 cohorts of all students in the national study as well as for CU, OU, and OSU. The data for underrepresented minority students are shown as well.

As with the graduation rates, to gain a better understanding of how the three Oklahoma institutions are doing compared to similar institutions nationally, Table 9 provides the retention data based on institutional selectivity. The table shows the first-year retention rates for all majors, within any major, and within STEM majors for 2015 URM cohorts by selectivity.

Table 9 indicates that the retention rates for underrepresented minority students are generally positively related to the selectivity of the institution for all cohorts of students, except for the Less Selective institutions. The retention rates for URM students are higher in Less Selective institutions than Moderately Selective institutions in all three categories.

The University of Oklahoma and Oklahoma State University's first-year retention rates were below the average for URM students within the highly selective group in all categories. OU's first-year retention rates were greater than the average for all URM students except in the STEM Major category; OSU's first-year retention rates were below the average for all URM students in all categories. Cameron University's first-year retention rates for URM students were below the average in all categories. Table 10 provides the first-year retention rates of the Total 2020 cohort by selectivity for the national data as well as the three Oklahoma institutions that participated in the study.

Table 8: *First-year Retention Rates – 2020 Total and URM Cohorts*

Category	Total	URM
All Majors		
National	84.8%	79.9%
OU	88.5%	86.0%
OSU	83.2%	76.3%
CU	60.7%	61.3%
Any Major		
National	87.2%	82.3%
OU	88.7%	86.7%
OSU	86.4%	79.6%
CU	61.9%	66.7%
STEM Major		
National	76.6%	70.9%
OU	68.2%	66.8%
OSU	69.2%	61.8%
CU	44.0%	33.3%

Table 9: *First-year Retention Rates by Selectivity – 2020 URM Cohort*

Category	Highly Selective	Selective	Moderately Selective	Less Selective	All URM
All Majors					
National	86.6%	78.1%	73.4%	73.7%	79.9%
OU	86.0%				
OSU	76.3%				
CU				61.3%	
Any Major					
National	87.3%	80.8%	73.2%	75.2%	82.3%
OU	86.7%				
OSU	79.6%				
CU				66.7%	
STEM Major					
National	76.1%	68.4%	58.9%	65.1%	70.9%
OU	66.8%				
OSU	61.8%				
CU				33.3%	

Table 10: *First-year Retention Rates by Selectivity – 2020 Total Cohort*

Category	Highly Selective	Selective	Moderately Selective	Less Selective	Total
All Majors					
National	89.7%	80.8%	75.6%	75.9%	84.8%
OU	88.5%				
OSU	83.2%				
CU				60.7%	
Any Major					
National	90.8%	82.8%	76.4%	77.2%	87.2%
OU	88.7%				
OSU	86.4%				
CU				61.9%	
STEM Major					
National	80.9%	70.3%	62.3%	66.6%	76.6%
OU	68.2%				
OSU	69.7%				
CU				44.0%	

Tables 8-10 show that, generally, both URM students and the Total cohort of students who started as a STEM major (Any Major category) are more likely to continue their education to the second year as compared to those students who start in any major (All Majors category) at the institution, regardless of selectivity. The retention rates of URM students are below the average rate among all races, ranging from 4.9 to 5.7 percentage points lower. However, the gap between the URM students and the total cohort of students is much smaller for the first-year retention rate than it is for the six-year graduation rate (see Tables 5-7 and Tables 8-10). The gap between graduation rates of URM students and all students ranges from 9.9 to 14.4 percentage points, indicating that more URM students are leaving the STEM disciplines after their second year and before they graduate than the Total cohort of students.

In Figures 16-18, the national data for the 2015 URM cohort and the Total cohort are provided for comparison, based on the percentages listed in Tables 9 and 10. Figure 16 provides the first-year retention rates for all students, regardless of their major when they began college. Figure 17 shows the data for students who began as a STEM major at the institution and returned for their second year in any major at the institution. Figure 18 provides the rates for students who began as a STEM major at the institution and continued to their second year within a STEM discipline.

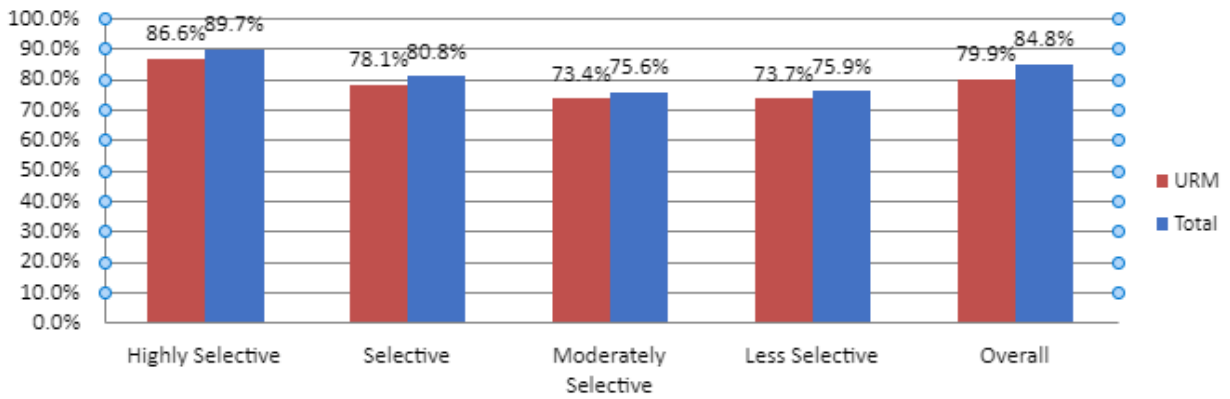


Figure 16: First-Year Retention Rates for 2020 Total and URM Cohorts by Selectivity – All Majors

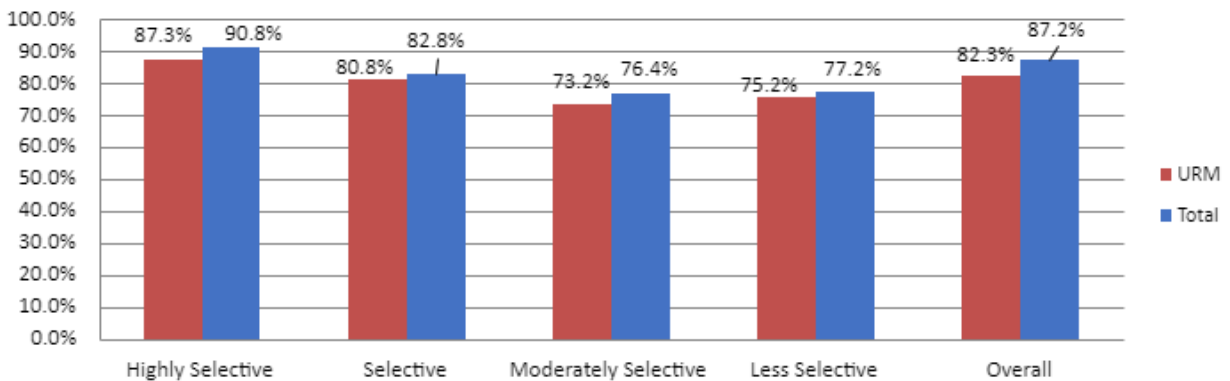


Figure 17: First-Year Retention Rates for 2020 Total and URM Cohorts by Selectivity – Any Major

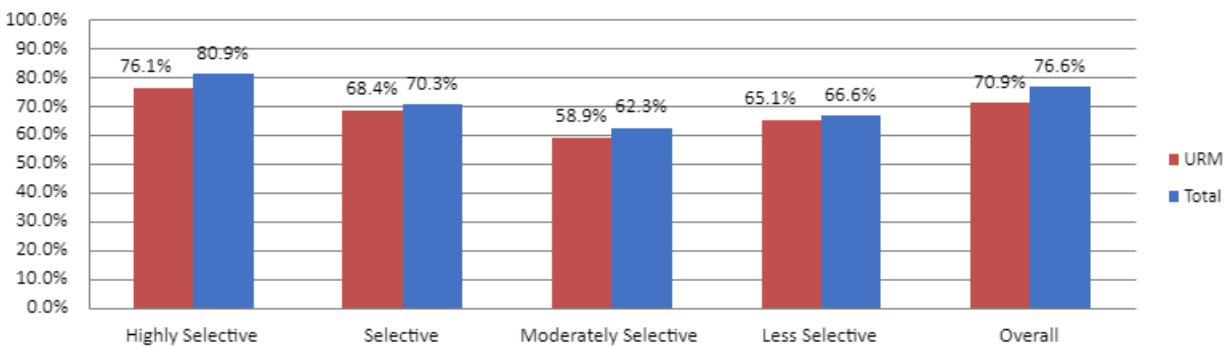


Figure 18: First-Year Retention Rates for 2020 Total and URM Cohorts by Selectivity – STEM Major

Summary

Providing a comparison between the retention rates of the national freshman cohorts and the retention of students in the OK-LSAMP program is difficult due to the focus on upperclassmen in this project. However, we can look at the retention of OK-LSAMP scholars within the evaluation period covered in this report.

