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## Section 1: Introduction

New Mexico State University (https://nmsu.edu), located at 1050 Stewart St, Las Cruces, New Mexico 88003, contracted with Helix Solutions, LLC (https://www.helixeval.com), located at 1107 E Robinson Ave, El Paso, Texas 79902, to evaluate its *Hispanic Serving Institutions (HSI) Institutional Transformation Project: NMSU-MAS, Mejorando las Aulas en STEM/Improving STEM Classrooms* (NMSU MÁS). The Track 3 project is supported by the National Science Foundation's (NSF) *Improving Undergraduate STEM Education: Hispanic-Serving Institutions* (HSI Program) (Award Abstract # 2246599). The current report provides findings from the inaugural year (June 1, 2023, to May 31, 2024). The grant period is estimated to end in May 2028.

Helix Solutions agreed to provide the following deliverables:

- Assist in crafting the project's logic model
- Assist in developing a project timeline and calendar
- Develop a series of data collection instruments
- Analyze collected data for reporting purposes
- Provide annual reports on the project's achievements

## Section 1-1: Brief Description of the Program

The NMSU MÁS program "aims to enhance the success of a diverse population of students through faculty professional development focused on equitable and inclusive teaching practices," thereby increasing the number of Hispanic, first-generation, and low-income university students who complete STEM degrees (NSF, n.d.). The project's logic long-term goal is to "increase the number of and diversity of NMSU graduates entering the STEM workforce," as noted in the project's logic model. The project has four main components: 1) Create a NMSU-MÁS Team, 2) Recruit faculty members, 3) Implement faculty professional development, and 4) Develop education policy and disseminate project findings. See Appendix A to view the project's logic model for additional program details.

The project attempts to transform and update NMSU faculty's current teaching methods and introduce new strategies by emphasizing active learning techniques and strategies, connecting course content to personal and community values, and using teaching practices that welcome all STEM students (NMSU, n.d.). These strategies strive to close the achievement gaps observed in NMSU's institutional data, such as lower six-year graduation and STEM-course pass rates among first-generation, financial need, and Hispanic students. The project addresses these concerns by directly supporting faculty through a peer coach model.

The project invites NMSU faculty to apply to the program. If selected, faculty participants (hereafter referred to as "instructors") are assigned to a "peer coach" (PC), an experienced faculty member in inclusive teaching, as part of a team. Each team has between two and four instructors assigned to them. The project provides PCs $5,550 supplemental compensation for the academic year for their participation in the program, while instructors received $3,000 in supplemental compensation

for the academic year. Coaches and instructors meet during the fall semester to introduce new teaching methods and plan to implement those methods in the following spring term. For example, the instructors will read and discuss journal articles. For the project's first program year, the project focused on "active learning," and PCs introduced these methods and techniques to instructors. The instructors were asked to incorporate these new teaching approaches into their classrooms during the spring term. In the coming years, the project will also introduce the following topics:

- Course Structure related to active learning
- Culturally Relevant
- Social/Psychological/Climate/ Sense of Belonging

The instructors and PCs meet as teams at least four times during the fall term, providing participants with opportunities to learn new teaching methods. Further, instructors prepare and submit a teaching plan to the peer coaches for review and feedback in the fall semester. The plan outlines the instructors' strategies for implementing new teaching methods for the following semester. The program will organize and invite PCs and instructors to attend presentations and workshops by expert speakers on relevant topics. The project will host at least two expert speakers, one in the fall and another in the spring. The faculty will implement new teaching methods and approaches in the spring term.

For PY1, the project had two peer coaches with eight instructors. However, the number of coaches and instructors will grow over time, as noted below:

- 2023–2024 (PY1): 2 Coaches and 8 Instructors
- 2024–2025 (PY2): 4 Coaches and 16 Instructors
- 2025–2026 (PY3): 5 Coaches and 20 Instructors
- 2026–2027 (PY4): 6 Coaches and 24 Instructors
- 2027–2028 (PY8): 7 Coaches and 28 Instructors

By the end of the project period, the project anticipates having reached 96 instructor participants. Note that these participants may not necessarily represent 96 unique instructors as individuals will be welcome to participate in multiple years of the implementation if they so choose.

## Section 2: Evaluation Methods

As discussed in the initial grant proposal, the evaluation team focused on conducting a formative assessment of the project. Also called "process evaluations," formative evaluation studies assess a project's implementation, satisfaction, and fidelity. Rossi, Lipsey, and Freeman (2004) explain that "audiences for formation evaluations typically are program planners, administrators, oversight boards, or funders with an interest in optimizing the program's effectiveness" (p. 34). The current report seeks to understand the extent to which NMSU program activities have been implemented as intended. The primary goal of the formative evaluation is to identify key successes, challenges, and lessons learned from the first year (PY1) of implementation, as well as develop strategies to improve overall implementation.

The evaluation study attempts to answer the following evaluation questions (EQs) as they pertain to the first year of implementation:

EQ-1: To what extent was the program effective in recruiting and mobilizing NMSU staff, faculty, and leadership into roles that supported the implementation?
EQ-2: Did program activities take place as initially proposed?
EQ-3: What was the program's faculty reach?
EQ-4: What are the challenges and barriers, if any, faced by the PIs, program partners, and/or staff during implementation?
EQ-5: Did the instructors implement their plans with fidelity?

The evaluation team used several approaches to answer the above questions, including implementing a fidelity matrix and interviewing the project's leadership team.

## Section 2-1: Fidelity Matrix Methods

In close coordination with the project staff, the evaluation team developed a fidelity matrix to assess the extent to which the project implemented its proposed program activities. Appendix B provides a copy of the project's fidelity matrix. In other words, the fidelity matrix provides a framework to answer the evaluation question (EQ-2), "Did program activities take place as initially proposed?" This matrix is a scoring system for measuring the fidelity of each of the project's four key components in the logic model, as noted below:

1. Create NMSU-MÁS Team
2. Recruitment
3. Faculty Professional Development
4. Education Policy and Dissemination

The evaluators rely on the fidelity matrix to determine the extent to which the project implemented its planned components (e.g., whether the project retained two PCs and eight instructors in PY1). The evaluation team and the PIs established levels for adequate (i.e., "adequate fidelity") and inadequate (i.e., "low fidelity") implementation fidelity by setting threshold scores. Lammert, Heinemeir, Schaaf, Fiore, and Howell (2016) define threshold scores as "numeric scores that are used to define different levels of fidelity of a specific indicator" (124). Please note that the scores "roll up" to a key component score.

Said differently, the fidelity matrix assigns scores for possible levels of implementation: adequate or inadequate. For example, four points will be awarded for recruiting more than eight instructors in PY1 (i.e., "high fidelity"), suggesting that the PIs had exceeded plan implementation targets. Two points will be assigned for recruiting eight participants, which is "adequate fidelity," meaning that the project reached its set objective. However, no points would be given if the project recruited less than eight instructors (i.e., "low fidelity"). Low fidelity indicates that the project fell short of its implementation objective. Lower-than-expected scores highlight possible areas for programmatic

improvement for the following program years. The project's logic model served as the base for the fidelity matrix.

Table 2-1 provides the project's threshold scores for the project's first year of implementation (PY1). The threshold scores indicate the minimum for adequate implementation established by the evaluation team and PIs.

**Table 2-1: PY1 Threshold and Implementation Scores by Key Component**

| Key Component No. | Key Component | Threshold Score |
|---|---|---|
| 1 | Create NMSU-MÁS Team | 2 |
| 2 | Recruitment | 5 |
| 3 | Faculty Professional Development | 31 |
| 4 | Education Policy and Dissemination* | - |
| | Total | 38 |

*Engagement with the Provost in these areas will begin being assessed in PY2

The evaluation team created a series of data collection tools, such as a "Faculty Tracking Tool," sign-in sheets, and meeting agenda/minutes forms, to document project activities and score the fidelity matrix. In other words, the evaluators relied on the project artifacts to determine the level of implementation fidelity.

