

Motivational Interviewing Skills for Coaches (R324A190173)
Research Performance Progress Report: Year 1

I. Accomplishments

What are the major goals for year 1?

1. Complete PDAS cycle 1
 - 1.1 Secure IRB and JCPS approval
 - 1.2 Develop draft of MITAS for Coaches and Coaching Best Practice prototype
 - 1.3 Solicit and analyze advisory feedback
 - 1.4 Revise prototype
2. Complete second PDSA cycle 2
 - 2.1 Recruit 12 instructional coaches, 12 teachers, and 12 students to participate
 - 2.2 Implement small, single group design study
 - 2.3 Analyze process data
 - 2.4 Revise prototype
 - 2.5 Prepare for PDSA cycle 3

Cycle 1

Secure IRB and JCPS approval

Our study was approved by the University of Louisville IRB on September 26th, 2019. After several meetings with JCPS administration, we were confident they planned to approve our protocol. It was submitted for their quarterly review in November. In early December, they informed us the superintendent had decided no new research projects would be approved. We explored several options and in late January, 2020, we formalized a partnership with Franklin County Public Schools (Frankfort, KY), which is approximately 50 miles east of Louisville.

Develop draft of MITAS for Coaches and Coaching Best Practice prototype

The initial version (V1.0) of the MITAS training and coaching protocol and CBP training and protocol for MISC were developed using preexisting training models, including the homeBase MITAS training and several trainings that have been conducted with teachers and specialized instructional support personnel over the past 6 years, primarily by Drs. Frey and Lee. The homeBase training was a three-day, 12-hour training, introducing both the essential components of MI, and the homeBase intervention procedures. The primary components of MI that were covered were: MI spirit, MI processes, and the MI Skills—hereafter referred to as Open-ended questions, Affirmation, Reflections, and Summaries (OARS). These components were introduced as technical and relational components. In the homeBase training, homeBase procedures were designed to mirror the MI processes. This strategy was also utilized when developing the MISC procedures. The research manager, Blake Skidmore, took the lead in assembling the existing materials into two PowerPoint (PPT) presentations, and Drs. Frey and Lee provided the following recommendations.

1. Organization and integration of OARS, spirit, and processes. Initially, the OARS were taught outside of the context of specific intervention (e.g., homebase), and then revisited in the context of the intervention. To streamline the training, our core intervention development team decided the initial introduction of the OARS skills would be brief and

would be practiced within the various tasks to be completed throughout the intervention. For instance, the introduction of the values discovery task coincided with exercises focused on utilizing the OARS skill reflections.

2. Scope of the training. We determined that all of the examples should be with teachers, rather than teachers, parents, and adolescents. We also decided that, while this project is focused on coaching in a specific context, we needed to create a training that is relevant to all coaching contexts. So, not only might we have examples other than OTRs and Positive Feedback that focus on different aspects of classroom management, we might also want examples to include implementation of other EBPs, including those that entirely or primarily focus on academic outcomes.
3. MITAS vs CBP. We decided that in addition to the PPT presentations, we would need to provide a coaching protocol, and be mindful of how it could be developed so that coaches in the comparison condition in the small RCT in Year 03 could use a similar version.
4. Bolstering Step 4- planning. Previous iterations of the trainings have not addressed the MI planning process as systematically as we have in other parts of the MITAS system. We decided this step needs to be further developed, and targeted this area for some of our advisory committee members.
5. The team determined that trainings, which were initially contained one PPT for the MITAS and one for CBP, be broken into one module for the CBP and four for the MITAS. Thus, there are now five PPT presentations as follows:
 - a. CBP
 - b. Intro to MI (Module A)
 - c. Engagement (Module B)
 - d. Focusing & Evoking (Module C)
 - e. Planning (Module D)