Based on the data from the OK-LSAMP program office, a total of 204 students participated in

Summer and Fall 2022. Of those 204 scholars, 23 graduated and 11 students left the program before the beginning of the Spring 2023 semester. Thirty-two new students became OK-LSAMP scholars during the Spring 2023 semester, for a total of 202 scholars participating in the spring. As of the end of the Spring 2023 semester, 44 students graduated and one was known to have left the program. It is anticipated that 99% of the Spring 2023 scholars will still be in the program for Fall 2023. The persistence rates for each semester (continuing students plus graduates) are excellent: 94.6% continued from the Summer and Fall 2022 to Spring 2023 semester or graduated; 99% of scholars in the program during the Spring semester either graduated or were still in the program at the end of the semester. Table 11 shows the retention and graduation data for OK-LSAMP scholars during the Summer/Fall 2022 and Spring 2023 semesters.

These rates are a strong indication that the OK-LSAMP program is succeeding in helping its students continue and graduate with STEM degrees. The support the OK-LSAMP program provides these students is proven to be effective.

Table 11: *OK-LSAMP Graduation and Retention Data, Summer/Fall 2022 and Spring 2023*

	Total Participating OK-LSAMP Scholars	Graduates Before Next Semester		Known Departures Before Next Semester		Continued to Following Semester (Fall 2022 to Spring 2023 Known; Spring 2022 to Fall 2023 Anticipated)		Graduates and Continuing Students	
	Count	Count	%	Count	%	Count	%	Count	%
Summer/Fall 2022	204	23	11.3%	11	5.3%	170	83.3%	193	94.6%
Spring 2023	202	44	20.6%	1	.5	157	77.7%	201	99.5%

Section 4: Overall Report Summary

The 2022-2023 academic year shows a slow recovery from the effects of Covid-19 on higher education. Accordingly, the Alliance is showing a recovery from the impact on Covid-19 as more goals are being met this evaluation period. Summer internships, international experiences, and conferences were being offered again. Research opportunities and internship options continued to be available and gain traction. Scholars continued to advance and graduate, be accepted to grad school and move into industry positions.

Over the course of the project, the OK-LSAMP institutions have attempted to support their underrepresented minority students as they move through their academic undergraduate careers as STEM majors. Review of the participation data from the OK-LSAMP Alliance coordinators shows that if students are in the program as upperclassmen, they most likely will graduate in a STEM discipline. This evaluation shows that 47% of the seniors (67 of 144) graduated during the evaluation period and 73 of the remaining seniors (all but four) were still in the program at the end of the spring semester; however, the Alliance did not meet its goal to graduate at least 88 OK-LSAMP scholars during this evaluation period. Of the 67 students who graduated, 16 scholars were accepted into graduate school in a STEM discipline, falling short of the goal to have 30 students advance to graduate work during this reporting period.

The seniors who did not graduate during the 2022-2023 academic year appear to be on track for graduation and graduate-school readiness as well. Of the 77 seniors who participated in the program during this reporting period who did not graduate, 81% (62 of 77) had a GPA of 3.0 or greater, 62.3% (48 of 77) participated in research during this academic year, and 22% (17 of 77) had participated in at least one summer internship. Only four were known to have left the program during the reporting period. Therefore, 73 senior scholars (95%) were expected to continue in the program in Fall 2023 to pursue their STEM degree. Given these numbers and the potential addition of new seniors joining the program in Summer and Fall 2023 and Spring 2024 OK-LSAMP is on target to continue increasing its underrepresented minority graduates in STEM majors.

Recruiting new scholars is critical to the success of the program. The Alliance added 87 new scholars during this reporting period, meeting its goal of 79 new scholars. The retention rate of its students matched the baseline (93%).

The goal related to increasing international experiences has been affected most during Covid-19. This year saw a significant increase in international experiences. The goal for each year has been for 16 students to have an international experience. This year we exceeded the annual goal by 106% with 33 experiences which has aided in putting the program back on track to meet the five-year funding period goal of 81 scholars. The goal for the five-year funding period is to have 81 scholars participating in OK-LSAMP who have had an experience abroad, which includes study abroad, international internships, international research, or international conference presentations.

Based on the results of our online student surveys conducted in Fall 2022 and Spring 2023, the scholars are pleased with their experiences in the program. They rated their mentoring experiences very high, they felt that the group meetings they attended were helpful in their STEM studies; they participated in summer internships; attended and presented at professional meetings and were encouraged to take the GRE and apply to graduate school. The following section outlines several recommendations for continued success of the program.

Recommendations for Continued Success in the OK-LSAMP Program

1. Increase research opportunities for scholars

Data from the OK-LSAMP program office indicate that 68% of the seniors (98 of 144) participated in a research opportunity during at least one semester during this evaluation period. More than a quarter of the seniors during the evaluation period did not conduct research. Since participation in research typically results in better participation at conferences, increasing the research opportunities for the OK-LSAMP scholars should help provide more opportunities for conference participation, which could eventually lead more students to graduate school to further their research and studies. A lack of time is identified as a top barrier for students not participating in research opportunities. We recommend that the program increase the number of research opportunities at less stressful times during the semester (such as summer, spring break) as an attempt to overcome this barrier. Additionally, continuing former recommendations of interest groups with assigned mentors is still a top priority for those in the Alliance who are still developing these systems of support.

2. Provide regular group meetings

We suggest that the Alliance hold regular group meetings on their campuses, as scholars find the meetings to be helpful in general. Students still noted they were not aware of meetings on their campuses. This is either because meetings are not being held or because of a lack of communication. Based on their responses to the surveys, many noted that the most helpful part of the group meetings was interacting with other scholars and experts. Although one-on-one meetings with their mentors may be preferred for receiving updates from students on their research, gathering as a group several times each semester has overwhelmingly been a positive experience for the students. Because transfer student graduation goals were not met, regular group meetings might offer transfer students the needed support to increase graduation rates. Therefore, we suggest that each Alliance institution continue to hold group meetings and consider how students may participate in the planning and activities, even sharing their research.

3. Improve communication and recruiting

Based on the responses in the scholar survey, a number of students identified communication with ongoing reminders of opportunities and/or guidance such as funding, finding a mentor, and point systems as key variables in the success of the program. Because communication through various channels (emails, social media) is being provided, finding a way to organize and categorize these messages with headings and/or a calendar of due dates for easy retrieval later might be beneficial. Transfer students could benefit from inclusion via prompting from various communication channels. For Alliance institutions that are not holding regular meetings, sending consistent communication to their scholars, and providing them with needed guidance, we recommend this. Again, scholars mentioned recruiting additional members and awareness on campus as key factors in growing the program. Providing scholars with some voice in recruiting may open additional opportunities for LSAMP to grow. We recommend providing some leadership roles, such as marketing and communication, for scholars within LSAMP for campus awareness and recruitment.

4. Improve data collection processes

Consistency in data collection from the program managers could greatly benefit students for tracking progress, accomplishments, and even concerns. Keeping accurate and consistent data will help in the validity and reliability of the data reporting for funding as well. A system of support relying on data tracking for improving services and satisfaction is supported through research at higher education institutions. Some researchers report increases in the likelihood of students reporting back with new data or improved participation in data collection tools as students build relationships with data managers. We suggest building relationships while involving students in the data collection (beyond surveys and meeting with program managers) so that they understand the impact data can make on their institutions and on them as scholars. Incentives to participate in data collection have shown to be successful in increasing involvement as well. With a stronger data tracking plan, transfer students should be identified, and additional support provided in a timely manner to increase their likelihood of success.

Appendix 1: Institution-Specific Details

Below is a summary of activities for each of the OK-LSAMP institutions. For each institution, the number of participants is identified as well as a few data points related to scholar support. These results are based on data from the OK-LSAMP program office. Not included in this report is a list of the titles of the papers, presentations, and research projects that the participants completed. This data is available from the Alliance Office at Oklahoma State University.

Cameron University

Participants

- 9 students were included in this evaluation
- 2 freshmen, 1 sophomore, 3 juniors and 3 seniors

Support

- 3 of 9 students included in this evaluation (33.3%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 1 of 9 students (11%) participated in at least one summer internship during college

Graduate School Preparation

- 3 of 9 students (33.3%) conducted research in summer, fall, 2022 or spring 2023
- 5 of 9 students (55.6%) attended at least one conference or symposium during summer, fall, or spring

0 of 3 seniors (0.0%) took the GRE 0 of 3 seniors (0.0%) completed at least one graduate school application. **Results**

- 0 of 3 seniors (0.0%) graduated
- 7 of 9 students (77.8%) had a minimum GPA of 3.0 (2 students' data was not reported)

East Central University

Participants

- 9 students were included in this evaluation
- 3 sophomores, 2 junior, and 4 seniors

Support

- 6 of the 9 students included in this evaluation (66.7%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 3 of 9 students (33%) participated in at least one summer internship during college

Graduate School Preparation

- 6 of 9 students (66.7%) conducted research in summer, fall, or spring
- 4 of 9 students (44.4%) attended at least one conference/symposium during summer, fall or spring
- 9 of 9 students (100%) had a minimum GPA of 3.0

0 of 9 (0.0%) seniors took the GRE2 of 4 seniors (50%) completed at least one graduate school application1 junior completed and was accepted to graduate school

- Results

- 3 of 4 seniors (75%) graduated

Langston University

Participants

- 45 students were included in this evaluation
- 2 sophomores, 14 juniors, and 29 seniors

Support

- 12 of the 45 students included in this evaluation (27%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 22 of 45 students (49%) participated in at least one summer internship during college