## Section 2-2: Primary Investigator Interview Methods

The evaluation team endeavored to gain insight into the program's first year of implementation from the perspective of the project's two Primary Investigators (PIs). An interview script (Appendix C) was developed to gauge the PIs' perspectives on the successes and challenges observed throughout the first year of implementation. The interview script included six primary questions, with the evaluators and PIs engaging in open discussion within the general parameters of each question. These questions included:

1. From a bird's eye perspective, how satisfied are you with the PY1 implementation?
2. How would you describe the success of the faculty recruitment and engagement strategies and activities conducted in PY1?
3. The theme of PY1 was Active Learning. How effectively do you think this theme was implemented?
4. NMSU leadership and administration awareness and involvement in this project is an important aspect of the desired system and policy change outcomes. How would you characterize the relationships and involvement between the program and NMSU leaders/administrators as PY1 ends?
5. Overall, what are the biggest lessons you learned in PY1 that could benefit you or the program in the next few years of implementation?
6. Lastly, are there any other aspects of your experience from PY1 that you'd like to discuss?

Separate interviews were conducted with the project PIs, each lasting approximately 90 minutes. The evaluation team conducted interviews on May 21 and 23, 2024. Audio recordings of the interviews were uploaded to an online transcription service, Rev (https://www.rev.com). The evaluators reviewed the transcripts and conducted an open coding analysis to identify the emergent themes in the responses.

## Section 3: Evaluation Findings

Table 3-1 briefly describes the findings for each evaluation research question. Subsequent sections contain more detail.

**Table 3-1: Status of the Evaluation Questions**

| Evaluation Question | Findings | Section/s |
|---|---|---|
| To what extent was the program effective in recruiting and mobilizing NMSU staff, faculty, and leadership into roles that supported the implementation? | The project recruited two Peer Coaches and eight instructors, meeting the target for PY1. Further, conversations with PIs indicate that they are actively keeping NMSU leadership abreast of the program's progress. | 3-1-2, 3-2-5 |
| Did program activities take place as initially proposed? | The fidelity matrix suggest that all major planned activities were implemented. | 3-1 |
| What was the program's faculty reach? | The project was able to recruit eight faculty members to participate in the program, meeting the objective for the year. | 3-1-2 |
| What are the challenges and barriers, if any, faced by the PIs, program partners, and/or staff during implementation? | Several barriers have been identified by PIs and Peer Coaches (PCs), including the Peer Coaches level of autonomy to direct and guide instructors. If recommendations, such as Program Observation From, are implemented, it is likely that PCs will improve their assistance. The program aims to make PCs to function as "coaches not as cheerleaders." | 3-2 |
| Did the faculty members implement plans with fidelity? | Focus group findings and discussion with Peer Coaches reveal that some faculty members implemented active learning to high degree while other struggled with the new approach. | 3-2 |

## Section 3-1: Fidelity Matrix Findings

Table 3-2 provides the threshold and implementation scores for each key component. **Overall, the fidelity matrix findings suggest that the project implemented activities as planned.** For some measures, the project exceeded expectations. For example, the PIs launched a project website (https://sites.google.com/view/nmsu-mas) a year earlier than initially planned. However, in other areas, the project fell short of expectations. For example, the project's PCs fell short for one sub-item

(number of check-ins on instructors). While minor, half (50%) of PCs conducted at least eight check-ins with instructors. The PCs who did not meet the requirement explained that the faculty did not respond to their initial contact efforts, resulting in the PC ceasing further communication.

Regarding key component 4, the fidelity matrix will begin assessing implementation progress in PY2. The indicators of this key component are comprised primarily of interactions with the NMSU provost, who is required to serve as a Co-PI by the terms of the grant. During PY1, NMSU experienced turnover in leadership positions, with the NMSU provost retiring after being in the position for less than a year as well as the chief academic officer resigning (Rios, 2024). The provost position has since been filled in an interim capacity and the PIs have had discussions informing that individual about the program and their role as required by the grant. The PIs have since had conversations with the interim provost including a meet with the interim provost, associate provost for faculty development, director of NMSU's teaching academy, and manager of NMSU's office of institutional analysis on June 27, 2024 . During this meeting, PI's shared information about the program and its activities, including data collected during the PY1 implementation. It is anticipated by the PI's that the interim provost will remain informed about program activities and strategy during the PY2 implementation.

**Table 3-2: PY1 Threshold and Implementation Scores by Key Component**

| Key Component No. | Key Component | Threshold Score | Implementation Score |
|---|---|---|---|
| 1 | Create NMSU-MÁS Team | 2 | 2 |
| 2 | Recruitment | 5 | 5 |
| 3 | Faculty Professional Development | 31 | 32 |
| 4 | Education Policy and Dissemination* | - | - |
| | Total | 38 | 39 |

*Engagement with the Provost in these areas will begin being assessed in PY2

## Section 3-1-1: Create NMSU-MÁS Team

The fidelity matrix's first key component is "Create NMSU-MÁS," which only has two sub-items: 1) Hire a program specialist and 2) Regular NMSU-MÁS Team meetings. The first item (1-1), i.e., hiring a program specialist, was not planned for the first program year (PY1). The project's PIs explained that the NMSU human resources (HR) department had established an institution-wide hiring freeze, including grant-supported positions. The project plans to fill the position in the coming program year. Note that this potential hire is contingent on the PIs identifying a sufficient need in workload support during the PY2 implementation.

To meet the second sub-item (1-2), a member from each project team (i.e., PI, Research, and Evaluation) must be in attendance. The evaluation team's notes and program documentation indicated that the team met two times: June 15, 2023, and September 6, 2023. The two meetings satisfy the requirement.

**Table 3-3: PY1 Threshold and Implementation Scores for the "Create NMSU-MÁS Team" Key Component**

| Indicator No. | Indicator | Threshold Score | Implementation Score |
|---|---|---|---|
| 1-1 | Hire a program specialist* | - | - |
| 1-2 | Regular NMSU-MÁS Team meetings | 2 | 2 |
| | Total | 2 | 2 |

* The program specialist will not be hired until program year 2 (PY2).

## Section 3-1-2: Recruitment

The project received the notice of award (NOA) in May 2023, leaving the PIs limited time to plan for a 2023-2024 program. However, the first year of implementation only included two PCs and eight faculty members. Despite the compressed timeline, the PIs recruited two peer coaches and eight instructors. Both coaches had four instructors each. All eight instructors taught STEM courses, as noted below:

- Biology
- Chemistry & Biochemistry
- Computer Science
- Mathematics
- Engineering Technology

During the first three years, the program must serve only STEM faculty. In program years 4 and 5 (PY4 and PY5), it will be open to NMSU faculty members from any discipline.

**Table 3-4: PY1 Threshold and Implementation Scores for the "Recruitment" Key Component**

| Indicator No. | Indicator | Threshold Score | Implementation Score |
|---|---|---|---|
| 2-1 | Efforts to recruit faculty | 1 | 1 |
| 2-2 | Instructors | 2 | 2 |
| 2-3 | Peer coaches (PCs) | 2 | 2 |
| | Total | 5 | 5 |

## Section 3-1-3: Faculty Professional Development

Overall, the total key component score for "Faculty Professional Development" was 32 points, exceeding the threshold score by a point. The key component has 11 sub-items, as noted in Table 3-5.

