

**Draft OMB Clearance Request
Promoting Student Success in Algebra I**

**Appendix D: Protocols for
Instructional Coaching**

March 2014

PROMOTING STUDENT SUCCESS IN ALGEBRA I
 Instructional Coaching Topical Area
District Official Interview

| | |
|------------------------|---------------|
| Name: | Title: |
| District: | State: |
| Interviewed by: | Date: |

INTRODUCTION AND BACKGROUND

Good morning/afternoon. First of all, thank you so much for being here and for being willing to participate in this project for the U.S. Department of Education. Before we start, we would like to introduce ourselves, provide a little background on our work, and answer any questions you might have.

My name is [name], and this is [name of the other site visitor]. We are researchers from American Institutes for Research and Windwalker Corporation, organizations that conduct research and technical assistance in education. We are here today to interview you as part of a collaborative effort to provide program developers and administrators with information to promote student success in Algebra I. We are particularly interested in Algebra I because it's a gatekeeper course in that it's a prerequisite for subsequent high school mathematics and science courses considered essential for getting into college. So, it is an important stepping-stone for success in high school and college.

As part of this project for the U.S. Department of Education, we are speaking with district staff, school administrators, math department chairs/leaders, and teachers about the approach to instructional coaching practices and how it may contribute to student success in Algebra I. We're particularly interested in your perspective on how [district name] has contributed to instructional coaching for Algebra I education. The data we collect will be used to develop technical assistance tools to help program developers and administrators implement similar programs to support struggling students.

I'll talk more about the topics of this interview, but for now, are there any questions about the project or why we are here?

DESCRIPTION OF INTERVIEW PROCEDURE AND CONFIDENTIALITY

Next, I'd like to say a few things about the process for this discussion. Responses to this data collection will be used to summarize findings in an aggregate manner (within a school or district), or will be used to provide examples of implementation in a manner that does not associate responses with a specific site or individual. In the publications, pseudonyms will be used for each site. The project team may refer to the generic title of an individual (e.g., "project director," or "eighth grade teacher") but

neither the site name nor the individual name will be used. All efforts will be made to keep the description of the site general enough so that a reader would never be able to determine the true name or identity of the site or individuals at the site. The contractor will not provide information that associates responses or findings with a subject or district to anyone outside the study team, except as required by law.

I'd like to ask you to sign a consent form before we begin. It outlines some of the issues I've just mentioned with regard to confidentiality. Please take a minute to read it and let me know if you have any questions.

PRA Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1810-xxxx. Public reporting burden for this collection of information is estimated to average 31 hours for instructional coaching, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is voluntary. If you have comments or concerns regarding the status of your individual submission of this survey, please contact (Project Director, Kirk Walters, at the American Institutes for Research at 202-403-5838 or at kwalters@air.org) directly. [Note: Please do not return the completed survey to this address.]

Are there any questions before we get started?

Notes to interviewer:

- Throughout the interview, possible probes are set aside following each general question. We would like to gather information relative to each of those probes. If, when the general question is asked, the respondent provides the information requested by the probes, you do not need to ask the probing questions. In addition to providing additional information, asking the probing questions may help move the interview pace or may prompt a less talkative respondent. Keep the tone conversational and comfortable.

- To the extent that this information can be retrieved from other data sources (e.g., school records) beforehand, document that information below prior to the interview. During the interview, prompt the District Official to confirm its accuracy if his or her initial response does not do so.

BACKGROUND ON ROLE AND EXPERIENCE

Let's begin with some information about you.

1. Can you tell me a bit about your background and how you came to serve as a district mathematics coordinator for [district name]?
2. Could you please describe your main job responsibilities?

Listen for

- o How long have you worked for [district name]?*
- o How long have you served as the mathematics coordinator?*
- o What, if any, experience do you have having teaching mathematics?*

For the remainder of the interview, I'd like to get your perspective on the instructional coaching activities for Algebra I specifically. I'd like you to focus on that subject area when you respond to these questions, OK?

Note to interviewer:

If the respondent is reluctant to speak to Algebra I specifically, try to focus the scope of the interview as closely as possible on Algebra I. For example, ask the respondent to speak to instructional coaching activities for math education in high schools before asking the respondent to provide perspective on math education more generally.

For ease of reference, I plan to use "coaching program" as an umbrella term that encompasses all the specific resources, activities, initiatives, and materials for Algebra I coaching collectively. If there is a more fitting label for that, please let me know.