Graduate School Preparation

- 32 of 45 students (71%) conducted research in summer, fall, or spring
- 28 of 45 seniors (62%) attended at least one conference/symposium during summer, fall or spring
- 40 of 45 students (88.9%) had a minimum GPA of 3.0

Results

- 14 of 29 seniors (48.3%) graduated
- 0 of 29 seniors (0.0%) took the GRE
- 4 of 29 seniors applied to graduate school

Northeastern State University

Participants

- 15 students were included in this evaluation
- 3 sophomores, 3 juniors, and 7 seniors 2 did not report classification

Support

- 4 of the 15 students included in this evaluation (27%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 10 of 15 students (66.7%) participated in at least one summer internship during college

Graduate School Preparation

- 12 of 15 students (80%) conducted research in summer, fall, or spring
- 11 of 15 students (73.3%) attended at least one conference/symposium during summer, fall or spring
- 13 of 15 students (86.7%) had a minimum GPA of 3.0

Results

- 4 of 7 seniors (57%) graduated
- 2 of 7 seniors (28.6%) took the GRE
- 2 of 7 graduates (28.6%) applied to graduate school

Northwestern Oklahoma State University

Participants

- 6 students were included in this evaluation
- 1 freshman, 2 juniors, and 3 seniors

Support

- 6 of the 6 students included in this evaluation (100.0%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 0 of 6 students (0.0%) participated in at least one summer internship during college

Graduate School Preparation

- 1 of 6 of 6 students (17%) conducted research in summer, fall, or spring
- 3 of 6 students (50%) attended at least one conference/symposium during summer, fall or spring
- 6 of 6 students (100.0%) had a minimum GPA of 3.0

Results

- 2 of 3 seniors (66.7%) graduated
- 2 of 3 seniors (66.7) took the GRE
- 0 of 2 graduates (0.0%) applied to graduate school

Oklahoma Panhandle State University

Participants

- 4 students were included in this evaluation
- 1 student was a freshman, 1 was a junior, and 2 seniors

Support

- 0 of the 4 students included in this evaluation (0.0%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 2 of 4 students (50.0%) participated in at least one summer internship during college

Graduate School Preparation

- 3 of 5 students (60.0%) attended at least one conference/symposium during summer, fall or spring
- 4 of 4 students (100.0%) had a minimum GPA of 3.0

Results

- 0 of 2 seniors (0.0%) graduated
- 0 of 2 seniors (0.0%) took the GRE
- 0 of 2 graduates (0.0%) applied to graduate school in a STEM discipline

Oklahoma State University

Participants

- 72 students were included in this evaluation
- 1 freshmen, 11 sophomores, 13 juniors, and 47 seniors

Support

- 46 of the 72 students included in this evaluation (64%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 38 of 72 students (53%) participated in at least one summer internship during college

Graduate School Preparation

- 32 of 72 students (44%) conducted research in summer, fall, or spring
- 35 of 72 students (49.0%) attended at least one conference/symposium during summer, fall or spring
- 55 of 72 students (76.4.0%) had a minimum GPA of 3.0

Results

- 24 of 47 seniors (51%) graduated
- 1 of 47 seniors (2.1%) took the GRE
- 8 of 47 graduates (17%) applied to graduate school

Southeastern Oklahoma State University

Participants

- 19 students were included in this evaluation
- 4 sophomores, 5 juniors, and 10 seniors

Support

- 16 of the 19 students included in this evaluation (84.2%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 0 of 19 students (0.0%) participated in at least one summer internship during college

Graduate School Preparation

- 10 of 15 students (53%) conducted research in summer, fall, or spring
- 10 of 19 students (53%) attended at least one conference/symposium during summer, fall or spring
- 18 of 19 students (95%) had a minimum GPA of 3.0

Results

- 8 of 10 seniors (80.0%) graduated
- 1 of 10 seniors (10%) took the GRE
- 4 of 10 graduates (40%) applied to graduate school

Southwestern Oklahoma State University

Participants

- 13 students were included in this evaluation
- 1 freshman, 2 sophomores, 1 junior, and 9 seniors

Support

- 11 of the 13 students included in this evaluation (85%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 7 of 13 students (54%) participated in at least one summer internship during college

Graduate School Preparation

- 10 of 13 students (77%) conducted research in summer, fall, or spring
- 8 of 13 students (62%) attended at least one conference/symposium during summer, fall or spring
- 12 of 13 students (92%) had a minimum GPA of 3.0

Results

- 7 of 9 seniors (77.8%) graduated
- 1 of 9 seniors (11%) took the GRE
- 3 of 7 graduates (43%) applied to graduate school

University of Central Oklahoma

Participants

- 7 students were included in this evaluation
- 3 juniors and 4 seniors

Support

- 7 of 7 students included in this evaluation (100.0%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 6 of 7 students (86%) participated in at least one summer internship during college

Graduate School Preparation

- 7 of 7 students (100.0%) conducted research in summer, fall, or spring
- 4 of 7 students (57%) attended at least one conference/symposium during summer, fall or spring
- 6 of 7 students (86 %) had a minimum GPA of 3.0 (one did not report)

Results

- 3 of 4 seniors (75.0%) graduated
- 1 of 4 seniors (25%) took the GRE
- 1 of 3 graduate (33.3%) applied to graduate school in a STEM discipline

University of Oklahoma

Participants

- 27 students were included in this evaluation
- 3 sophomores, 3 juniors, and 21 seniors

Support

- 16 of the 27 students included in this evaluation (59%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 7 of 27 students (26%) participated in at least one summer internship during college

Graduate School Preparation

- 10 of 27 students (37%) conducted research in summer, fall, or spring
- 9 of 27 students (33.3%) attended at least one conference/symposium during summer, fall or spring
- 22 of 27 students (82%) had a minimum GPA of 3.0

Results

- 4 of 21 seniors (19%) graduated
- 1 of 21 seniors (4%) took the GRE
- 9 of 21 seniors (43%) applied to graduate school

University of Tulsa

Participants

- 10 students were included in this evaluation
- 1 freshman, 3 sophomores, 1 junior, and 5 seniors

Support

- 10 of the 10 students included in this evaluation (100%) received funding during Summer 2022, Fall 2022, and/or Spring 2023.
- 3 of 10 students (30%) participated in at least one summer internship during college

Graduate School Preparation

- 9 of 10 students (90%) conducted research in summer, fall, or spring
- 9 of 10 students (90%) attended at least one conference/symposium during summer, fall or spring
- GPA was not reported

Results

- 0 of 5 seniors (0%) graduated
- 0 of 5 seniors (0%) took the GRE
- 0 of 5 seniors (0.0%) applied to graduate school in a STEM discipline

Appendices 2-7 include student responses to the Fall 2022 and Spring 2023 online surveys.

Appendix 2: Scholar Responses About Group Meetings **What was most helpful about the group meetings that you attended? (Fall 2022)**

Good information

I liked seeing who was still active in the program and seeing the individuals in charge. I was told to consider the Annual LSAMP Symposium as the monthly meeting for October, as I got to meet many

LSAMP leaders and research leaders. It was very informative!

Maintaining an open environment for conversations and help.

The poster presentation meeting

The most helpful information was knowing how I can be an active scholar as well as bond with other scholars who share common mindsets.

Told me what I should be looking for regarding research opportunities.

The information put out

Opened my eyes to opportunities

Opportunity

Gives us all the information we need

She clarified things I was unsure of.

Information given was helpful

Interaction with other students

communicating with other, resources

It informed me of upcoming events that I wanted to join.

Learning about all the internship and grad school opportunities.

Our program mentor gave us insight about all the different conferences and meetings we could attend.

We were provided with ample information about research opportunities and upcoming conferences

They were very informative

The opportunities and scholarships available

Getting an understanding on the different conferences that were available

The info on upcoming events

gave me option to met others

The information concerning upcoming LSAMP events

A lot of information

Information about all the program offers opportunity wise and information about finances were allocated

Didn't waste time; giving important news/deadlines

Experience

Learning about upcoming conferences to present posters

Communication of opportunities

Clarifying information

Research Internship opportunities and graduate school application assistance

It was very welcoming

Advice given about research as well as applying to graduate schools

Meeting all of the other researchers was helpful.

This event that helped us critique and present our resource that allowed to to get feedback on what things do include

The conversation

Informative

I was able to network with other students and learn about other schools, and I made friends with the Langston University Students.

The meetings got me in contact with people that were in the same field as me and served as great networking opportunities.

Organizing the plans for traveling to OK-LSAMP events.

It provided me an opportunity to learn more about research opportunities and life skills

A lot of updates and information were given during the meetings

What was most helpful about the group meetings that you attended (Spring 2023)

Meeting my peers , and learning the program .

What was most helpful about the group meetings you attended?

They had a lot of information each time..

The information presented about future meetings and research events

Information on future events.

The calendar that has all the upcoming conferences with their deadlines.

Information about REU

Hire OSU grads had a larger job expansion

Support

Reviewing logistical expectations (paperwork, participation, etc)

Connecting with my peers

Very informative

It made me aware of resources on campus and off campus.

Information about opportunities I could look into after I graduate

Being able to speak with people in similar fields as myself.

We focus on what research symposium was open and dedicated to .

I am able to learn so much

Diversifying my education

The information, dates and deadlines provided for following weeks

The keynote speakers! Very informative.

Extremely informative.