Solicit and analyze advisory feedback

The second iteration of the MITAS and CBP for MISC were informed by feedback from the rest of the investigation team and the project Advisory Committee. Upon engaging our advisory committee, Drs. Sue Sheridan and Steve Forness expressed concerned that they may not be able to contribute to the project. We agreed it would be best if they be replaced. Dr. Catherine Bradshaw expressed interest in contributing, and indicated the timing was not ideal. We decided to leave her on as an advisor, but not solicit feedback on version 2.0. We added Dr. Dawn Clifford, who has extensive experience developing and implementing MI training within the area of health promotion, to our advisory team. We distributed a project summary, the PPT presentations (MITAS and CBP), and a link to several structured prompts to Drs. Clifford and Maggie Sibley. Drs. Clifford and Sibley's feedback was assembled into a summary report based on a qualitative analysis of their comments by Dr. Crosby. These comments were reviewed and discussed by the investigative team. Additionally, Dr. Frey presented the project at the Annual School Mental Health Research Summit in Washington DC, which provides opportunity for a suggestion by colleagues. Further, Drs. Scott and Tsai revised the codes and pilot tested the observation system; which allowed us to draft the performance feedback graph coaches will use during steps 2 and 3. We received particularly useful suggestions from Drs. Maureen Conroy, Kevin Sutherland, and Liz Baker. Finally, Dr. Jon Lee pilot tested Module A and provided anecdotal feedback.

Revise prototype

Version 2.0 was revised in November and December (2019). Revisions, based on the advisory feedback provided above, included the following.

1. Creation of video and audio clips. We determined it would be necessary to create a spreadsheet with video and audio clips we need to create, and consulted with IT to see how best to capture, organize, and integrate these into the presentation. During this iteration, we developed scripts that would eventually be converted to audio recordings, as well as exercises that could be completed with participants in conjunction with the audio recordings.
2. Standardized teacher routine. We decided to develop the standardized teacher component: script teacher actor role and feedback procedures.
3. Draft a coaching protocol. We determined that supplemental training materials would be needed that provided structure to the MITAS coaching processes. We developed materials for coaches to introduce teachers to OTRs and Positive Feedback, quick guides for CBP Steps 1-4 (infused with MI reminders for coaches to reference), MI primers, as well as drafts of the forms, such as the initial teacher interview guide and the OTR and positive feedback graphs.

Cycle 2

As noted above, our initial plans were to complete the entire Cycle 2 protocol in partnership with JCPS. We intended to recruit 12 instructional coaches, 12 teachers, and 12 students for participation, as well as completing the various training and data collection components detailed in our protocol. Upon being informed that we would be unable to proceed in our work with JCPS, we secured a partnership with FCPS. We succeeded in recruiting and consenting the five eligible instructional coaches who serve the entire district. We recruited and obtained consent from five teachers, and screened 5 classrooms to identify a focus student for our data collection purposes. Additionally, to make participation less burdensome and to increase the likelihood we completed the training and coaching procedures, we altered the teacher screening procedures. Specifically, rather than collect consent on all teachers who volunteer to participate, randomly select five, and then include the teacher with the lowest base rates of Opportunities to Respond (ORT) and Positive feedback to participate, we simply had instructional coaches identify a teacher they thought would benefit from the coaching procedures.

During year 1, cycle 2 five coaches participated in the MISC training. The five coaches ranged in age from 35 to 60. As detailed in Table 1 below, 4 of 5 coaches were female and all were Caucasian. None of the coaches reported their ethnicity as Hispanic or Latino. All five participants reported their current position as an instructional coach in either an elementary (n = 4) or middle/high school setting (n = 1). All five reported having a professional diploma with at least one year of coursework beyond a Master's degree. All coaches also reported very limited or limited previous exposure to Motivational Interviewing. The coaches also completed two assessments of motivational interviewing skills (Written Assessment of Simulated Encounters and Video

Assessment of Simulated Encounters). We have not yet coded the motivational interviewing assessments.

Table 1. Instructional Coach demographics (Year 1, Cycle 2).