IMPETUS FOR AND DEVELOPMENT OF THE INSTRUCTIONAL COACHING PROGRAM

I'd like to get a general idea of the coaching program and how it was developed.

3. What were the main reasons for developing the coaching program?

Listen for:

- o To improve specific types of instructional practices in Algebra I?*
- o To support lesson planning?*
- o To support the implementation of algebra or other mathematics curriculum?*
- o To transfer knowledge and/or instructional practices emphasized in professional development to the classroom?*

4. **Were you involved in the development of the coaching program? If so, do you feel like your contributions were valued and reflected in the current program?**
5. **Can you describe in detail how the coaching program was developed?**

Listen for:

- o Who was involved in developing it, and what were their roles?*
- o What specific roles did district representatives have compared with school leaders or teachers?*
- o How long did it take to develop the program?*

6. **Could you explain any underlying principles that guided the development of the coaching program?**

Listen for:

- o Extent to which philosophy/principles were informed by data and/or research*
- o Enactment of math content knowledge in the classroom*
- o Support for implementing specific instructional activities, including technology-based interventions*

7. **We understand that your district provides tools to support the implementation of instructional coaching for Algebra I. What was the process for developing these tools?**

Listen for:

- o Who was involved and what were their roles?*
- o Did school-level staff have the opportunity to provide input?*

8. **How was the coaching program initially funded, and how is it being sustained?**

Listen for:

- o Federal or district support; grant funding*
- o Strategies for and steps taken to promote efficient use of resources*
- o Strategies for and steps taken to promote sustainability*

IMPLEMENTATION OF THE INSTRUCTIONAL COACHING PROGRAM

Now that we have a better sense of how your instructional coaching program was developed, I am interested in how it is implemented.

Implementation Features and Context

9. Can you describe the key components of the instructional coaching program? What is the rationale behind these components?

Listen for:

- o The coaching's setting—is it classroom based or school-based, or does it adhere to another format?*
- o The content of the coaching—what types of teacher knowledge and skills do the coaches focus on, and how is this content determined?*
- o The number of schools and teachers with whom each coach works*
- o The amount of coaching time involved and how that time is scheduled*
- o The use of particular coaching practices and pedagogies*
- o Emphasis on one-on-one versus collaborative teacher coaching activities*
- o Use of technology, including video*

10. Can you describe how teachers are targeted to participate in the instructional coaching program? How does the district encourage or support participation?

Listen for:

- o Is it for volunteers or are teachers required to participate?*
- o Are particular types of teachers targeted (e.g., new teachers, struggling teachers, teacher leaders, teachers from different grade levels) to participate?*
- o What types of participation incentives does the district provide to teachers or schools?*

Tools Supporting Implementation

Now, we would like to ask specific questions about tools or resources that the district provides to support the implementation of the instructional coaching program. [Note to interviewer: Skip questions that refer to tools that are not available in this district.]

11. You provided us with a copy of the {insert coach tool}. In what ways are coaches expected to use this tool to support their coaching work?

Listen for:

- o What are its distinguishing features?*
- o Is it available online?*
- o How is it linked to the district's algebra curriculum?*

12. You provided us with a copy of the {insert teacher tool}. In what ways are teachers expected to use this tool to support what they are learning through the coaching program?

Listen for:

- o What are its distinguishing features?*
- o Is it available online?*
- o How is it linked to the district's algebra curriculum?*

13. Can you describe any other tools (e.g., frameworks, video or other technology) that are used to support the implementation of the coaching program?

Listen for:

- o Who is intended to use these tools and for what specific purposes?*
- o What limitations do they present?*
- o What additional resources, financial or otherwise, are needed to provide these resources?*
- o How, when, and by whom are these tools refined?*

Coach Selection and Support

14. Can you describe how coaches are hired and assigned to schools or teachers?

Listen for:

- o What criteria are used to select coaches?*
- o Who selects them (e.g., district-level staff, school-level staff, teachers)?*
- o To what extent are providers selected from outside the district (e.g., consultants, external organizations) and to what extent are they district- or school-level staff?*

15. What are the characteristics of a successful Algebra I instructional coach?

16. What types of training or professional learning opportunities do coaches receive?

NOTE: These could include, but are not limited to, workshops, webinars, instructional coaching, and professional learning communities.