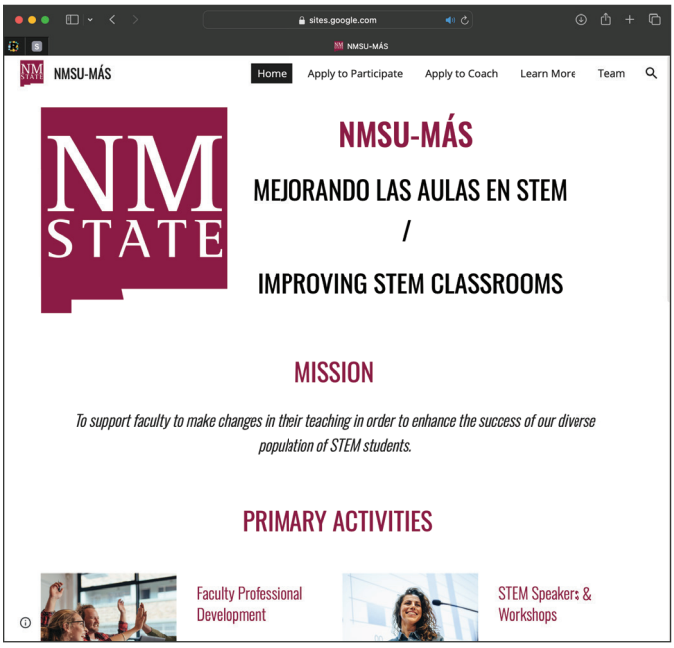
**Table 3-5: PY1 Threshold and Implementation Scores for the "Faculty Professional Development" Key Component**

| Indicator No. | Indicator | Threshold Score | Implementation Score |
|---|---|---|---|
| 3-1 | "Kick-Off" event | 1 | 1 |
| 3-2 | Project Website* | - | 1 |
| 3-3 | PC training | 2 | 2 |
| 3-4 | Faculty Participant Teams | 1 | 1 |
| 3-5 | Faculty implementation plans | 2 | 4 |
| 3-6 | Faculty training module development | 4 | 4 |
| 3-7 | Faculty participant training | 12 | 12 |
| 3-8 | Classroom observations | 4 | 4 |
| 3-9 | Expert speakers | 2 | 2 |
| 3-10 | Check-ins | 2 | 0 |
| 3-11 | "Wrap-Up" event | 1 | 1 |
| | Total | 31 | 32 |

* The website for the project was not expected to be completed until PY2.

The project implementation exceeded its threshold score for two items: 1) the project website and 2) the faculty implementation plans. The project PIs had planned to launch a website in PY2; however, staff developed the site early (https://sites.google.com/view/nmsu-mas). Figure 3-1 shows the project's site. The site has information about the project, including its mission, primary activities, outcomes, and contact details. Further, the site provides guidance on how to apply to the program as a PC and coach.

**Figure 3-1: New Mexico State University Mejorando las Aulas en STEM/Improving STEM Classrooms (NMSU MÁS) Project Website**




The fidelity matrix also included a sub-item that examines the level at which PCs review instructors' teaching plans. Adequate fidelity for this measure is 90% of faculty plans being reviewed. Documentation indicates all faculty submitted a plan and that the two PCs reviewed 100% of those plans. As a result, the evaluation team awarded the sub-item four points, exceeding adequate fidelity by two points.

For most of the sub-items, the project reached its intended targets. For example, the project hosted two expert speakers: Elli Theobald, Ph.D., on November 6, 2023

(Fall) and Eric Mazur, Ph.D., on February 2, 2024 (Spring). The NMSU Teaching Academy (https://teaching.nmsu.edu) organized and coordinated the presentations, including participant registrations. The NMSU faculty community was welcome to attend these presentations. While the formative evaluation does not formally track attendance at the speaker sessions, program documentation indicated that the series was popular. Over 100 persons attended the presentations—32 people were present at Dr. Theobald's presentation ("Mind the Gap: Active Learning a Path to Equity in STEM") and 72 for Dr. Mazur's session ("Confessions of a Converted Lecture: Teaching as Telling or Teaching as Questioning"). Dr. Mazur's presentation is available here. Dr. Mazur also volunteered to conduct an informal follow-up virtual session wherein participants could ask any questions that had arisen after his formal presentation. This session, titled "Coffee with Eric," was held on Zoom on April 25th, 2024.

One item ("Check-ins") fell short of meeting its objective. To meet Adequate Fidelity, at least "75% of PCs [need to conduct] at least 8 check-ins." As noted in the project's logic model, PCs were asked to check in with instructors eight times throughout the year. One PC indicated they met with their instructors nine times, while the other stated they only met twice. As a result, half (50%) of PCs checked in with faculty, not fulfilling the requirement. The PC explained, "I never received any responses to my check-in emails, so after a while, I stopped sending them." The comment reveals that instructors were not responsive when contacted by their PC, offering them support. The lack of engagement from instructors most likely discouraged the PCs from continuing to contact them.

### Section 3-1-4: Education Policy and Dissemination

The five sub-items were not yet active for PY1. Sub-items 4-1 and 4-2 regarding meetings and presentations with NMSU leadership will be completed in PY2. The remaining sub-items are not scheduled to occur until the end of the grant period, likely in PY5.

**Table 3-6: PY1 Threshold and Implementation Scores for the "Education Policy and Dissemination" Key Component**

| Indicator No. | Indicator | Threshold Score | Implementation Score |
|---|---|---|---|
| 4-1 | Provost meetings* | - | - |
| 4-2 | Project presentations* | - | - |
| 4-3 | Policy development** | - | - |
| 4-4 | Professional meeting presentations** | - | - |
| 4-5 | Journal articles** | - | - |
| | Total | - | - |

* Indicators 4-1 and 4-2 will not be completed until PY2
** Indicators 4-3 to 4-5 will not be completed until PY5.

## Section 3-2: Primary Investigator Interview Findings

As noted in the methods section, the evaluation team conducted two interviews with the project's PIs. The purpose of the interviews was to understand the strengths and weaknesses of implementation, if any, from their perspective. During the interviews, the respondents discussed the implementation, including their overall satisfaction, faculty recruitment and engagement, and the effectiveness of introducing active learning. The interviews yielded the following themes:

- PIs were generally satisfied with the PY1 implementation
- PIs successfully recruited instructors despite time constraints
- Active learning implementation faced mixed results where some instructors fully embraced the approach while others were reluctant
- PCs struggled to what degree they could direct (or coach) instructors
- A need for greater support and involvement from NMSU leadership and administrators
- Limited resources required PIs to overcome implementation challenges

### Section 3-2-1: PIs Were Generally Satisfied with PY1 Implementation

The PI interviews covered six primary questions, the first of which asked the respondents to discuss their satisfaction with the first year of implementation from a bird's eye perspective. In other words, they discussed their broad perceptions of success achieved in the first year of implementation. Generally, the respondents indicated that they were satisfied with the implementation year's efforts and activities while acknowledging that there was room for growth and improvement. Regarding satisfaction, respondents explained that the program successfully executed its major proposed activities. A respondent stated, "I was pleased that we basically did everything we said we would do. When I was able to submit the report to the NSF, basically, we could say we basically got everything done." More importantly, respondents noted that several instructors discussed their excitement and success in implementing active learning in their classrooms.

Regarding areas of future improvement, respondents noted that a short timeline constrained participant recruitment efforts in PY1. The notice of award (NOA) to commence program activities came in May 2023, limiting PIs' planning period to implement activities for PY1. Respondents indicated that this constraint would no longer be a factor in PY2. In fact, the project PIs had already finalized the new cohort of instructors at the time of the interviews.

Respondents stated that they have identified new strategies to improve the experiences and support of instructors and coaches in PY2. Such strategies aim to improve communication between program administrators and implementers (i.e., instructors and coaches), enhancing program activities and outcomes in PY2. For example, respondents suggested adding "coffee with the PIs" sessions. The sessions would provide an informal and supportive environment for Peer Coaches and instructors to discuss their experiences, share ideas, and seek feedback regarding the implementation of active learning strategies.