Variable	Total (n = 5)
Age <i>M(SD)</i>	48.0 (11.1)
Female <i>n(%)</i>	4 (80.0)
Caucasian <i>n(%)</i>	5 (100.0)
Master's degree or higher <i>n(%)</i>	5 (100.0)
MI Exposure	
Very limited exposure	3 (60.0)
Limited exposure	2 (40.0)
Have attended an MI training in the past	0 (0.0)
Have received individualized supervision and feedback on MI	0 (0.0)

Following baseline data collection for the coaches, we completed 100% of the Coaching Best Practices prototype and 75% of the MITAS for Coaches training prototype with participating coaches. They also provided feedback on the three training modules we completed: CBP, Intro to MI, and Engagement. Tables 2 and 3 contain a summary of the satisfaction results following our first day of training (CBP and Module A training) and our second day of training (Module B and C), respectively. Our final workshop was scheduled for March 12, but was cancelled on March 11th when the gravity of the current national health crisis was starting to become evident.

Table 2. Usability Outcomes for the Coaching Best Practices and Module A

	Coach 1	Coach 2	Coach 3	Coach 4	Coach 5	<i>M</i>
<i>Acceptability</i>						
1. The MITAS training meets my approval.	6	6	6	6	6	6
2. The MITAS training is appealing.	6	6	6	6	6	6
3. I like the MITAS training.	6	6	5	6	6	5.8
4. I welcome use of the MITAS training.	6	6	6	6	6	6
Overall Acceptability						5.95
<i>Appropriateness</i>						
5. The MITAS training seems fitting.	6	6	6	6	6	6
6. The MITAS training seems suitable.	6	6	6	6	6	6
7. The MITAS training seems applicable.	6	6	6	6	6	6
8. The MITAS training seems like a good match.	6	6	6	6	6	6
Overall Appropriateness						6
<i>Feasibility</i>						

9. The MITAS training seems implementable.	5	6	6	6	6	5.8
10. The MITAS training seems possible.	5	6	6	6	6	5.8
11. The MITAS training seems doable.	5	6	6	6	6	5.8
12. The MITAS training seems easy to use.	6	6	6	6	6	6
Overall Feasibility						5.85

Note. 1 = Completely Disagree; 6 = Completely Agree

Table 3. Usability Outcomes for Training Modules B & C

	Coach 1	Coach 2	Coach 3	Coach 4	<i>M</i>
<i>Acceptability</i>					
1. The MITAS training meets my approval.	6	6	6	6	6
2. The MITAS training is appealing.	6	6	6	6	6
3. I like the MITAS training.	6	6	6	6	6
4. I welcome use of the MITAS training.	6	6	6	6	6
Overall Acceptability					6
<i>Appropriateness</i>					
5. The MITAS training seems fitting.	6	6	6	6	6
6. The MITAS training seems suitable.	6	6	6	6	6
7. The MITAS training seems applicable.	6	6	6	6	6
8. The MITAS training seems like a good match.	6	6	6	6	6
Overall Appropriateness					6
<i>Feasibility</i>					
9. The MITAS training seems implementable.	6	6	6	6	6
10. The MITAS training seems possible.	6	6	6	6	6
11. The MITAS training seems doable.	6	6	6	6	6
12. The MITAS training seems easy to use.	6	6	6	6	6
Overall Feasibility					6

Note. 1 = Completely Disagree; 6 = Completely Agree

Teachers completed the Systematic Screening for Behavior Disorders (SSBD) classroom screener, we were in the process of consenting parents when FCPS's closed as a result of COVID-19. Screening data were processed for 4 of 5 teachers participating during cycle 2 of year 1. All four teachers submitted SSBD stage 2 screening data for five students in their classroom. For externalizing behavior, screening cutoffs for the SSBD are scores on the Critical Events Index (CEI) of five or higher. Alternative criteria can be met if the student's CEI ranges from 1- 4 and the student has a score of 30 or less on the ABI *and* a score of 35 or greater on the

maladaptive behavior index (MBI). Overall, 8 of 20 students (40%) met SSBD stage 2 criteria. All qualifying students met criteria based on the number of critical events (e.g., ≥ 5). Within classroom, the number of students meeting stage 2 criteria ranged from 0 to 4 students. Three of four classrooms (75%) had at least one student who met criteria. Mean scores on the SSBD critical events index (CEI), adaptive behavior index (ABI), and maladaptive behavior index (MBI) are summarized in Table 4 below.