The exploration of other fields of research and the networking opportunities

The opportunities presented to us

Professional development

Really liked a financial based one I went to because it provided me with resources I did not know of beforehand.

The opportunities presented

Information and updates

Learning bits that will help my career and getting motivation.

Building connections and resources for internships

R meeting

They all gave advice regarding school and classes.

It was a great opportunity for others to share internship opportunities that might interest others.

Making sure I am on track

Details for research opportunities

The ideas that were being shared.

Speaking with the other students and hearing their advice and experience.

Clarifying requirements.

Learning new info of how OK-LSAMP benefits me and resources I get from it.

If I remember correctly, there may have been a meeting at the beginning of the semester, in a sort of

Introductory fashion. I liked seeing everyone involved and hearing directly from the LSAMP leaders.

Learn a lot and talk to/see other people who are also in the program

Info on research projects on campus.

What was least helpful about the group meetings you attended? (Fall 2022)

Lack of free interaction with other students

As far as I am aware, there is only one meeting planned for this semester on November 16th. I would like more meetings, preferably at least 2 a month since the meetings often fall on days and times when I have class.

The MD/PHD presentation because I don't plan to go to Medical school.

There were not any moments in the meeting where information was not helpful. All information shared in LSAMP meetings had some type of value, whether it was small or huge.

Distractions led it to lasting longer than needed.

Signing of paperwork

The keynote speaker rambled a little!

They were not that interactive

All helpful

Nothing. Even the information for new participants can be used to recruit more.

Ice breakers

Time spent on admin tasks

Sometimes overwhelming amount of information

I was lost on what was required from me

There were some meetings that did not apply to my major, yet I enjoyed them nonetheless

Times

The confusing scheduling for presentations.

The seminars over politically correct topics really did not add any value to my experience. There is no point in making any of us feel like victims.

Most were for medical or biology neither are my major

It was the first one, so I am still learning .

The redundancy of some of the information given to us. Sometimes the meetings probably didn't need to happen.

Some of the meeting was repetitive. If the same resources come we hear the same spiel

We do not have enough of them to have any kind of relationship with program managers or other scholars.

They are at an inconvenient time

Not informing us on the emails we were receiving.

Maybe the time process

Has no direct impact on my current goals

The lack of breaks.

Time. I have a busy schedule and it was often hard to make time to attend

Running a little long but it was still fun.

Don't remember which is why it was least helpful

Took too long.

Off topic conversations

The amount of time that they take to complete and make sure everyone is on the same page.

Being on Zoom or Teams is inconvenient and impersonal.

Besides the lack of meetings, maybe also the lack of structure or agenda for the meetings, as this was also true of meetings in the past. I liked the meetings that would focus on specific things, like the GRE or how to apply for grad school, but monthly meetings don't have a lot of structure.

What was least helpful about the group meetings you attended? (Spring 2023)

The redundancy of some of the information given to us. Sometimes the meetings probably didn't need to happen.

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What would you change for future group meetings? (Fall 2022)

Have more of them, present more opportunities for research, provide more face to face aid or opportunities.

I would like more student interaction which has increased.

For future meetings, I noticed some agricultural majors were interesting in conferences for networking and presentation opportunities. It would be more helpful to find various conferences geared to each person's interest so everyone has opportunities for participation.

Having an agenda.

Times

All presenters have time to walk around and look at other students' work too!

more interactive activities in time management with research, school, and involvement, activities meeting other LSAMP members and connecting

I would keep them the same.

I am not sure

Add more interactive opportunities

better food maybe but that is it

Outlines of meetings

More of them

Having more structure to them. Very informative and offered a lot but the flow and topics were scattered.

I would be more intentional with time and ask all students to turn on their cameras, as connecting with only a blank square is challenging.

More comfortable

Record meetings and allow for more time to pertinent content

More exposure to graduate school and internship opportunities

I will plan ahead better, make sure I'm checking in with the instructors and doing my part

More students in attendance

More accessible times.

Allowing for an online attendance for those who have events that prevent them from film such as work or classes

Make them on Wednesdays

Mixing the students at the tables and having them learn about others but with at least 1 person at the table being from their same university so students have more opportunities to branch out.

No more seminars on topics that boil us as individuals down to solely our race and other characteristics that are secondary to our performance and knowledge.

Meeting at a higher frequency.

Add more meetings that can be transferable to all majors

How can I prep better for sending my abstract?

What would you change for future group meetings?

Maybe just the location for a change.

I would have them be less redundant

How to notice racial discrimination would be a topic or how to handle difficult people. I feel uncomfortable at OSU

MORE meetings.

Increase the hybrid options

Nothing!

Allowing a checklist of emails to make sure people are understanding and receiving them. Also allowing us to network virtually and familiarize ourselves with people in our state.

Having an agenda.

A consistent reminder for important events

Making them more available and doing better advertising when an event is coming up. Don't hide important information in lengthy emails.

The time of the meetings

More opportunities and funding opportunities across the U.S.

More interactive with audience engagement activities? Overall the meetings were very good and very informative. There is not much I would change.

Food at every meeting! Haha!

Saying "the formal meeting is done and if you need to go" and then continuing with supplemental useful information/group discussion.

More technical group meetings

Shorter meetings.

Less off topic and in person

I would have more brainstorming sessions.

Not be online.

Maybe change the length of the meetings so as to not overlap with other events going on for students.

Maybe send out an agenda for what points will be covered in the meeting.

Make the dates more apparent and easy to find

What would you change for future group meetings? (Spring 2023)

Maybe just the location for a change.

I would have them be less redundant

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MORE meetings.

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Maybe change the length of the meetings so as to not overlap with other events going on for students.

Maybe send out an agenda for what points will be covered in the meeting.

Make the dates more apparent and easy to find

Do you have any other comments regarding group meetings? (Fall 2022)

I just want meetings to attend, I feel left out of the loop.

I think it's awkward when some students speak because it feels like they want to hear themselves speak and it then makes it seem similar to some of the classes where there are students that just want to hear themselves speak to sound smart. [redacted] gives that vibe sometimes and it's a little unwelcoming.

More stuff about internships

For the presentations I noticed professors going from one presentation to the next. If there was a way to schedule each university in 1 room there would be less confusion on where to go next.

I would like us to have more.

Do you have any other comments regarding group meetings? (Spring 2023)

Dr. Lewis is sure to keep us all on track and updated.

-

Appendix 3: Scholar Responses About Mentor Support

Do you have any comments regarding your Fall 2022 research experience?

While LSAMP wasn't very involved in it, LSAMP did give me the opportunities I needed to present my research

I had no assistance from OK-LSAMP in finding a research assistant.

My research is a little disorganized and I feel a little uncomfortable going to my advisor for questions about my research

COVID-19 database research on how effective social distancing factors play into the spread of COVID. Also working with multiple sclerosis and the reduction of inflammation by the use of a natural compound.

It was great! I began to participate in clinical studies more with participants!

This counts as my honors research and is an independent project that I organized with my professor

Dr. Ellis, my Mentor is amazing at what he does. My time doing research is one of the highlights of my week. I have greatly expanded my knowledge of Organic chemistry and Laboratory functions because of him.

It was something very new to me. I appreciated OK-LSAMPS support in my choice to change research directions.

While presenting everyone was super friendly!

I would love to present my research and one of the events in spring 2023

It was educational, I could have had a more pleasurable experience. However, it was an experience overall.

Really awesome!

Lab setbacks

We have just started our research and I am excited to see where we will be taking it.

Very informative and satisfying.

I did research with USRI

I have been having a great time learning from Dr. Kelsey as we try to synthesize films using beta cyclodextrin and other compounds. I really appreciate the opportunity.

Do you have any comments regarding your Spring 2023 research experience?

It was an amazing opportunity and learning experience.

I went to Oklahoma Research Day to present with two other students. I will be going to the NCUR 2023 conference as well.

It was very great, started a new experiment using S. aureus and Strep A in CO2

It was a valuable experience that taught me many hard skills as well as soft skills.

It's has been rigorous but enjoyable

It was fun !

NDVI Specialist for the Sky Wrangler Research Program

It was fun. I researched crayfish.

It was a great experience being able to gain exposure to new equipment and gain lab skills.

Best Experience Yet

Great, very hands on

I want to continue it till I graduate

Great

I am continuing to gain experience using different instrumentation which is my goal until I reach graduation.

My Experience was great and allowed me hands-on experience that I was able to present at ORD

More support from my mentor would have been helpful. Overall it was a good experience.

I made a ton of progress on my project and attended several awesome conferences

It went well

How did your research mentor help you? (Fall 2022)

My research mentor has helped me make the project as I am the only student working on it

Helped me find grants, symposiums, and internships to apply for.

Assisted me in selecting classes and allowing me to become prepared fully for applying to graduate school

They answer my questions and concerns, especially when I am stuck. They also ensure that I always have a task for the week before our next meeting.

He was very engaged with whatever was needed and was always willing to help.

My mentor has helped me find and apply for scholarships and she has also provided me with letters of recommendations or scholarships. She has helped me with writing abstracts to present my work.

I had two different research mentors. One mentor resides at Oklahoma Medical Research Foundation, and the other is at Langston University. My mentor from OMRF was helpful by allowing me to continue my summer research and further the experiment. He allowed me to work throughout the school year and is also keeping note of my grades and helping in whatever way possible to help with the project and outside of that, such as shadowing and tutoring opportunities. My on-campus mentor has solely helped me understand the project, but not able to relate it to what I enjoy most about research.