### Section 3-2-2: PIs Successfully Recruited Instructors Despite Time Constraints

The evaluators asked the PIs to share their thoughts on the level of success observed regarding faculty recruitment and engagement activities. Despite that recruitment activities were constrained by the restricted timeline from the notice of award to commence program operations, the project recruited a full cohort of instructors. A respondent stated, "I think recruitment was okay. I mean, again, we got eight people. I was worried we might not even get that many." Respondents noted that these recruitment activities primarily relied on deans and department heads to recommend participants. However, in some cases, deans and department heads may have recommended faculty members who had already incorporated active learning into the current teaching practices. A respondent said, "I do think [instructors] were encouraged by their department heads, and as we heard in the wrap-up, like someone said, 'I already do this. I don't know why I was told to participate.'" Nonetheless, the program served to refresh and reinforce active learning best practices.

Respondents noted that they were able to develop a more robust recruitment and application procedure for PY2. The application was updated to allow the project to better identify and select instructors. For example, the updated application included fields to identify teaching delivery modes and what undergraduate classes they would teach in the spring term. One respondent stated, "So, in program year two, as part of the application, they had to identify an undergraduate class that they would be teaching in the spring, and if they didn't identify one, we didn't accept them." In regard to teaching mode, a respondent said, "We also asked them the teaching delivery mode, and there was one person who applied, and it was online asynchronous. So, we ended up not accepting them because we felt like that's not really our target for this type of active learning intervention."

### Section 3-2-3: Active Learning Implementation Faced Mixed Results Where Some Instructors Fully Embraced the Approach While Others Were Reluctant

The evaluators asked the respondents to discuss their thoughts on the efficacy of implementing active learning during PY1. Respondents had mixed perceptions. Broadly, the respondents discussed that the program had success in setting the theme of active learning among the cohort. For example, the project hosted well-known guest speakers in active learning, and experienced PCs guided the instructors in their active learning journey. One respondent said, "I think we did as much as we could to have that [active learning] as our theme and build a structure to support it..." However, respondents also noted that the intensity of active learning implementation varied among the instructors.

Some instructors utilized active learning strategies within their courses to a high degree while others did so to a lesser extent. For example, one faculty participant embraced the active learning approach, fully committing to student improvement. The faculty member examined his pass rates to reflect on their teaching approaches. The respondent stated, "[The faculty participant] had already looked at [their] pass rates, had already identified that it was a problem, that [they] needed to do something about it, and [they were] really serious about doing something about it and measuring it and

tweaking things." Other instructors struggled or implemented strategies in ways that were not likely to be effective, such as conducting active learning activities outside the classroom/outside of class time. One respondent indicated that a few instructors had a misunderstanding of the core concepts of active learning and were reluctant to change. A respondent indicated that one faculty member was very enthusiastic initially but then struggled to implement active learning effectively or correctly.

In discussing plans for PY2, respondents discussed some new strategies for programmatic improvement based on their experiences and observations from PY1. One example was exploring the possibility of providing more opportunities for instructors to learn about and observe active learning teaching practices. Further, PIs plan to invite one of the most successful teaching participants from PY1 to address the new cohort at the PY2 welcome meeting. The purpose of this presentation is to convey how active learning can be effective in the classroom when implemented correctly. Another example was respondents discussing the utilization of a shared online folder (e.g., Google Drive) to accumulate active learning resources for instructors to access. Respondents also discussed the intention to collaborate with the evaluation team in developing an observation form for coaches to use as a resource when working with instructors. The objectives behind the observation form would be to provide structure around the guidance provided to instructors regarding their active learning implementation and to serve as a vehicle to facilitate discussions between coaches and instructors in reflection of implementation practices.

### Section 3-2-4: PCs Struggled to What Degree They Could Direct (or Coach) Instructors

Respondents indicated that PCs were unsure of the limits to the extent that they could direct or guide instructors toward implementing active learning in their classrooms. In the evaluators' informal conversations with PCs, they echoed similar concerns. The respondents expressed that they wanted PCs to have full autonomy in their role as coaches, including being more directive. A respondent stated, "I wanted [the PCs] to have full autonomy, but that meant full autonomy to push a little bit. That's what a coach does versus a cheerleader, right?" However, PCs did not know the boundaries of their authority as a coach. A respondent stated, "[A PC] said [that they] went to [faculty participant's] class with observation and there was no active learning, and [they were] like, 'I didn't quite know what to do.'"

### Section 3-2-5: A Need for Greater Support and Involvement from NMSU Leadership and Administrators

The evaluators prodded respondents to discuss their experiences regarding the relationships between the program and NMSU leaders and administrators, considering that these stakeholders' involvement had been identified as an important part of program outcomes regarding systems and policy change. The primary point noted by respondents was that the NMSU higher administration (i.e., key leadership positions) has experienced substantial turnover during PY1, making building buy-in from these groups difficult. For example, the proposal included the NMSU provost as a Co-PI,

a requirement of the grant; however, the individual is no longer with the university. While the situation was explained to the interim provost and that individual has agreed to fill the grant role, the turnover requires PIs to spend additional time and effort to garner buy-in from individuals with little or no knowledge of the project.

Respondents also stated that they have worked to spread awareness and build buy-in with other members of NMSU's leadership and administrators. Although there was some variability, the respondents noted that program awareness and buy-in have been building among the instructors' home departments from PY1. For example, respondents explained a PY1 faculty participant was invited to present about their experience with the program at a faculty meeting. Respondents also indicated that the department head was supportive of this faculty member and their efforts with the program. The department head has agreed to assign one of the college's premier classrooms (known as the "TEAL classroom"), a teaching space designed specifically for active learning with the latest technology. The new classroom assignment is designed to facilitate the faculty member in support of their continued implementation of active learning in the upcoming Fall 2024 semester.

Regarding their outlook toward relationships with administrators and leadership in PY2 and beyond, respondents acknowledged that there is a need for policy and systems change but that considerable work still needs to be done to identify areas to target and make administrative progress in those domains. Respondents indicated their intention to build the relationship with the interim provost and share data and findings from PY1 as their next step in building relationships with NMSU leadership as the program heads into PY2.

### Section 3-2-6: Limited Resources Required PIs to Overcome Implementation Challenges

The respondents were asked to reflect on the biggest lessons that they had learned in PY1 which they could carry forward into PY2 and beyond. Respondents discussed that the project's team dynamics were improved by having to overcome administrative challenges. Specifically, NMSU had enacted a hiring freeze which meant that the grant was unable to hire a program coordinator as planned. This resulted in the project team working together to reallocate responsibilities to ensure that all necessary activities were completed as required. Overcoming this challenge helped bring the team together and respondents noted it also increased their confidence in their ability to successfully execute the program in the future.

## Section 4: Conclusions and Recommendations

The evaluation team submits the following key findings.

Finding 1:
**The fidelity matrix reveals that the project successfully carried out all planned program activities in its first year of implementation.**

Overall, the fidelity matrix findings indicate that the PIs have implemented all key components of the program. Further, some key activities, such as launching the project website, occurred earlier than planned. One aspect of the program that fell short was the number of check-ins on instructors by PCs. Documentation revealed that one PC only conducted two of the eight check-ins during the year. Such check-ins could be in the form of emails and phone calls. The PC explained that the instructors did not reply to her email correspondence, discouraging her from continuing these efforts. Such a lack of commitment to pursue unwilling participants is completely understandable. However, it is important for PCs to have strategies and support to overcome such difficulties.

The evaluation team recommends that the PCs explore a variety of communication methods. It appears that the PC only emailed the instructors. However, the PCs might want to explore other means that might be more effective, such as in-person meetings, phone calls, or text messages. Even though faculty members may not respond, PCs need to log these efforts in the tracking tool provided by the evaluation team. It is important that these correspondences are logged since it is a component of the program and fidelity matrix. It is recommended that PIs periodically remind PCs to connect with their instructors, even though they might not respond.

