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Indiana Louis Stokes Alliance for Minority Participation (IN LSAMP) Year 1 Evaluation

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EXECUTIVE SUMMARY

The new Indiana Louis Stokes Alliance for Minority Participation (IN LSAMP) was formed in 2016, uniting six institutions of higher education (Indiana University Bloomington, Indiana University–Purdue University Indianapolis, Ball State University, Indiana University Northwest, Indiana University South Bend, and Ivy Tech Community College Indianapolis) in their mission to double the number of STEM bachelor's degrees earned by historically underrepresented minorities. The program's three strategies for fulfilling its mission are:

1. High-impact practice programs to increase the first-year, full-time URM retention rate by 2% per year at each institution and to strengthen disciplinary engagement;
2. Seamless transitions into STEM undergraduate and graduate degree programs; and
3. Mechanisms for project communication and information dissemination.

Goodman Research Group, Inc. (GRG), a research firm specializing in the evaluation of educational programs, materials, and services, was contracted to serve as the external evaluator for the five-year IN LSAMP program. To date, GRG has completed the first annual online survey with project team members, launched the first annual online survey with students at four of the six Alliance institutions, and attended several team meetings.

KEY FINDINGS FROM THE PARTNER SURVEY

- Key high-impact practice programs are being implemented at most of the IN LSAMP institutions. There is variability in the implementation of other activities as well as in the total number of activities carried out.

- Within each IN LSAMP institution, team members have different expectations about the program activities that will be implemented during the first two years of the five-year project.

- Across institutions, there is generally a moderate level of capacity in place for carrying out high-impact practice programs and/or activities to ease transitions into STEM degree programs. Different institutions have different strengths and areas for increased capacity.

- Relative to their capacity for high-impact practice programs and activities to ease transitions into STEM degree programs, IN LSAMP institutions are starting the project with lower capacity for communication and dissemination strategies. On average, the Alliance institutions have basic-moderate capacity for communication and basic capacity for dissemination.

RELATED RECOMMENDATIONS

- We recommend that IN LSAMP clarify essential vs. discretionary and adaptable IN LSAMP components and that GRG and the IN LSAMP team discuss any implications the different approaches have for the program's intended outcomes as well as for program evaluation.

- If final campus implementation plans have not yet been agreed upon and shared with IN LSAMP leadership, we recommend this happen as soon as possible.

- We recommend that IN LSAMP leadership use the partner survey results (suggesting different strengths and areas for improvement across the Alliance) to identify tangible next steps that the team can take to share and strengthen capacity.

- We recommend that survey results on perceived capacity be shared with each institutional team as a tool to spark dialogue on where members agree and disagree and to learn from one another.

THE INDIANA LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION

The new Indiana Louis Stokes Alliance for Minority Participation (IN LSAMP) was formed in 2016, uniting six institutions of higher education (Indiana University Bloomington, Indiana University–Purdue University Indianapolis, Ball State University, Indiana University Northwest, Indiana University South Bend, and Ivy Tech Community College Indianapolis) in their mission to double the number of STEM bachelor's degrees earned by historically underrepresented minorities (URM). Specifically, the target is 512 URM STEM degrees across the six INLSAMP institutions by 2021.

STEM degrees include biological/life sciences, physical sciences (including physics, astronomy and chemistry), mathematical sciences (including statistics and data science), computer and information sciences, geosciences (including environmental sciences), engineering; and technology areas associated with these disciplines. The racial and ethnic groups identified by the project as historically underrepresented in STEM disciplines are African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and Native Pacific Islanders.

The program's three strategies for fulfilling its mission are:

1. High-impact practice programs to increase the first-year, full-time URM retention rate by 2% per year at each institution and to strengthen disciplinary engagement, including:
   a. mathematical placement and online review support,
   b. summer bridge programs,
   c. freshman learning communities,
   d. peer mentoring programs,
   e. degree mapping,
   f. faculty-mentored research, and
   g. an annual research conference

2. Seamless transitions into STEM undergraduate and graduate degree programs by:
   a. increasing activities for community college transfers and
   b. improving undergraduate disciplinary connections and preparation for STEM graduate programs

3. Mechanisms for project communication and information dissemination through:
   a. an interactive website,
   b. Alliance-wide professional development opportunities, and
   c. broader dissemination of results

THE IN LSAMP EVALUATION

Goodman Research Group, Inc. (GRG), a research firm specializing in the evaluation of educational programs, materials, and services, was contracted to serve as the external evaluator for the five-year IN LSAMP program. The purpose of the current report is to present results from evaluation activities conducted during the first year of the grant.