We meet weekly and go over updates from both of our ends and determine goals for the next week

Too many ways to account for. I have a hectic schedule and he has worked with me through everything. His ability to explain complex concepts in a way that is understandable is why I decided to do research, and why I am currently in the OK_LSAMP program.

Has been monitoring and guiding my progress

Did not partake in research this semester.

My mentor has trained me in several different techniques in 1-on-1 settings.

She was very helpful in answering any questions and verifying any concerns and calculations.

I just started research in September, but my research mentor has been helpful in being flexible with time and partnering new students with more experienced students.

The research mentor reached out to me and helped me with understanding the new techniques in the research we were conducting.

Get me started on a new research

He prepped me for presentations and edited my poster

He helped guide me in my research

He helped to guide me and give me advice in pursuing my research.

He answered any questions I had!

Helped me learn more about my career path

My research mentor helped me by guiding me through our research project.

She let me join her research lab late so I could get my required LSAMP Research hours and has helped me find different summer internships.

They were always available and ready to help me with whatever I needed

He helped me carry out my experiment and was very supportive throughout the whole process.

My mentor provided guidance for my next steps following graduation

Helped me with networking so I can reach my next steps after undergrad

Gave me advice and pushed me in the right direction so I will know what to do for myself

Helped me better my research skill and applying to grad school

Taught me a lot

He was very caring

Improve analytical skills, academic writings, meeting deadlines and holding myself accountable

Allowed me to think and do research on topics I did not know existed or exposed me to other individuals who are keen on helping new students

Very understanding

He has given me several opportunities to learn new procedures when handling new equipment, such as micropipettes and the Spectrophotometer.

Somewhat

My research mentor has been helpful in writing reference letters for graduate school applications

Information and opportunities

Willingness to instruct and critique my work constructively

Aided me in learning the ins-and-outs of conducting research

She taught me everything about research, scholarships, conduct, and many other areas.

He helped me get connected to OKLSAMP and other beneficial opportunities on campus.

Directs me towards where I can find solutions without giving me the solution

They helped me receive appropriate lab training and etiquette.

Asked as a general mentor as well

He has adjusted the research to prepare me for work after college and coordinates with me to change the research goal based on my interests. He makes every possible effort to be available when I am available. Currently our goal is to learn how to use all available types of instrumentation.

My research mentor gave me access to great opportunities and the ability to conduct research at the University of Tulsa

She guided me on how to participate in the process of developing research, future experiments and developing reasons behind behavior observed.

She provided support in what I needed to get done and there if i ever needed to talk

He presented me with research topic and books on the topic

Did not have an opportunity to day anything this semester

He encourages me to keep on working

He made sure that I was on top of my classes and research

She informed me of all the possible ways research opportunities are available for minorities. She also assisted me throughout my research

He made sure I was aware of all opportunities and their deadlines. He also does a great job of following up with students.

She gave me more opportunities, and gave a lot of important advice for my future career.

How did your research mentor help you? (Spring 2023)

She guided me through everything and then let me work more independently while still being there for me when I needed her.

They came up with the idea

Helped with my understanding of concepts that I have not learned in my classes yet, and helped walk me through protocols and procedures.

Did a very good job explaining any questions that I had. Also allowed me chances to think for myself and helped me to grow my mind in how it thinks about research and different strategies.

helped give out a lot of resources

By mentoring and guiding me

My mentor has guided my research efforts as well as helped me develop presentation and professional skills.

She has guided me in professional development and scientifically, and started being my de facto academic advisor

My mentor has made herself very available to support me. We learn together and take the full time of our research meetings. It helped using the 1st semester to plan my research and the 2nd semester to execute it. Throughout the whole process, I have felt very capable alongside her because of her approach to supporting my learning. We would both read some articles each week and discuss them in the planning phase. Now that we are executing we both split up tasks as appropriate.

They helped me apply for grad school and they wrote me a letter of rec.

He trusted me to get the work done and that I would reach out if needed help.

Give information for future steps after graduation and show me opportunities that research has

By preparing me for upcoming conferences and giving guidance on next steps for my project. My mentor was always readily available to help and open minded.

She allowed me to apply for an internship and focus on how to get my career.

Resources for different opportunities

He has given me many opportunities for research.

My research mentor helped me strongly with my career goals in professional and personal development matters. During my time with my mentor not only did he help with my career goals of working in the lab but also enhanced greater communication, social skills, and time management.

Helping me prepare for research conferences and Being An overall good mentor outside of research.

Providing encouragement, and an expert opinion

My mentor helped me find a summer internship and prepare for it.

answered any and all questions I had

Offered guidance on future careers

Provided me with multiple opportunities to network through poster presentations as well as good learning experiences to help further my education.

helped with research

They helped me to conduct professional research without being overbearing, and guided me through the process very smoothly!

She has me participate in many presentations and gives me advice on graduate school

I had to take a semester off but they are ready to help me get back on track next semester.

Guided me while allowing to make my own experimental design

My mentor helped me with recommendation letters as well as preparing for interviews

Dr.Davis guided me through my research and helped me dig deeper into my topic for better understanding. She was always around to answer my questions and did everything she could to help me!

She helps with finding opportunities to help advance my future and goals.

They provided me with the resources and support I needed to adequately conduct my research but also let me have freedom in the lab and come to my own conclusions.

She was always available to answer any questions I had.

Provides me with resources relative to the research, gives us ideas and guides us through difficulties with the research, provides me with possible internship opportunities.

allowed me to do research

My mentor helped beyond the lab providing me with experiences to grow as a young scientist.

My mentor was there for every step of the process, she was always available to answer any questions.

He helped me find a passion for neuroengineering and immunoengineering

By being available and very active

He helped me find a summer research program.

Answering questions and helping me in my research

By giving me the opportunity to watch and help her conduct her project.

Provided me with an opportunity to have technical experience on my resume

kept in contact with me as needed

Forwarded us emails of job opportunities, and other resources to help us. We also had meetings where he encouraged us to do big things.

Taught me a lil about semiconductor process

My mentor continues to help me by allowing me to learn and experience as much instrumentation as I can and tweaking my research to help me in my weakest areas.

He was very insightful about my future.

They gave me advice on how to apply to jobs and they were very encouraging.

Believe in me

They helped me organize my information to make it presentable. They guided me through my research while also allowing me to take control of my own project

Giving me advice on how to portray myself in the scientific community, and to research what really makes me passionate.

Guides me through my research

Helped me in finding internship opportunities. Informed me of conferences to attend.

Provided opportunities to present research and to conduct research on other campuses

Dr. Kelsey was a fantastic research mentor, he helped me grow a lot in the lab and utilized various techniques.

Helped me apply for conferences and work through problems pertaining to my research.

Gave clear instructions, support, and encouragement

Encouraged me to pursue things I otherwise never would have done! I presented at WCUR in the UK last week because of that.

By respecting my process and checking in.

they have helped answer my questions and inform me on various symposiums and meetings I can attend too

She offered her help whenever I had questions. She's knowledgeable and I feel comfortable asking questions or talking to her about things in general.

How could your research mentor improve? (Fall 2022)

Nothing comes to mind at the moment

They could be more involved in the research process throughout the week

I could use more support on the actual processing of data.

Both of my mentors could improve by asking about my interest and ensuring I understand the research I have been given. My on-campus mentor could be more active in my academics and look for opportunities to present further research besides LSAMP activities.

She has done great and there is nothing I can think of for improvement

Did not partake in research this semester

Respond in a more timely manner.

Setting clear expectations not only verbally, but also in written forms.

My research mentor could improve in scheduling.

He is already great

Be a little more understanding about my availability!

My research mentor has been a great help. No improvement needed at the moment.

His availability time could be improved

She did great

More time to meet

At the beginning of the research, it was all difficult research that could be intimidating for new students. Working on how to bridge that gap to make the research fun and exciting as a goal to accomplish. Better PR for the lab, so students can feel like their work in the lab is a building block to something great.

Availability

Lab set up with proper equipment would be more beneficial in future

I don't have any complaints

She did very well, I'm not sure how to tell her to improve.

I don't have anything at this time

Maybe recommendations on where he believes the Aerospace Industry is headed and how I could adapt to fit into a good position in that future.

Be more available

I have just started research with my mentor and so far the improvement will mostly come from my end after I learn to use multiple types of instruments.

Better communication would be best but there really isn't anything to gripe about.

Delivering critical advice in a softer manner.

Communication is an issue due to both of our busy schedule resulting in rescheduling meeting

Did not have an opportunity to do anything this semester

Recruiting students earlier in their degree plan

She is very popular, and which is hard sometimes to reach out . Since everyone reaches out to her all the time .

How could your research mentor improve? (Spring 2023)

Talking to me more about the project and reaching out

Communicate more clearly by following up conversations with writing or emails with action steps

Reach out more

Communicating expectations from the lab as a whole (there are several other members in the lab.)

I can't think of any way

She is great. Sometimes I feel like I do too little, but we have discussed the workload and set expectations early on so it has not been a real issue.

I wish she had more time .

He could be more organized and communicative

My research mentor can improve simply by sticking to what is important for me to learn and also critiquing me more on my work that way I know what to change about my work

Being present more of the time.

Perfect Mentor

I'd like to learn more laboratory techniques

Scheduling and more time in the lab

She does really well, I have no critiques.