Finding 2:
**Peer Coaches were experienced active learning educators who supported instructors. However, they were unsure about the level of authority they had to direct and guide instructors in implementing active learning activities in their classrooms.**

The application of active learning techniques in instructors' classrooms was uneven. Some faculty members embraced the new teaching methods, making a full commitment to improvement, while others were resistant to change. Herein lies the challenge for PCs in the coming years: overcoming resistance to change and earning the buy-in from faculty who might not believe in the benefit of active learning. Project PIs have been clear to instructors that incorporating active learning methods takes trial and error, and it may take more than one iteration before finding the active learning technique that fits with the instructor and content. One approach to this discovery is through classroom observation of instructors' active learning activities. While observations were conducted, PCs were uncertain how to provide feedback and what was their level of autonomy to give direction and guidance. Perhaps, with more affirmative direction, instructors can make mid-course corrections to their implementation and realize the benefits of active learning more quickly.

To facilitate observations, the evaluation team recommends implementing an observation tool. One benefit of such a tool is that it provides structured feedback and consistency, which will be important as the project adds more PCs in the coming program years. The evaluation team has developed the "Program Observation Form," see Attachment D. The form attempts to assess the quality and fidelity of the instructors' implementation of active learning, including student participation and engagement, knowledge of active learning techniques, and overall quality of the lesson. The form is intended to be completed by both the PC and faculty participant, with the intention of the PC and faculty meeting after the observation to discuss implementation strengths and weaknesses.

The post-observation discussion between the PC and faculty participant enables opportunities to engage in constructive feedback and continued development, especially as it relates to implementing active learning in the classroom. The observations also provide tailored feedback for instructors, emphasizing active learning strategies that best engage students effectively. Through the tool and classroom observations, PCs might be able to foster more trusting relationships with instructors, which could be crucial to transferring active learning skills and knowledge. Finally, the Program Observation Form will also create new data points valuable for the evaluation.

The new data generated by the Program Observation Form allows the evaluation team to assess the fidelity and quality of the instructors' active learning implementation widely. The evaluators will be able to report findings from the form year-over-year. Further, the aggregated data from multiple observations can highlight areas where the instructors might need adjustments to better support active learning strategies, leading to more targeted improvements and comprehensive evaluations.

◆ ◆ ◆

As the inaugural year ended, the evaluation findings indicated that the PIs implemented all major planned activities. While some aspects can be improved, the program has demonstrated to begin with a strong start. The PIs' commitment to continuous quality improvement will likely lead to better implementation in the following program year. The recommendations provided in the current report will provide structured, detailed, and actionable feedback on instructors' performance, which will improve student outcomes, the ultimate goal of the program.

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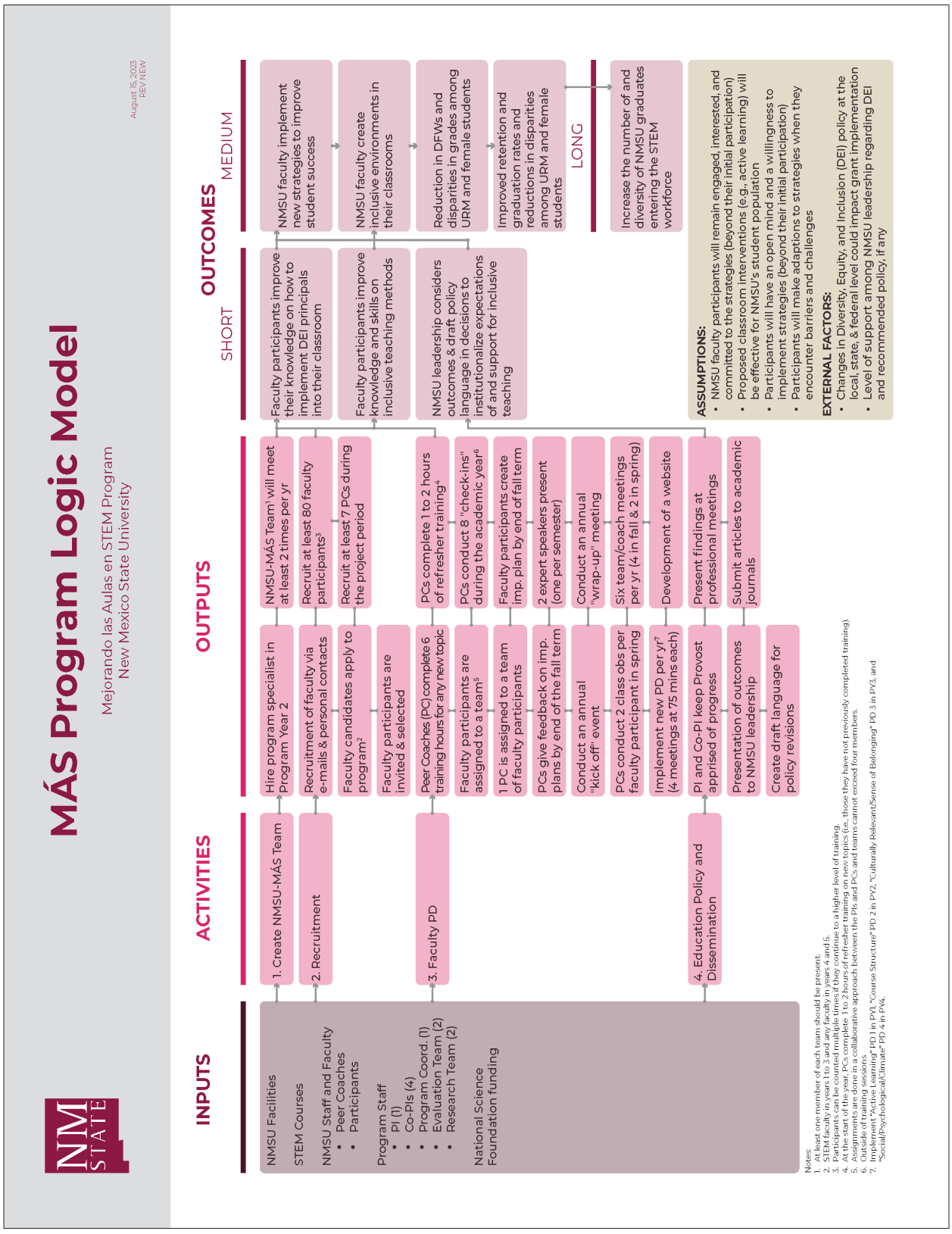
# List of Appendices