The multi-method evaluation of IN LSAMP is designed to gather consistent data from key stakeholders across each year of the award. GRG's overall aim in this evaluation is to collaborate with the IN LSAMP team to gather data needed to understand how the program is unfolding and to demonstrate whether, and to what degree, the program is achieving its intended outcomes. The evaluation activities and progress during Year 1 are presented in Table 1.

To date, GRG has completed the first annual online survey with project team members, launched the first annual online survey with students at four of the six Alliance institutions, and attended several team meetings. We have not yet completed an online survey with faculty/mentors, nor have we reviewed institutional data and data from the program's interactive website. These latter activities will be a priority early in Year 2, and we may repeat them again toward the end of Year 2 to make up for a missing data point in Year 1. We will determine next steps and priorities in consultation with the IN LSAMP team.

Another priority in January 2018 will be to launch the student survey at the remaining two institutions and to re-launch it on the first four campuses, where initial response has been very low. To date, only six respondents have completed the survey, and five of the six had never heard of the LSAMP program; the sixth had heard of LSAMP but had never participated.

We have since learned that Indiana University implemented (system-wide) a two-step login to university accounts beginning in October 2017. This new process may be a factor in non-response. Another factor may have been the timing of the survey at the end of the semester. Prior to launching/re-launching the student survey, GRG and the IN LSAMP team will evaluate the survey invitation process and make necessary adjustments.

Table 1
Evaluation Activities and Year 1 Progress

Evaluation Activities	Year 1 Progress (Dec 15 2016-Nov 30 17)
Annual online survey with project team members: to measure extent to which cohesive and supportive partnership has been cultivated	☑ Completed (June)
Annual online survey with students (LSAMP and non-LSAMP): to understand the success of recruitment strategies, student participation rates and reasons for participation, participants' degree of engagement, use of and satisfaction with interactive website, satisfaction with the experience, perceived effects, and expectations for academic achievement	**IUB, IUPUI, IUN, IUSB:** ☑ Obtained IRB approval to conduct survey (Oct 15) ☑ Obtained student database (Nov 15) ☑ Launched survey (Nov 30) **BSU & ITCC:** ☐ Expecting IRB approval, student database, and survey launch in Jan 2018
Meeting attendance: to stay informed about program implementation and operations and to share progress regarding evaluation	☑ Attended (by phone) Annual IN LSAMP Retreat (June 10) ☑ Attended (in-person) Quarterly IN LSAMP Meeting (Oct 6) ☑ Attended and presented (in-person) 5th annual Louis Stokes Midwest Center of Excellence (LSMCE) Conference (Oct 6)
Annual online survey with IN LSAMP faculty, mentors: to understand relationship to and collaboration with LSAMP students, use of and satisfaction with interactive website	☐ Not completed
Review/analysis of data provided by each campus: to track student enrollment, participation in IN LSAMP programs and activities, retention, and progress toward degrees	☐ Not completed
Review/analysis of student use of interactive website via online system: to help inform faculty about student progress and/or need for intervention	☐ Not completed
Site visits to IN LSAMP campuses: to observe students participating in activities, interview students, faculty, leadership	■ N/A (Not scheduled to begin until Yr 2)
Annual phone interviews with leadership: to record and report on information collected by project team members to monitor programming and implementation of project activities and strategies	■ N/A (Not scheduled to begin until Yr 2)

Because we are not yet able to report on the student survey and the faculty/mentor survey and institutional data analysis has yet to occur, the results we present here are limited to the partner survey. While a summary of those results have already been shared with leadership, we present select survey data in some new ways to provide leadership with further insight into IN LSAMP's first year.

FINDINGS

Key high-impact practice programs are being implemented at most of the IN LSAMP institutions. There is variability in the implementation of other activities as well as in the total number of activities carried out.

The partner survey asked respondents to indicate which of 16 possible IN LSAMP program activities were expected to be implemented on their campuses during the first two years of the five-year project. The 16 activities are high-impact practice programs and/or activities to ease transitions into STEM degree programs.

According to PI reports, there are four activities that will be implemented on five of the six campuses by the end of Year 2 (blue shading in Table 2): faculty mentored STEM research, math placement, STEM peer mentoring, and Summer Bridge programs. Eight activities will be carried out on four of the campuses by the close of Year 2 (green shading), three activities will be operating on three campuses (purple shading), and one activity – telephone math tutoring –will be put into practice only at IUN. There is no single activity that will be executed at all six participating institutions. Across institutions, the number of different programs/activities that will be implemented during the first two years ranges from five to all 16.