Be more organized.

He does a great job. I can't think of anything.

None. He is great.

Shorter projects

My mentor does an excellent job all around and is a great fit for me and my needs.

He did a great job, honestly I do not know how he could improve.

Being more punctual and helpful in terms of tasks that are asked of them. Reaching out to students rather than waiting for them to come.

I do not see much room for improvement.

Appendix 4: Scholar Responses About Graduate School Preparation

1 responded Magoosh through LSAMP

2 responded Through Another GRE Prep Program_

What kind of help did you receive preparing for the GRE? (Spring 2023)

1 responded Through Another GRE Prep Program

Appendix 5: Scholar Responses About Help Received During Transfer Transition

How was your previous institution helpful? (Spring 2023). This question was not included in the Fall 2022 survey.

They helped me receive an education concurrently

Additional Advisors

How was your previous institution helpful? (Spring 2023). This question was not included in the Fall 2022 survey.

How was your previous institution helpful?

Two professors worked with me in getting me set up.

Helped me take classes that they knew would transfer

Appendix 6: Scholar Responses About Program Strengths, Weaknesses, and Recommended Changes

What are the strengths of the OK-LSAMP program? (Fall 2022)

Financial support and opportunities for research

Good connections and opportunities

The stipend eases my worries about tuition.

I like the idea of it, and how it provides aid to those who did not have the option for financial aid for them before.

Internships and pay for students

The amount of information sent out about internships and research opportunities.

Their connection with students from underrepresented backgrounds in STEM

No meetings

Having a relationship with Brenda Morales is great and helps me a lot because I can go to her when I have poor encounters with peers or other people in the university.

The biggest strength I have is I do not back down from a challenge even when I get nervous. I carry a great load of humble ambition that allows me to have a great work ethic that keeps me motivated to expose and network.

I love the community that there is and the support from friends and students

Very friendly and supportive program managers

The ability to encourage people to expand their knowledge in the STEM fields, and to experience and interact first hand with knowledgeable people in those fields

To build confidence and to network

A very strong outreach to specific universities. A great amount of diversity!

The commitment to diversity and their outreach with opportunities for graduate school.

Stipends being offered.

It is a great way to get involved with research and to establish a network.

The program is very informative and provides lots of opportunities to undergraduates.

Opportunity

Help you get involved for research

The experiences to travel and learn

Helped me to interact with other like minded individuals.

Very helpful when needed!

The reach of meeting people

It provides a bridge for minorities pursuing sciences.

The mentorship, and help for life after undergrad.

The access we have to internships and research opportunities as well as graduate school programs.

Provide students with research opportunities

Providing many different possible internships and academic advancement options.

Connections

The programs provides good financial help as well as information regarding scholarships and internships

Funding students to be apart of stem and experiencing new environments they we are not accustomed or exposed too normally

Encouraging students to continue their education

Giving me option that I wouldn't have without it and the weekly emails

LSAMP grants minority students opportunities in stem that they otherwise would not have. It's leaders, mentors, and managers are very passionate and helpful

Information and opportunities

Information about research opportunities

Introduce a lot of great opportunities

Very personal people, easy to work with mentors and students

Network

I got all the information I needed through the emails.

It brings in more diversity to the STEM field

Bringing resources to those from traditionally underrepresented backgrounds.

Intentionality and passion to help students

Undergraduate research opportunities

Financial support, relevant meetings, share information about programs

Very welcoming and helpful when I needed them

Opportunities for research and internships

I think the strengths of OK-LSAMP is that it helps connect me with resources around campus.

It gives students opportunities they would not normally have.

Diversity,resources, community of people to teach with.

The community

Mentoring

Ability to help support students who are working hard and in need.

I did not know research was available to anyone, and since I have started it has been a great experience.

The opportunities presented

Providing opportunities to present and make connections.

There good with communication

Networking

I great outreach opportunity for students

Encouraging people to participate in research projects.

The mentor here has been very helpful in helping me apply and to plan for this program.

Community and research resources

The professors and the friendly environment they create

It enables STEM POCs a network where we can connect to one another

Providing and keeping up with a variety of programs for us. The weekly emails are nice.

Encouragement

Plenty of different opportunities and areas of interest

You get to network with other minorities in Stem . You have a huge support system .

The constant emails letting us know about what events are coming up and deadlines for things.

What are the strengths of the OK-LSAMP program? (Spring 2023)

That they make sure to send out a lot of opportunities.

I like the variety of different interests and categories of research presented and the information provided about graduate school

Providing stipends to help students do research

OKLSAMP has really opened me up to the world of research which before I was in the program was something that I knew little about. It has now given me the ability to conduct my own research and grow as a student.

Encouraging the students to talk about their experiences and finding conferences to attend.

helps us by opening up resources for us to look into

Assisting students with academic success

It offers many internship opportunities and academic support.

Assistance for underrepresented minorities looking to study in the stem field

The larger community across the state makes it a strong program, as well as the financial aid for the students.

There is a community and we receive financial support to conduct research

Multiple opportunities to present and conduct research.

They provide funding so that the student can work with whichever mentor would work best for them and makes the process much easier by bringing funding with them.

Well organized

Opportunities to explore other science jobs beyond doctors

Opportunities to get more experience in your respective fields of interests

The main strength is allowing OK-LSAMP to pay for students' ability to attend conferences without a financial burden. Allowing students to understand the importance of research and exposure.

Allows me to meet other students and discover my field .

The opportunities it brings

Research

Providing an outlet of undergraduates to do research

The programs and conferences they set up for us to be able to present our research

Attending conferences and camps

Communication between scholars and lots of opportunities offered to scholars.

Provides a good way for students to gain extra finances to help strengthen their careers.

Informing about opportunities

Helping students become successful and build an excellent resume for grad school and post graduate studies

Resources and support in future schooling

They are flexible and willing to work with students.

It has scholarships and resources to help schoolers present at conferences

Funding, encouragement, and opportunity

Collaboration

Giving opportunities to student to see and do research their interested in

Opportunities for minorities

Connections

Organization

Support, academic opportunities, and community building

Friendly group of like minded people

Ability to conduct research and STEM symposium opportunities

Ability to give minorities a chance to present.

The opportunities present

It is a great financial program that helps encourage minorities to get into research and graduate school.

It gives great opportunities!

Awareness of research events.

Financially assisting students

Darlene and Brenda

I have the opportunity to learn and see things I never thought would be possible for someone like me.

Research opportunities

Helpful for minorities.

The emails that recommend internship opportunities

Everything

Financial Aid and Research opportunities

The funding for the individuals in the program itself.

Finding out about interesting opportunities is easy with the informative emails and encouragement from the program.

Encourage networking among other members and in different fields.

Opportunities for presenting research are great.

Internship opportunities. Scholarships, graduate school help

I like how it reaches out to people that aren't normally sought after, like me!

Opportunities to do research and present research

Funding

The community

Funding, resources, STEM, mentors, research

Fellowships, Scholarships, Mentoring, etc.

I got the opportunity to learn about research and connect with others in the video game industry.

It offers help to an underprivileged demographic.

Really backs the students and has there best interest

Constantly keeping in contact through email

Building confidence

The resources

What are the weaknesses of the OK-LSAMP program? (Fall 2022)

Communication and meetings/updates on the programs

There are very few resources and communication is practically non-existent. Website not helpful.

For LSAMP on the OU campus, it was simply the time I joined. I joined when there was a change in directors and leadership, and any guidance that other previous LSAMP scholars had received was unfortunately not available by the time I joined. I am now a senior, and almost all of my junior year was spent waiting for the LSAMP leaders for OU to decide what to do. My attempts to find another research opportunity after my previous one finished were unsuccessful.

An overwhelming amount of information is sent out.

Their organization at OU

Not great contact points and slow information delivery

It's very disorganized and they don't maintain high student outcome to meetings

One weakness I carry is that I want to be a perfectionist and be able to take every opportunity offered to me without taking a break, I need to learn to say no and understand every opportunity offered does not have to be accepted, especially when cutting myself short.

More scholar meet-ups and meetings would be nice to get to know each other. Building our network amongst each other should be encouraged as well.

At OU there is a lack of community building and relationships rely on friends I already had. I met other OU students for the first time going to the symposium and wished I had known them beforehand.

very vague directions on what needs to be done

none that i can think of.

Many universities in Oklahoma are not involved.

The variation in organization from campus to campus.

A weakness of the OK-LSAMP program could be connections. I think there could be more chances for scholars to meet each other in relaxed environments.

Time management

Budget

Sometimes, people in the program need to work on their approachability or people skills.

the lack of being representing on campus to students

I cannot think of any.

Creating closer relationships with students

It's only available to view students actually in college

I haven't seen any so far.

Some Universities don't get the level of support they deserve

Communication, structure, organization

Not very publicized

Very last minute

It isn't well advertised on campus

Clarity on opportunities

Setbacks of class and campus research during semester

I personally just joined when there was a transition of staff and mid semester so never knew what to personally expect or do

As a new member, I am a little confused on what I need to do to get started.

There are many members, so it can be harder to form more one on one relationships.

The times or meetings, also not having access to research preventing opportunities we'll in advance for those who work schedules require notification

Availability

It is hard to state a weakness because I am still new to the program.

More funding.

The politically driven aspects and talks given to the students to make them feel like they are victims of a system they are powerless to change. I would give people the courage to go out and do the best they can under any circumstances.