# Appendix A: Logic Model



# Appendix B: Fidelity Matrix

Fidelity Matrix

**New Mexico State University – Mejorando las Aulas en STEM/Improving STEM Classrooms (NMUS-MÁS)**

| Indicators | Definition | Unit of implementation | Data source(s) | Data collection (who, when) | Score for levels of implementation at unit level | Threshold for adequate implementation at project level | Threshold score | Expected years |
|---|---|---|---|---|---|---|---|---|
| Key Component 1: **Create NMSU-MÁS Team** | | | | | | | | |
| 1-1. Hire program specialist | Hiring process completed | Project staff | Program records | Who: PI/Co-PI<br>When: PY2 | N/A | **1 – High Fidelity**: Completed<br><br>**0 – Low Fidelity**: Not completed | 1 | PY2 |
| 1-2. Regular NMSU-MÁS Team meetings | Meetings conducted with the NMSU-MÁS Team members | Number of team meetings | Agendas, sign-in sheets | Who: PI/Co-PI<br>When: Each meeting | **1 – High Fidelity**: A member from each group (PI, Research, and Evaluation) attends meeting<br><br>**0 – Low Fidelity**: Not all groups attend meeting | **4 – High Fidelity**: >2 meetings per PY<br><br>**2 – Adequate Fidelity**: 2 meetings per PY<br><br>**0 – Low Fidelity**: <2 meetings per PY | 2 | PY1–PY5 |
| *Key Component Score →* | | | | | | Score range: 0-4<br><br>Score range: 0-5 | 2<br><br>3 | PY1<br><br>PY2–PY5 |
| Key Component 2: **Recruitment** | | | | | | | | |
| 2-1. Efforts to recruit faculty | Type of communications and strategies to recruit faculty participants | Number of contacts (e.g., email, personal comms) | Recruitment Activity Log, Examples of comms (e.g., Emails) | Who: PI/Co-PI<br>When: Spring-Summer semesters | N/A | **1 – High Fidelity**: Completed each PY<br><br>**0 – Low Fidelity**: Not completed each PY | 1 | PY1–PY5 |
| 2-2. Faculty participants | Faculty who participate in the program | Number of faculty participants | Program records, attendance records, application forms | Who: PI/Co-PI, Evaluation team<br>When: ongoing | **1 – High Fidelity**:<br>PY1–PY3: Faculty participant teach STEM *and* attends at least one training session<br>PY4-PY5: Faculty participant teach at any college *and* attends at least one training session<br><br>**0 – Low Fidelity**:<br>PY1–PY3: Faculty participant does <u>not</u> teach STEM *and* does not attend any training sessions<br>PY4-PY5: Faculty participant does not attend any training sessions | **4 – High Fidelity**: >84 participants*<br>PY1: >8 participants<br>PY2: >16 participants<br>PY3: >20 participants<br>PY4: >20 participants<br>PY5: >20 participants<br><br>**2 – Adequate Fidelity**: 80 participants<br>PY1: 8 participants<br>PY2: 16 participants<br>PY3: 16 participants<br>PY4: 20 participants<br>PY5: 20 participants<br><br>**0 – Low Fidelity**: <80 participants<br>PY1: <8 participants<br>PY2: <16 participants<br>PY3: <16 participants<br>PY4: <20 participants<br>PY5: <20 participants<br><br>* Participants may not be unique. They are eligible to participate in subsequent years if they partake in different topics/subjects. | 2 | PY1–PY5 |
| 2-3. Peer coaches (PCs) | Faculty and staff who coach and | Number of PCs | Program records | Who: PI/Co-PI<br>When: Ongoing | N/A | **4 – High Fidelity**: >7 PCs*<br>PY1: >2 PCs<br>PY2: >4 PCs | 2 | PY1–PY5 |

# Appendix B: Fidelity Matrix

Fidelity Matrix

**New Mexico State University – Mejorando las Aulas en STEM/Improving STEM Classrooms (NMUS-MÁS)**

| Indicators | Definition | Unit of implementation | Data source(s) | Data collection (who, when) | Score for levels of implementation at unit level | Threshold for adequate implementation at project level | Threshold score | Expected years |
|---|---|---|---|---|---|---|---|---|
| | mentor faculty participants | | | | | PY3: >5 PCs<br>PY4: >6 PCs<br>PY5: >7 PCs<br><br>**2 – Adequate Fidelity**: 7 PCs<br>PY1: 2 PCs<br>PY2: 4 PCs<br>PY3: 5 PCs<br>PY4: 6 PCs<br>PY5: 7 PCs<br><br>**0 – Low Fidelity**: <7 PCs<br>PY1: <2 PCs<br>PY2: <4 PCs<br>PY3: <5 PCs<br>PY4: <6 PCs<br>PY5: <7 PCs<br><br>* PCs may not be unique. They will be invited to coach in subsequent years. | | |
| *Key Component Score →* | | | | | | Score range: 0-9<br><br>(Adequate fidelity must be met for faculty participants and peer coaches) | 5 | PY1–PY5 |
| Key Component 3: **Faculty Professional Development** | | | | | | | | |
| 3-1. "Kick-Off" event | An annual "Kick-Off" event will be conduct in the Fall term | Event | Program records, sign-in sheet, event materials (e.g., flyers) | Who: PI/Co-PI, Program specialist<br>When: | N/A | **1 – High Fidelity**: Completed<br><br>**0 – Low Fidelity**: Not completed | 1 | PY1–PY5 |
| 3-2. Project Website | A website will be created for the project | Website | Live URL | Who: PI/Co-PI , Program specialist<br>When: | N/A | **1 – High Fidelity**: Completed<br><br>**0 – Low Fidelity**: Not completed | 1 | PY2 |
| 3-3. PC training | PCs are required to complete training each year. | Number of training hours | Training attendance records | Who: PI/Co-PI, PCs<br>When: Fall term | **1 – High Fidelity**: PCs attend training*<br><br>**0 – Low Fidelity**: PCs does not attend training<br><br>* For new topics, PCs will be asked to attend six hours of training. PCs will need to complete one to two hours of refresher training for topics that they have completed initial training. | **4 – High Fidelity**: 100% of training hours completed<br><br>**2 – Adequate Fidelity**: 90% of training hours completed<br><br>**0 – Low Fidelity**: <90% of training hours completed | 2 | PY1–PY5 |
| 3-4. Faculty Participant Teams | A team of faculty participants will be created | Number of teams | Program records, Training | Who: PI/Co-PI, PCs<br>When: Fall term | **1 – High Fidelity**: At least one PC is assigned to a team of faculty participants | **1 – High Fidelity**: A team consists between 2 and 4 faculty participants | 1 | PY1–PY5 |

# Appendix B: Fidelity Matrix

Fidelity Matrix

**New Mexico State University – Mejorando las Aulas en STEM/Improving STEM Classrooms (NMUS-MÁS)**

| Indicators | Definition | Unit of implementation | Data source(s) | Data collection (who, when) | Score for levels of implementation at unit level | Threshold for adequate implementation at project level | Threshold score | Expected years |
|---|---|---|---|---|---|---|---|---|
| | | | attendance records | | **0 – Low Fidelity**: No PC has been assigned to a team of faculty participants | **0 – Low Fidelity**: A team does not consists between 2 and 4 faculty participants | | |
| 3-5. Faculty implementation plans | Faculty develops plan to implement new teaching methods/approaches | Number of plans | Plans, program records | Who: PCs<br>When: Fall term | **1 – High Fidelity**: Faculty participants creates plan<br><br>**0 – Low Fidelity**: Faculty participants does not create plan | **4 – High Fidelity**: PCs review 100% of the faculty's plans*<br><br>**2 – Adequate Fidelity**: PCs review 90% of the faculty's plans*<br><br>**0 – Low Fidelity**: PCs review <90% of the faculty's plans*<br><br>* Denominator is the total number of faculty participants for the given program year. | 2 | PY1–PY5 |
| 3-6. Faculty training module development | Project will create four training modules:<br>1) Active Learning<br>2) Course Structure<br>3) Possible Self<br>4) Social/Psychological /Climate | Number of training modules created | Training materials | Who: PI/Co-PI<br>When: Fall term | **1 – High Fidelity**: Each module will include four sessions at 75 minutes per session<br><br>**0 – Low Fidelity**: Each module does not include four sessions at 75 minutes per session | **4 – High Fidelity**: 1 module created per program year<br><br>**0 – Low Fidelity**: No module is created during the program year | 4 | PY1–PY4 |
| 3-7. Faculty participant training | Faculty participants complete the required trainings | Number of training session attended | Attendance logs | Who: PCs, Faculty participants<br>When: Ongoing | **1 – High Fidelity**: Faculty attend at least 1 training session (at 75 minutes each) with PCs<br><br>**0 – Low Fidelity**: Faculty did not attend any training sessions with PCs | **16 – High Fidelity**: 100% of faculty attend 6 training sessions with PCs*<br><br>**12 – Adequate Fidelity**: 75% of faculty attend 6 training sessions with PCs*<br><br>**0 – Low Fidelity**: <75% of faculty attend 6 training session s with PCs*<br><br>* These six meetings are comprised of the 4 required faculty training modules in the fall term and 2 follow-ups in the spring. | 12 | PY1–PY5 |
| 3-8. Classroom observations | PCs will conduct classroom observations of the faculty participants | Number of classroom observations | Completed observation tools, observation logs | Who: PCs<br>When: Spring term | **1 – High Fidelity**: PC conducts classroom observations during the spring term<br><br>**0 – Low Fidelity**: PC do not conduct classroom observations during the spring term | **6 – High Fidelity**: >PCs conduct at least 2 classroom observations for 100% of faculty<br><br>**4 – Adequate Fidelity**: PCs conduct at least 2 classroom observations for ≥85% of faculty<br><br>**0 – Low Fidelity**: PCs conduct at least 2 classroom observations for <85% of faculty | 4 | PY1–PY5 |