Table 2
PI Reports of Activities to be Implemented by End of Year Two

|	IUN*	BSU	IUPUI	IUSB	IUB	ITCC
Faculty Mentored STEM Research	✓	✓	✓	✓	✓	
Math Placement	✓	✓	✓	✓		✓
STEM Peer Mentor	✓	✓	✓	✓		✓
Summer Bridge	✓	✓	✓	✓	✓	
Conference Participation	✓	✓		✓	✓	
First Year Experience/First Year Seminar	✓		✓	✓	✓	
Math Tutoring	✓		✓	✓		✓
Online Math Review	✓	✓	✓	✓		
Resource Center(s)	✓	✓	✓			✓
Student Orientation	✓	✓	✓		✓	
Supplemental Instruction	✓	✓	✓	✓		
Themed Learning Community	✓	✓	✓		✓	
Degree Mapping	✓	✓		✓		
Professional Preparation	✓	✓			✓	
Transfer Student Support	✓	✓				✓
Telephone Math Tutoring	✓					
Total Activities	**16**	**13**	**11**	**10**	**7**	**5**

* IUN data is based on the response of the Campus Coordinator who was the only IUN team member who responded to the partner survey.

Within each IN LSAMP institution, team members have different expectations about the program activities that will be implemented during the first two years of the five-year project.

All but one institution (IUN) had more than one respondent to the partner survey. IUPUI had seven respondents; IUB had three respondents; and BSU, IUSB, and ITCC each had two respondents. Other respondents included Co-PIs, Campus Coordinators, and other team members. This allowed us to examine agreement among team members from the same institution. Figure 1 compares PI and other respondent reports on program activities that will be implemented during the first two years of the five-year project. It illustrates that, within each institution, team members have different expectations about their implementation plans.

It is important to note that the IN LSAMP leadership team visited all campus sites between December 2016 and April 2017 to meet with IN LSAMP faculty, staff and administrators and assist the teams in finalizing their implementation plans. Thus, implementation plans may still have been in development at the time of this survey.

Figure 1
Comparison of PI and Other Team Member Reports of Activities to be
Implemented by End of Year Two
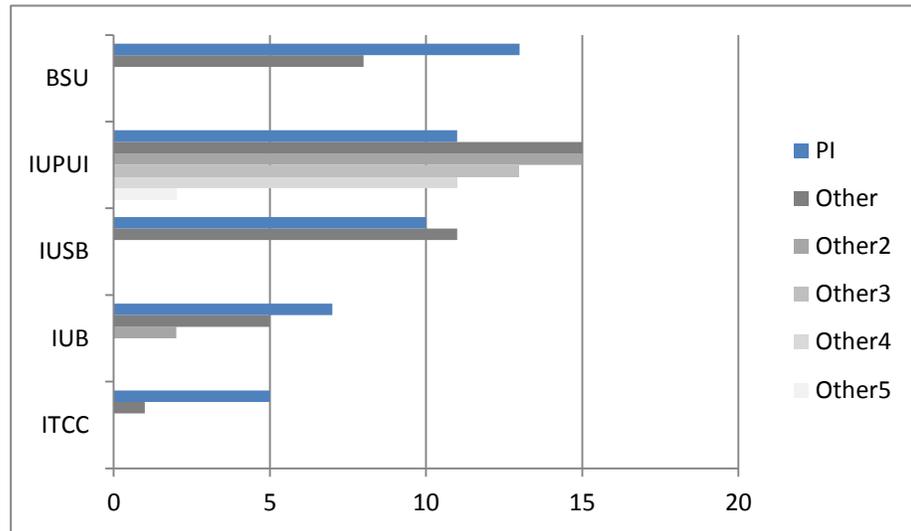
Across institutions, there is generally a moderate level of capacity in place for carrying out high-impact practice programs and/or activities to ease transitions into STEM degree programs. Different institutions have different strengths and areas for increased capacity.

The partner survey also asked respondents to describe the current capacity at their campus to carry out high-impact practice programs and/or activities to ease transitions into STEM degree programs. Table 3 shows the average ratings by campus. The rating scale was a 4-point scale, where 1 = clear need for increased capacity, 2 = basic level of capacity in place, 3 = moderate level of capacity in place, and 4 = high level of capacity in place.