Table 4. Teacher-reported screening data (Year 1, Cycle 2).

Variable	Number of students screened	Score <i>M(SD)</i>	Range
Critical Events Index	20	4.2 (2.7)	1 – 9
Adaptive Behavior Index	20	33.3 (8.3)	20 – 51
Maladaptive Behavior Index	20	27.5 (8.1)	13 - 39

Given the unique circumstances facing our schools and research project at this time, we have provided three potential plans for advancing the project in the upcoming weeks or months. These plans have been communicated to all coaches and teachers involved. As circumstances evolve we will proceed as seems responsible and effective. The three plans are described below:

Plan A: If students and staff at Franklin County return to business as usual in the next few weeks, the MISC project will explore completing the last two MITAS training modules, and completing the intervention with teachers and students in whatever capacity we are able prior to the summer break. This would hopefully include coaches completing all four steps of the CBP and our staff collecting all applicable data.

Plan B: If staff return without students, or if students return after a more extended closure, thereby making completion of the full intervention with teachers impractical, we can explore: completing the training together or remotely, completing our standardized teacher practice routine, and then run the intervention with the teachers at beginning of following school year.

Plan C: If school stays closed for students and staff for the remainder of the year, and therefore completing our training is also not an option, we could reconvene before the new school year begins, complete a booster for the training modules that were already completed and finish the intervention with teachers at the beginning of the new school year.

If any of the above plans are implemented we are confident we can complete the following additional tasks from our protocol: completion of the MITAS training prototype, standardized teacher practice, coach and/or teacher focus groups, and collection of the proposed data that coincide with the above tasks. Whichever option we select, we will conduct an online focus group interview with the five instructional coaches in May 2020 to better understand their experiences and recommendations for improvement.

Prepare for PDSA cycle 3 We have already learned much in regards to changes we can make in the next iteration of our project, including: training revisions, completion of a training protocol, creation of a MITAS for Coaches Training Implementation Checklist, utilize real audio from interventions or from standardized teacher, and further develop the protocol for MI group and quick guide supplements for the control condition. Additionally, we will analyze and process any data that has been gathered at the completion of this cycle.

What opportunities for training and professional development has the project provided?

See above

Have the results been disseminated to communities of interest?

We have not disseminated any results yet.

What do you plan to do during the next reporting period to accomplish project goals?

We are confident we can complete a comprehensive iterative development of the CBP and MITAS trainings over the summer, including another round of feedback from our advisory committee. We are working to identify 2 or 3 school districts to partner with during the 2020-2021 school year to complete Cycle 3 of our iterative development process. Further, we are working on a new online platform for our WASE and VASE assessments, which will improve our ability to coordinate and analyze this data, and also improve instructional coach's experiences with the assessment protocol. Over the next few months, we will expand our assessment protocol to include the following proximal and distal outcomes: teacher motivation to change, teacher's sense of self-efficacy, student-teacher relationships, teacher burnout, teacher attitudes towards inclusion.

In addition to potentially finishing the teacher coaching procedures with our Cycle 2 participants, as described above, during the 2020-2021 school year, we will implement Cycle 3. Specifically, we will implement a single group design with 12 coaches, 12 teachers, and 12 students in fall and replicate the procedures in the spring.

II. Products

See answer to "how have results been disseminated" question above.

III. Participants and Other Collaborating Organizations

What individuals have worked on the project?

Name: Terry Scott

Project role: PI

Nearest month worked: 1

Contribution to the Project: Dr. Scott has responsibility for day-to-day coordination of the study. He oversees staffing and coordination of the teacher and student observations, and assists to develop the provision of OTRs and feedback portion of the coach best practice procedures training with instructional personnel. He also assists in preparing data, using the teacher baseline

observations, for instructional personnel to use to provide feedback (step 3) during the coaching best practice procedures. Dr. Scott also supervises data collection staff and participates in the dissemination of the study findings.