# Appendix B: Fidelity Matrix

Fidelity Matrix

**New Mexico State University – Mejorando las Aulas en STEM/Improving STEM Classrooms (NMUS-MÁS)**

| Indicators | Definition | Unit of implementation | Data source(s) | Data collection (who, when) | Score for levels of implementation at unit level | Threshold for adequate implementation at project level | Threshold score | Expected years |
|---|---|---|---|---|---|---|---|---|
| 3-9. Expert speakers | Two expert speakers per year presenting to NMSU faculty at large (one in each semester) | Number of expert speakers | Photos, event materials, sign-in sheets | Who: PI/Co-PI, Program Specialist<br>When: Fall and Spring terms | N/A | **2 – High Fidelity**: 2 expert speakers presented<br><br>**0 – Low Fidelity**: <2 expert speakers presented | 2 | PY1–PY5 |
| 3-10. Check-ins | PCs conduct "check-ins" with faculty participants | Number of check-ins | Check-in logs | Who: PCs<br>When: Fall and Spring terms | **1 – High Fidelity**: ≥8 check-in conducted for each PC for the year<br><br>**0 – Low Fidelity**: <8 check-in conducted for each PC for the academic year | **4 – High Fidelity**: 100% of PCs conducted at least 8 check-ins*<br><br>**2 – Adequate Fidelity**: 75% of PCs conducted at least 8 check-ins*<br><br>**0 – Low Fidelity**: <75% of PCs conducted at least 8 check-ins*<br><br>* Denominator is the total number of PCs for the given program year. PCs should conduct at least four check-ins per semester. These touch points are out of team meetings. | 2 | PY1–PY5 |
| 3-11. "Wrap-Up" event | An annual "Wrap-Up" event will be conduct in the Spring term | Number of events | Program records, sign-in sheet, event materials (e.g., flyers) | Who: PI/Co-PI, Program specialist<br>When: | N/A | **1 – High Fidelity**: Completed<br><br>**0 – Low Fidelity**: Not completed | 1 | PY1–PY5 |
| *Key Component Score →* | | | | | | Score range: 0-43<br><br>Score range: 0-44<br><br>Score range: 0-43<br><br>Score range: 0-39<br><br>(Adequate fidelity must be met for: 1. PC training; 2. Faculty implementation plans; 3. Faculty participant trainings; and 4. Classroom observations) | 31<br><br>32<br><br>31<br><br>27 | PY1<br><br>PY2<br><br>PY3–PY4<br><br>PY5 |
| Key Component 4: **Education Policy and Dissemination** | | | | | | | | |
| 4-1. Provost meetings | PI and Co-PI keep Provost apprised of progress | Number of meetings | PI-Provost Meeting documentation | Who: PI/Co-PI, Provost<br>When: End of academic year / Early summer | N/A | **4 – High Fidelity**: ≥2 meetings held with the provost<br><br>**2 – Adequate Fidelity**: 1 meeting held with the provost<br><br>**0 – Low Fidelity**: No meeting held with the provost | 2 | PY2–PY5 |

# Appendix B: Fidelity Matrix

Fidelity Matrix

**New Mexico State University – Mejorando las Aulas en STEM/Improving STEM Classrooms (NMUS-MÁS)**

| Indicators | Definition | Unit of implementation | Data source(s) | Data collection (who, when) | Score for levels of implementation at unit level | Threshold for adequate implementation at project level | Threshold score | Expected years |
|---|---|---|---|---|---|---|---|---|
| 4-2. Project presentations | Presentation of outcomes to NMSU academic leadership | Number of presentations | Presentation materials, agendas, sign-in sheets | Who: PI/Co-PI, NMSU leadership<br>When: End of academic year / Early summer | N/A | **4 – High Fidelity**: ≥2 presentations with leadership<br><br>**2 – Adequate Fidelity**: 1 presentations with leadership<br><br>**0 – Low Fidelity**: No presentations with leadership | 2 | PY2–PY5 |
| 4-3. Policy development | PI/Co-PI, advisory team from grant discuss, then work with e.g. dean's/ associate provost if changes are warranted. | Draft formal memo | Meeting notes; any draft docs generated | Who: PI/Co-PI, NMSU leadership, Provost<br>When: Mid-to-end of PY5 | N/A | **16 – High Fidelity**: Completed<br><br>**0 – Low Fidelity**: Not completed | 16 | PY5 |
| 4-4. Professional meeting presentations | Present findings at professional meetings | Number of presentations | Presentation materials, agenda, conference/ meeting documentation | Who: MÁS Team<br>When: Annually | N/A | **1 – High Fidelity**: Presented to at least one professional meeting<br><br>**0 – Low Fidelity**: Did not present at least one professional meeting | 1 | By PY5 |
| 4-5. Journal articles | Submit articles to academic journals | Number of journal articles submitted | Program records | Who: MÁS Team<br>When: Annually | N/A | **1 – High Fidelity**: Submitted an article to at least one academic journal<br><br>**0 – Low Fidelity**: Did not submit an article to at least one academic journal | 1 | By PY5 |
| *Key Component Score →* | | | | | | Score range: 0-0<br><br>Score range: 0-4<br><br>Score range: 0-8<br><br>Score range: 0-26 | 0<br><br>2<br><br>4<br><br>22 | PY1<br><br>PY2<br><br>PY3–PY4<br><br>PY5 |

# Appendix C: Primary Investigator Interview: NMSU MÁS Program Year 1 (PY1)

**Primary Investigator Interview: NMSU MÁS Program Year 1 (PY1)**
Helix Solutions Project No. 2022-16

[Introduction]

Hello, thank you for taking the time to meet with us today. As you know, we are Christopher Villa and Randy Taylor, the NMSU MÁS external evaluators. We have asked you here today to discuss your perspective on the project's first year of implementation. Specifically, we want to learn about any drivers that facilitated implementation and what barriers may have existed during this past year of the project. In other words, our primary goal is to understand what worked and didn't and how things can be improved next year.

We want you to know that your answers will remain anonymous. Your name will not be used when reporting any of the information obtained from our conversation today. We would also like to remind you that your participation in this discussion is entirely voluntary, and you do not have to answer any questions you don't want to.

So that we can accurately report what we have discussed today, we would like to audio record our interview. The recording will not be shared with anyone outside the evaluation team, including NMSU administration and staff. We will take notes if you are not okay with us recording the interview.

**Do we have your permission to record our interview?**

[IF YES: START RECORDING, THEN PROCEED]
[IF NO: DO NOT RECORD; PROCEED]

We have six primary questions for you today. We want to respect your time and will ensure that the interview lasts no more than 90 minutes. First, we'd like to ask about your general opinion on the PY1 implementation

1. **From a bird's eye perspective, how satisfied are you with the PY1 implementation?**
    a. How would you describe the factors that made PY1 generally successful?
    b. What were the factors that made the first year of implementation unsuccessful or ineffective?