A red-yellow-green color scale has been applied to highlight the relationship of ratings across institutions and items. Intense greens reflect ratings toward the top, while intense reds reflect ratings toward the bottom. The following observations emerge:

- BSU and IUPUI stand out as having high capacity for implementing high-impact practice programs at their campuses, while ITCC has lower capacity in this area.
- IUN and ITCC have high capacity for improving undergraduate preparation for STEM graduate programs, with other institutions having at least moderate capacity in this area.
- IUN and IUSB have lower (basic) capacity in place for facilitating seamless transfer student transitions into STEM undergraduate degree programs, while others have at least moderate capacity.
- IUSB has lower (basic) capacity in place for improving undergraduate disciplinary connections, such as introduction to careers; others have at least moderate capacity.

- ITCC stands out as having high capacity for increasing programming support to community college transfers, while IUN and IUSB have lower (basic) capacity in place in this area.

Table 3
Capacity for Implementing IN LSAMP Strategies

	IUPUI	IUB	BSU	IUN	IUSB	ITCC
Implement HIP programs	3.83	3.00	4.00	3.00	3.00	2.50
Improve undergrad prep for STEM grad programs	3.17	3.00	3.50	4.00	3.50	4.00
Facilitate transfer into STEM undergrad programs	3.50	3.50	3.00	2.00	2.00	3.50
Improve undergrad disciplinary connections	3.33	3.33	3.00	3.00	2.00	3.50
Increase support to CC transfers	3.33	3.50	3.00	2.00	2.00	4.00

Again, members of the same institutional teams had different views regarding institutional capacity, which is not uncommon the different experiences they have in their roles on campus. Also, it is likely that when trying to decide between two ratings, some respondents tended to underestimate while others overestimated capacity.

Relative to their capacity for high-impact practice programs and activities to ease transitions into STEM degree programs, IN LSAMP institutions are starting the project with lower capacity for communication and dissemination strategies. On average, the Alliance institutions have basic-moderate capacity for communication and basic capacity for dissemination.

In addition to high-impact practice programs and facilitated transitions into STEM degree programs, another IN LSAMP strategy is to create mechanisms for project communication and information dissemination, including an interactive website, Alliance-wide professional development opportunities, and broader dissemination of results. During Year 1, the team worked on a website, a Canvas Course site, social media, forms and templates, and quarterly communication updates.

Partners described the current capacity at their campus to carry out communication and dissemination. Table 4 shows the average ratings by campus, using the same red-yellow-green color scale described earlier. Based on these averages, ITCC has a high level of capacity in place for communication and collaboration across the Alliance and moderate capacity for disseminating through the interactive website. In contrast, IUN and IUSB have clear needs for increased capacity in both communication and dissemination. BSU also has a need to increase capacity to disseminate, although has moderate-high capacity for communication. IUPUI and IUB have basic to moderate capacity in place for both communication and dissemination.

Table 4
Capacity for Implementing Communication & Dissemination Strategies

	IUPUI	IUB	BSU	IUN	IUSB	ITCC
Communicate/collaborate across Alliance	2.83	2.67	3.50	1.00	1.00	4.00
Disseminate through interactive website	2.33	3.00	1.50	1.00	1.00	3.00

RECOMMENDATIONS

As explained, the evaluation is behind schedule with regard to an online survey with faculty/mentors, review of institutional data, and review of data from the program's interactive website. We have also had a problem with non-response to the first wave of the online student survey. *We recommend meeting with the IN LSAMP team in January 2018 to troubleshoot, brainstorm, and revise the evaluation scope of work and timeline as needed.*

We know that IN LSAMP offers individual campuses a certain degree of flexibility in implementing an LSAMP program that matches their resources and responds to their campus needs. The initial partner survey results confirm some of the differences in implementation. *We recommend that IN LSAMP clarify essential vs. discretionary and adaptable IN LSAMP components and that GRG and the IN LSAMP team discuss any implications the different approaches have for the program's intended outcomes (e.g., the intended 2% increase in first-year, full-time URM retention, per year and institution) as well as for program evaluation.*

Within LSAMP institutions, team members reported differently on their implementation plans. *If final campus implementation plans have not yet been agreed upon and shared with IN LSAMP leadership, we recommend this happen as soon as possible. Campus implementation or work plans should also be shared with GRG.*

The partner survey confirmed that individual Alliance institutions have different perceived strengths and areas for increased capacity in terms of the program's key strategies. *We recommend that IN LSAMP leadership use these results to identify tangible next steps that the team can take to share and strengthen capacity.*

Within institutional teams, there are also different perspectives on capacity. *We recommend these results be shared with each institutional team as a tool to spark dialogue. They present an opportunity for members of each team to see where they agree and disagree and to learn from one another. Teams may wish to discuss ratings until a consensus is reached on one set of ratings that best represents the team. However, we believe the value of such communication is in understanding each other's perspectives rather than on coming up with a definitive measure of capacity.*

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