Name: Andy Frey

Project role: Co-PI

Nearest month worked: 3

Contribution to the Project: Dr. Frey assists Dr. Scott with day-to-day coordination of the study, and shares responsibility with senior investigators for the monitoring of study protocol procedures, and ensuring all project objectives are met. Dr. Frey also supervises intervention staff, leads development efforts of the MITAS for Coaches, and participates in data analysis and writing tasks.

Name: Blake Skidmore

Project role: Research Manager

Nearest month worked: 6

Contribution to the Project: Mr. Skidmore is a lead trainer and assists with intervention development. He also assists with the development of the data collection protocol and with data collection.

Name: Shu-Chen

Project role: Research manager

Nearest month worked: 4

Contribution to the Project: Dr. Tsai trains data collectors and monitors the reliability of this data. She also assists develop mechanisms to summarize and distribute teacher observation data to instructional support to be used in the performance feedback (step 3) portion of the coaching best practice procedure. Dr. Tsai also prepares and processes observation and survey data.

Name: John Seeley

Project role: Co-I

Nearest month worked: 1

Contribution to the Project: Dr. Seeley is our senior methodologist. He participates in weekly team meetings and oversees efforts related to our measurement protocol and the processing and analyzing of project data.

Name: Hill Walker

Project role: Co-I

Nearest month worked:

Contribution to the Project: Dr. Walker participates in weekly team meetings and advises our team on matters related to measurement and implementation. He will be instrumental in our dissemination efforts.

Name: Jason Small

Project role: Co-I

Nearest month worked: 1

Contribution to the Project: Mr. Small prepares data collection forms and oversees the data preparation and analysis processes. He serves as the primary liaison between the University of Louisville and the Oregon Research Institute.

Name: Jon Lee

Project role: Consultant

Nearest month worked: 1

Contribution to the Project: Dr. Lee assists our efforts related to motivational interviewing.

Name: Shantel Crosby

Project role: Co-I

Nearest month worked: 1

Contribution to the Project: Dr. Crosby is new faculty at the Kent School of Social Work at the University of Louisville, and was included to design, facilitate, and analyze our focus group interviews.

What other organizations have been involved as partners?

We engaged our advisory committee in fall 2020.

Have other collaborators or contracts been involved?

Nothing to report.

IV. Impact

This project is helping the fields of education, psychology, and social work understand the relative effectiveness of motivational interviewing skills in the context of coaching. We are also learning a great deal about the potential of motivational interviewing applied within the context of school-based interventions, particularly with regard to the supports needed for school personnel to practice this approach with adequate skill levels.

What is the impact on other disciplines?

Coaching is an interdisciplinary activity, and thus the results are relevant to professionals from several disciplines, including social work, psychology, counseling, and educators serving as consultants, resource teachers, or behavior specialists.

What is the impact on the development of human resources?

The training should increase capacity of participating coaches and teachers.

What is the impact on physical, institutional, and information resources that form infrastructure?

Not applicable.

What is the impact on technology transfer?

Not applicable.

What is the impact on society beyond science and technology?

The primary impact is on the improvement of the quality of life for the teachers, students, and parents who have benefited from the services provided through this grant. Given the relationship between early school success and long term outcomes such as graduation, and employment, impacting families early in their school career has long-term positive effects on society.

What dollar amount of the award's budget is being spent in foreign countries?

None.

V. Changes/Problems

In addition to the challenges faced with the COVID-19 health crisis described elsewhere in this report, two of our national advisors, Dr. Steve Forness, and Dr. Beth Stormshak, notified us they had too many prior responsibilities to serve our project in an advisory capacity. We filled the void they created by adding Dawn Clifford, who is an expert in applying motivational interviewing in the area of health and nutrition in the Department of Health Sciences at Northern Arizona University.

Further, as a result of our initial partner, JCPS, determining they will no longer participate in research, we will need to reassess our budget to account for conducting the research in settings that are further from the University of Louisville.

Violation of protocol

None to report

Actual or anticipated problems or delays and actions or plans to resolve them.

See above.

Changes that have a significant impact on expenditures.

None identified.

Significant changes in the use or care of human subjects, vertebrate animals, and/or biohazards.

None to report.