Next, we'd like to talk about specific aspects of PY1 in more detail.

2. **How would you describe the success of the faculty recruitment and engagement strategies and activities conducted in PY1?**
    a. What were the challenges, if any, regarding faculty recruitment/engagement that you observed?
    b. How did you overcome those challenges?
    c. How successful do you feel your response to challenges was?

## Appendix C: Primary Investigator Interview: NMSU MÁS Program Year 1 (PY1)

   d. What were your lessons learned from the faculty recruitment and engagement?

3. The theme of PY1 was Active Learning. **How effectively do you think this theme was implemented?**
   a. What efforts of the program to instill Active Learning concepts and practices, do you think were most and least effective?
   b. What adaptations, if any, do you envision in applying to this theme next year?

4. NMSU leadership and administration awareness and involvement in this project is an important aspect of the desired system and policy change outcomes. **How would you characterize the relationships and involvement between the program and NMSU leaders/administrators as PY1 ends?**
   a. In what ways to do you hope to see these relationships with NMSU MÁS expand or improve in PY2?
   b. Have you identified any areas in which NMSU policy could be created or updated based on the current project?

5. **Overall, what are the biggest lessons you learned in PY1 that could benefit you or the program in the next few years of implementation?**
   a. What are the "if I knew then what I know now" lessons you feel you gained throughout PY1?

6. **Lastly, are there any other aspects of your experience from PY1 that you'd like to discuss?**

Thank you for taking the time to talk with us today. If you have any other questions, we are happy to answer them. Otherwise, please have a great rest of your day.

# Appendix D: Program Observation Form

**Class Observation Form**

New Mexico State University
Mejorando las Aulas en STEM Program

Observer/Peer Coach:
Observation Date: __ __ / __ __ / __ __ __ __
Faculty:
Course & Section:
No. of Students:
Name of Person Completing Form:

This form aims to capture observations of active learning activities implemented by faculty members in the New Mexico State University (NMSU) Mejorando las Aulas en STEM Program (MÁS) program. The purpose of the observation form is to record reflections and feedback around the implementation of the spring active learning plan. Information from the observation forms may be used in program evaluation reporting. Any information included in the program evaluation will be reported anonymously. In other words, no names or identifying information will be included in any program evaluation reporting of classroom observation reporting. Additionally, any evaluation reports produced will include only information aggregated across completed classroom observations.

The peer coach and the faculty member should each complete this form. Following the observation, the peer coach and faculty member should meet to discuss the observation, using the completed observation forms to guide the discussion. The **observer** should complete the form after observing the entire class. However, it is recommended that the observer become familiar with the form before the observation. It may be helpful to take notes during the observation and to place a checkmark next to a rating when the faculty member demonstrates a specific action, then decide on a final rating after the class. When observing, the observer should not select multiple answers or modify the scale (i.e., providing a score of 1.5). Instead, the observer should choose only one answer for each item (e.g., a 1 or 2).

**1. How much of the class time was spent on active learning strategies?**

1 -- Not at all
2
3 -- Some of the time
4
5 – All of the time

## Appendix D: Program Observation Form

**2. Describe the active learning techniques observed.**

_____

_____

_____

**3. To what extent did the class meeting align with the active learning plan developed by the faculty member?**

1 – The class meeting included little or no elements that had been outlined in the active learning plan
2 – The class meeting aligned closely with what had been outlined in the active learning plan
3 – The class meeting exceeded what had been outlined in the active learning plan

**4. To what extent did the students appear to understand the active learning activity instructions?**

1 -- Little understanding
2
3 -- Some understanding
4
5 -- Good understanding
6 – No active learning activity took place

Use your best judgment based on participant conversations and feedback to make a selection:
1 Less than 25% seem to understand; the faculty member's explanations were unclear
3 About half seem to understand; the faculty member's explanations were decent
5 75–100% seem to understand; the faculty member's explanations were very clear

**5. In general, what level of participation in discussions and activities was observed among students?**

1 -- Little participation
2
3 -- Some participation
4
5 -- Active participation

Use your best judgment based on participant conversations and feedback to make a selection:
1 Less than 25% of students participated
3 About half participated
5 75–100% participated

## Appendix D: Program Observation Form

**6. Of students participating in the active learning and discussion, what was their apparent level of engagement?**
1 –distracted, splitting attention between other tasks and the active learning
2
3—generally engaged
4
5—highly engaged, enthusiastic participation

On the following scale, rate the **faculty member** on the following qualities:

**7. Clarity of explanations and expectations provided by the faculty member**
1 -- Poor
2
3 -- Average
4
5 -- Excellent

Use your best judgment based on student conversations and feedback to make a selection:
1 Expectations and directions are not clear; students appear to be confused and unable to complete the activity
5 Expectations and directions are clear; students successfully completed the activity

**8. Level of enthusiasm demonstrated by the faculty member**
1 -- Poor
2
3 -- Average
4
5 -- Excellent

Use your best judgment based on student conversations and feedback to make a selection:
1 Faculty member presents information in a dry and boring way; lacks personal connection to the material; appears "burned out"
5 Makes clear that the activity is a great opportunity; gets students talking and excited; the faculty member is outgoing

**9. Poise and confidence of the faculty member in delivering active learning strategies**
1 -- Poor
2
3 -- Average
4

## Appendix D: Program Observation Form

5 -- Excellent

Use your best judgment based on participant conversations and feedback to make a selection:
1 The faculty member appears nervous or hurried; does not make good eye contact with students
5 Does not hesitate addressing concerns. Well organized, not nervous, rushed, or hurried

**10. Rapport and communication with students**

1 -- Poor
2
3 -- Average
4
5 -- Excellent

Use your best judgment based on participant conversations and feedback to make a selection:
1 Faculty member c does not "connect" with students; acts distant or unfriendly
5 Gets students talking and excited; very friendly; seems to understand the students and their needs

**11. Effectively addressed students' questions and concerns**

1 -- Poor
2
3 -- Average
4
5 -- Excellent

Use your best judgment based on participant conversations and feedback to make a selection:
1 Faculty member engages in "power struggles;" responds negatively to or dismisses comments; gives inaccurate information; does not direct students elsewhere for further information as appropriate
5 Answers questions of fact with information, questions of value with validation; if the faculty member does not know the answer, they are honest about it and directs them elsewhere

**12. Rate the overall quality of the class meeting**

1 -- Poor
2
3 -- Average
4

## Appendix D: Program Observation Form

5 -- Excellent

Summary measure of all the preceding questions. Assesses both the extent of material covered and the performance of the faculty member. Use the description below to make a selection:

Characteristics of **excellent class meetings** might include:

- Students are "doing" something rather than listening to a lecture-style presentation
- Non-judgmental and informative responses to questions posed by students
- Answering questions of fact with information, questions of value with validation
- Good time management and well-organized
- Adequate pacing—not too fast and did not drag
- Using effective checks for understanding
- Showing enthusiasm for the content, activities and students

Indicators of **class meetings with room for growth** might include:

- Relying on lecture-style of presentation
- No active learning activities are implemented during the class period
- Reading the content from the notebook/directly from slides
- Stumbling along with the content and failing to make connections to what has been discussed previously or what students are contributing
- Uninvolved students
- Getting into power struggles with students about the content
- Judgmental responses
- Flat affect and unengaging style
- Disorganized
- Loses track of time

**13. Briefly describe any implementation issues related to the delivery of the active learning techniques and ideas for how to address/improve those issues,** including changes to the delivery of the active learning strategies, more effective use of time, more effective engagement of students, etc. :

_____
_____
_____

**14. Please note at least one major strength of the faculty member's delivery of the active learning techniques:**

_____
_____
_____

## Appendix D: Program Observation Form

**15. Other comments:** Use the space below for additional comments regarding the strengths or weaknesses of the class meeting.