Organization during the research colloquium.

Limited meetings and small amount of topics

I have yet to meet with the program coordinator, but that is my own fault

Introducing the program with a face to face sit down with an advisor

Need better opportunities to connect with other schools' POCs

Lack of awareness

I don't have anything to say besides providing more agriculture science students to present research. Most of the symposiums cater to biology and chemistry majors .

What are the weaknesses of the OK-LSAMP program? (Spring 2023)

I like the information sessions more than the research presentations and thought the PHD camp could be more beneficial in the Fall than the Spring

Although the program mentions how important mentorship and networking is, there could be more put in place so scholars can network with each other.

Recruitment rates. As in having a small number of students engaged in the group.

Not everyone has a deep understanding of the OK - LSAMP

Lack of attention at smaller campuses.

I don't feel connected to our OU LSAMP community and feel like there is very little happening to support us other than financial support.

More funding opportunities would be helpful

There is a lack of transparency of how many "points" you have earned at that moment in time, you only really know that you earn "points" by participating in various activities.

Scheduling conflicts for events

Limited symposium and conference awareness and exposure

Communicating new events effectively and planning for students to attend conferences in a more organized way. Also being able to network throughout the states and outside of conferences.

It's been good to me

There's not enough gatherings as a program

Presenting/ consistency

only researched focus. students can really lose sight of school work if they are only focused on LSAMP managing my school work while at these conferences.

Lack of personal help or socialization

Communication

Thorough communication

Not much outreach? Not a whole lot to improve upon. It's a good program.

Doesn't work with all schedules

Structure and availability

We need more mentors

Using email as communication. An app might help a centralized website.

Not enough opportunities for students to make money

Heavily geared towards graduate instead of enjoying research/ learning from research

The stipend is not enough to get by per semester.

Lack of communication with advisor

The internships recommended are only for the summer

Not enough meetings

The amount of coordination between everyone and the team building aspect as an organization.

Not well-known among people as an opportunity.

No comment

I wish there was a stronger organization in the administrative part of it.

Outreach

Lack of meetings

Not very good at communicating and informing students about events

Most of the people who are in the OK-LSAMP program are not in my major.

Not very good communication about events happening.

Lack of communication which has gotten better since my start in the program in 2019 but could be better still

If you could make any changes to the OK-LSAMP program, what would those changes be? (Fall 2022)

More frequent meetings

I would just have more people available for the students to reach out to.

Incorporate premed students more

More marketing about events for LSAMP at OU

Clearness on what one has to do to get funding and set meetings with people who respond on time

An interface like canvas or microsoft teams where resources could be and a better understanding of what we can do to receive points and possibly allow students across the state to interact.

Add monthly meetings that support education about the grad school process, research programs, and professional development. Also host 1 or 2 socials through each semester so scholars can meet each other. I would co-program with other organizations and offices to connect current scholars with students looking into the opportunity as well.

To encourage students to get into research sooner

Include workshops

More opportunities to present in other countries.

I would allow for more interaction between students and faculty from other schools!

I would have people come to speak directly from OK-LSAMP to outreach to more students.

I would make sure to create stronger bonds with OKLSAMP students

More public, an attempt to reach more minorities

More in person events

At least one or two in-person meetings/hangouts to get to know the staff and students

Publicize the program more

More assistants for osu section

More forward facing and alter operations to mimic a fraternity or more social organization

To allow virtual workshop opportunities that students can complete to make up for missing events, meetings etc. This would allow students more resources to gain and not just simply miss out on the opportunity due to work, classes, etc

Have more dates available for event opportunities. As well as sending out when to meet

I would not make any changes.

More stipend money.

Focus on performance and acquiring knowledge over everything else and encouraging those of us who would like to stand out.

To find better caterers for the dinner and lunch provided.

Have things that don't pertain to research all the time

More outreach to participants

Nothing so far

Again, I don't know what I would change because so far I have had nothing but good experiences.

Earlier awareness of schedules

I think it would be good if we were grouped by a major .

There would be no changes

If you could make changes to the OK-LSAMP program, what would those changes be? (Spring 2023)

I have not been a part of the program very long.

Partner students with current PhD candidates so we can learn from them

More social interactions

I would like to know how to get points and what's worth points to get funding. I would like mentors to be more involved because I had a bad mentor that made microaggressions and ended up firing me. I was not paid for my research and in CEAT it is policy to pay students

Improve the campus programs by having students more actively engage within their own cohort.

I wish there were more meetings. Once there was one about making a poster and I took a lot away from that. I would love to see the program do events with other offices and organizations on campus. A joint event between our diversity and inclusion office would be incredibly compelling to our students.

Hopefully can extend it to Non STEM students.

Access to where points are logged for the semester.

I do not have any specific changes

More field trips and travel to other conferences beyond Oklahoma regularly and maybe study abroad programs

Maybe having study abroad . It can make research more accessible and better.

More meetings to get to know one another.

More In person meetings

Incorporate the importance of Academics in the talk, emails, and over forms of communication

More bonding activities

Have more social events

More opportunities for Ag Science Majors

Better communication

The timeliness of announcing opportunities

Expanding to opportunities that make significant changes.

More user-friendly emails. The current weekly resource ones are a bit difficult to navigate.

Open the program to more so that it can accommodate all schedules

Better structure to LSAMP program

Maybe a meeting for each semester

More interaction with each research mentor.

Improved OKLSAMP advertisement and student stipend.

Add more money to individual students and add non traditional grants to non traditional students

Be open to people who just want to learn more things from research up into they graduate before they enter the industry

Along with the research stipend pay for extra hours of research that are being put in.

More emails about available research positions for seniors

More gatherings

More conference varieties

I would have more local events in Tulsa.

No comment

There would be more people reaching out to LSAMP members to check in and send reminders of meetings and meet ups.

I would like easier ways to be more educated about the program.

Scheduling meetings more effectively and outreach.

maybe form a discord or a group chat

Not that I can think of

More communication between other Lsamp at your campus. After 3 years I finally have met another scholar at UCO and we have become good friends since meeting at the symposium in September

Any other comments about your OK-LSAMP experience? (Fall 2022)

I'm glad it is more cohesive now, I hope the program is better for incoming students, and that it continues to provide aid and outreach

It was great! Thank you for the opportunity

I enjoy the values of the program and the symposium was an incredible opportunity. My favorite part was their encouragement to do research outside of the country and the workshop on diversity in research, specifically. I have gained plenty through this program that I would not have otherwise gained without it, especially as a student from a minority background looking to attend graduate school.

It's pretty awesome!

I really love OKLSAMP

No, it's great. Thank you!

I hope to present my research soon.

I have had a wonderful LSAMP experience thanks to Dr. Sharon Lewis

Thank you for your understanding and all hard work

I had a great experience, met new friends, and my path has been pushed in a new direction I thought wouldn't be possible for me and with the help of this program I will be able to achieve my family's and my dream.

Besides the points mentioned previously I enjoy the program

I was disappointed at the lack of organization for the dinner the day before. I'm impressed by the gifts for students that were given out.

Just need someone to help guide me on what all is expected from me

Thank you for making this available for me and other students. It is very helpful.

It has been lot of fun , and I am so glad that I join

Any other comments about your OK-LSAMP experience? (Spring 2023)

So far so good!

I really like the Canvas page that we use to streamline communication and the monthly surveys will be transparent about how many points we have. I just wish there was more community and resources locally beyond the state-wide email.

It has been beautiful!

It has been a great opportunity overall!

OK-LSAMP has made me confident in attending grad school! I wouldn't have considered it if it weren't for this program

Nope very grateful for the opportunity

My overall experience has been wonderful

Thank y'all

Great job

I've enjoyed being a recipient and my knowledge has expanded far beyond what I thought would have been possible for me.

Amazing experience being and LSAMP scholar

Nope! I'm glad to be a part of it!

Appendix 7: List of Survey Questions

The Alliance included a research component to the program during this new funding period. Some of the research questions were included in the Fall 2022 and Spring 2023 surveys. Several of these are also included below; however, the results are reported by the researcher, not in this evaluation.

Fall 2022

Did you participate as a student in the OK-LSAMP program in Fall 2022?

- Yes
- No

Where did you spend most of your life?

- Primarily rural
- Small town
- Suburban
- City
- Prefer not to answer

What is your marital status?

- Single
- Married or in a domestic partnership
- Widowed
- Divorced
- Separated
- Prefer not to answer

What is your current employment status?

- Employed full-time (40 or more hours per week)
- Employed part-time (up to 39 hours per week)
- Unemployed and currently looking for work
- Unemployed and not currently looking for work
- Prefer not to answer

Did you transfer from another institution?

- Yes
- No

What is the name of the institution you attended prior to transferring?

How did you find out about the OK-LSAMP program? (Choose all that apply)

- Campus recruitment
- State-wide STEM activity (Name the activity below)
- On-campus program, such as McNair Scholars, summer academy or camp (Name the program)
- OK-LSAMP Website
- OK-LSAMP Administrative Staff
- Social Media
- Friends or family
- Current OK-LSAMP participant
- Alumni/Past OK-LSAMP participant
- Professor(s)
- Other (Specify below)

You selected that you heard about the OK-LSAMP program from a professor. Where was the professor(s)?

- At my previous school (If you transferred)
- At my current school
- Other (Specify below)

Please rate your OK-LSAMP experiences with the following?

	Excellent	Good	Okay	Fair	Poor	Not Applicable
Academic support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional development support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity to work with other undergraduate research programs on your campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity to work with STEM organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interactions with other students in the program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Did you have an OK-LSAMP research mentor in Fall 2022? (Campus program manager is the OK-LSAMP person who runs the program at your home institution)

- Yes, my research mentor is also the OK-LSAMP campus program manager
- Yes, my research mentor is someone other than the OK-LSAMP program manager
- No

Did you conduct research during Fall 2022?

- Yes
- No

How did you conduct your research in Fall 2022?

- In-person
- Remotely
- Combination of In-person and remotely

Do you have any comments regarding your Fall 2022 research experience?

Rate the helpfulness of your research mentor.

How did your research mentor help you?

How could your research mentor improve?

Have you met with your OK-LSAMP campus program manager in Fall 2022 (in person, via phone, or through Zoom or other online platform)?

Yes

No, but I know who the campus program manager is

No, I do not know who the campus program manager is

Comments about campus program manager.

How many times did you attend OK-LSAMP group meetings at your institution in the Fall 2021 semester (in person or via Zoom or other online platform)?

0

1

2

3

4

5

More than 5

Overall, how helpful were the Fall 2022 group meetings you attended? 1=Not at all Helpful; 5=Extremely Helpful

1

2

3

4

5

What was most helpful about the group meetings that you attended?

What was least helpful about the group meetings that you attended?

What would you change for future group meetings?

Do you have any other comments regarding group meetings?

Reasons for not attending Fall 2022 group meetings (Choose all that apply)

Not in the program at the time

There were no meetings

Schedule conflicts

Not interested in topics

Other (Specify below)

Did you attend the annual OK-LSAMP Research Symposium in Fall 2022?

Yes

No

Reasons for not attending the annual OK-LSAMP Research Symposium (Choose all that apply)

Lack of research

Not in the program at the time

I did not know about it

I was not interested

Schedule conflict

Other (Specify below)

Did you present at the Fall 2022 Symposium?

Yes

No

How many conferences/professional meetings did you attend in Fall 2022 (in person, via phone, or through Zoom or other online platform)? Do not include the OK-LSAMP Research Symposium in your count.

0

1

2

3

4

5

More than 5

Reasons for not attending other conferences/professional meetings (Choose all that apply)

Not in the program at the time

I did not know about them

It was too expensive

I was not interested

Schedule conflict

Cancelled due to COVID-19

Other (Specify below)

How many presentations did you make at the conferences/professional meetings you attended?

0

1

2

3

4

5

More than 5

Did you receive financial assistance from OK-LSAMP to attend any of these meetings?

Yes

No

Are there any professional meetings you would recommend that all scholars attend?

Did you complete Responsible Conduct of Research (RCR) training in Fall 2022?

- Yes
- No
- Not sure

Were you encouraged to participate in a summer internship?

- Yes
- No

How did you find out about internship opportunities? (Choose all that apply)

- Mentor or campus program manager
- OK-LSAMP program emails
- OK-LSAMP Social Media
- OK-LSAMP group meeting
- Friend or family
- Current OK-LSAMP participant
- Alumni/Past OK-LSAMP participant
- Other (Specify below)

Did you participate in an internship in Summer 2022?

- Yes
- No, it was canceled due to COVID-19
- No

How did you participate in your Summer internship in 2022?

- In-Person
- Remotely
- Combination of in-Person and remotely

Were you a senior prior to beginning the Fall 2022 semester?

- Yes
- No

Did someone in the OK-LSAMP program encourage you to take the GRE?

- Yes
- No

Did you receive help preparing for the GRE?

- Yes
- No

What kind of help did you receive?

- Magoosh GRE prep through OK-LSAMP
- GRE prep through another program
- Other

Have you taken the GRE?

Yes

No

Have you applied to any graduate schools?

Yes

No

How many graduate school applications have you completed?

How many graduate school applications are you waiting for?

Please rate your overall satisfaction with the OK-LSAMP program.

Please rate how the OK-LSAMP program has helped your academic career?

What are the strengths of the OK-LSAMP program?

What are the weaknesses of the OK-LSAMP program?

If you could make any changes to the OK-LSAMP program, what would those changes be?

Any other comments about your OK-LSAMP experience?

Spring 2023

Did you participate as a student in the OK-LSAMP program in Spring 2023?

Yes

No

Where did you spend most of your life?

Primarily rural

Small town

Suburban

City

Prefer not to answer

What is your marital status?

Single

Married or in a domestic partnership

Widowed

Divorced

Separated

Prefer not to answer

What is your current employment status?

Employed full-time (40 or more hours per week)

Employed part-time (up to 39 hours per week)

Unemployed and currently looking for work

Unemployed and not currently looking for work

Prefer not to answer

Did you transfer from another institution?

Yes

No

What is the name of the institution you attended prior to transferring?

Was your previous institution helpful in the transfer transition?

How was your previous institution helpful?

Did your current institution assist with the transfer transition?

How did your current institution help?

How did you find out about the OK-LSAMP program? (Choose all that apply)

Campus recruitment

State-wide STEM activity (Name the activity below)

On-campus program, such as McNair Scholars, summer academy or camp (Name the program)

OK-LSAMP Website

OK-LSAMP Administrative Staff

Social Media

- Friends or family
- Current OK-LSAMP participant
- Professor(s)
- Other (Specify below)

You selected that you heard about the OK-LSAMP program from a professor. Where was the professor(s)?

- At my previous school (If you transferred)
- At my current school
- Other (Specify below)

Please rate your OK-LSAMP experiences with the following?	Excellent	Good	Okay	Fair	Poor	Not Applicable
Academic support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional development support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity to work with other undergraduate research programs on your campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity to work with STEM organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interactions with other students in the program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What can be improved?

Did you have an OK-LSAMP research mentor in Spring 2023? (Campus program manager is the OK-LSAMP person who runs the program at your home institution)

- Yes, my research mentor is also the OK-LSAMP campus program manager
- Yes, my research mentor is someone other than the OK-LSAMP program manager
- No

Did you conduct research in Spring 2023?

- Yes
- No

How did you conduct your research in Spring 2023?

- In-person
- Remotely
- Combination of in-person and remotely

Do you have any comments regarding your Spring 2023 research experience?

Rate the helpfulness of your research mentor.

How did your research mentor help you?

How could your research mentor improve?

Have you met with your campus OK-LSAMP program manager in Spring 2023? (in person, via phone, or through Zoom or other online platform)?

Yes

No, but I know who the campus program manager is

No, I do not know who the campus program manager is

Comments about campus program manager.

How many times did you attend OK-LSAMP group meetings at your institution in the Spring 2023 semester (in person or via Zoom or other online platform)?

0

1

2

3

4

5

More than 5

Overall, how helpful were the Spring 2023 group meetings you attended? 1=Not at all Helpful; 5=Extremely Helpful

1

2

3

4

5

What was most helpful about the group meetings you attended?

What was least helpful about the group meetings you attended?

What would you change for future group meetings?

Do you have any other comments regarding group meetings?

Reasons for not attending Spring 2023 group meetings (Choose all that apply)

Not in the program at the time

There were no meetings

Schedule conflicts

Not interested in topics

Other (Specify below)

How many conferences/research symposia did you attend in Spring 2023 (in person, via phone, or through Zoom or other online platform)?

0

- 1
- 2
- 3
- 4
- 5
- More than 5

Reasons for not attending other conferences/research symposia meetings (Choose all that apply)

- Not in the program at the time
- I did not know about them
- It was too expensive
- I was not interested
- Schedule conflict
- Other (Specify below)

How many presentations did you make at the conferences/research symposia meetings you attended?

- 0
- 1
- 2
- 3
- 4
- 5
- More than 5

Did you receive financial assistance from OK-LSAMP to attend any conferences/research symposia?

- Yes
- No

Are there any conferences/research symposia you would recommend that all scholars attend?

Did you complete Responsible Conduct of Research (RCR) training in Spring 2023?

- Yes
- No
- Not Sure

Were you encouraged to participate in a summer internship?

- Yes
- No

How did you find out about internship opportunities? (Choose all that apply)

- Mentor or campus program manager
- OK-LSAMP program emails
- OK-LSAMP Social Media
- OK-LSAMP group meeting
- Friend or family

Current OK-LSAMP participant
Alumni/Past OK-LSAMP participant
Other (Specify below)

Are you planning to participate in an internship in Summer 2023?

Yes

No

Were you a senior prior to beginning the Spring 2023 semester?

Yes

Did someone in the OK-LSAMP program encourage you to take the GRE?

Yes

No

Did you receive help preparing for the GRE?

Yes

No

What kind of help did you receive?

Magoosh GRE prep through OK-LSAMP

GRE prep through another program

Other

Have you taken the GRE?

Yes

No

Have you applied to any graduate schools?

Yes

No

How many graduate school applications have you completed?

0

1

2

3 or more

How many graduate school responses are you waiting for?

0

1

2

3 or more

Please rate your overall satisfaction with the OK-LSAMP program.

Please rate how the OK-LSAMP program has helped your academic career?

What are the strengths of the OK-LSAMP program?

What are the weaknesses of the OK-LSAMP program?

If you could make any changes to the OK-LSAMP program, what would those changes be?

Any other comments about your OK-LSAMP experience?