Listen for:

- o What is the format for this training (e.g., webinar, in-person, Web-based materials to review)?*
- o Who provides the training, and who receives it?*
- o When and how often does the training occur? Is training provided only once or repeated regularly (e.g., annually, biannually)?*
- o What are the training objectives?*
- o Is there anything that is not currently covered in the training that should be?*
- o What resources, financial or otherwise, are needed to support this training?*

17. What roles and responsibilities have you had in the implementation of the coaching program within the past year?

Listen for:

- o Have you supervised program staff (e.g., coaches)?*
- o Have you monitored teacher participation/engagement or teacher incentives?*
- o Have you overseen or directed any of the coaching activities?*
- o Have you played a role in monitoring or evaluation?*

18. If respondent or preliminary research indicates significant coaching responsibilities: What sorts of professional learning opportunities or materials have you had to help you with your instructional coaching responsibilities for Algebra I education?

Implementation Challenges

19. What are the major challenges your district has faced in implementing the coaching program? In what ways have you addressed these challenges?

Listen for:

- o What strategies did and did not work and why?*

20. What changes would you make to the coaching program to increase its success?

OUTCOMES OF THE INSTRUCTIONAL COACHING PROGRAM

Next, I would like to talk about outcomes of the instructional coaching program.

21. How is the success of the instructional coaching program measured?

Listen for:

- o Changes in observed teacher practices*
- o Student achievement measures*
- o Course grades or failure rates*
- o Graduation or drop-out rates*
- o Other metrics*

22. Has the program been successful according to these measures? Why or why not?

23. Does the coaching program appear to be more successful with certain types of teachers or students than others?

If yes:

Which teachers or students have benefitted the most? Why?

Which teachers or students have benefitted the least? Why?

FINAL THOUGHTS AND CONCLUSION

OK, please take a step back to provide some key take-away thoughts from this interview today.

24. What do you think are the key components—the active ingredients—of a successful coaching program?

25. Do you have anything else that you would like to add before we conclude this interview?

Those are all the questions I have. Thank you for your time and for participating in this project.

PROMOTING STUDENT SUCCESS IN ALGEBRA I
 Instructional Coaching Topical Area
Math Coach Interview

| | |
|------------------------|---------------|
| Name: | Title: |
| District: | State: |
| Interviewed by: | Date: |

INTRODUCTION AND BACKGROUND

Good morning/afternoon. First of all, thank you so much for being here and for being willing to participate in this project for the U.S. Department of Education. Before we start, we would like to introduce ourselves, provide a little background on our work, and answer any questions you might have.

My name is [name], and this is [name of the other site visitor]. We are researchers from American Institutes for Research and Windwalker Corporation, organizations that conduct research and technical assistance in education. We are here today to interview you as part of a collaborative effort to provide program developers and administrators with information to promote student success in Algebra I. We are particularly interested in Algebra I because it's a gatekeeper course in that it's a prerequisite for subsequent high school mathematics and science courses considered essential for getting into college. So, it is an important stepping-stone for success in high school and college.

As part of this project for the U.S. Department of Education, we are speaking with district staff, school administrators, math department chairs/leaders, and teachers about the approach to instructional coaching practices and how it may contribute to student success in Algebra I. We're particularly interested in your perspective on how [employer/school name] has contributed to instructional coaching for Algebra I education. The data we collect will be used to develop technical assistance tools to help program developers and administrators implement similar programs to support struggling students.

I'll talk more about the topics of this interview, but for now, are there any questions about the project or why we are here?

DESCRIPTION OF INTERVIEW PROCEDURE AND CONFIDENTIALITY

Next, I'd like to say a few things about the process for this discussion. During our session today, I'll be asking you some questions, and [another site visitor] will be taking notes on what you are saying. [S/he] will not record your names. If you don't mind, I would also like to record our conversation simply for note-taking purposes. No one outside of our project team will hear the recording; it will just be for our own reference. If you would like us to turn off the recorder at

any point, just let me know. Would that be OK?

I want to assure you that we will treat the information you provide in a confidential manner. The recorded interview will be transcribed by a member of the project team, and only selected research staff will have access to the data, except as required by law. We will not use your name or attribute any quotes to you, instead, we will use pseudonyms in practice profiles. All efforts will be made to keep the description of the site general enough so that a reader would never be able to determine the true name or identity of the site or individuals at the site. Therefore, no one who reads the profiles of practice will know that the statements came from you.

I'd like to ask you to sign a consent form before we begin. It outlines some of the issues I've just mentioned with regard to anonymity and confidentiality. Please take a minute to read it and let me know if you have any questions.

Are there any questions before we get started?

Notes to interviewer:

- Throughout the interview, possible probes are set aside following each general question. We would like to gather information relative to each of those probes. If, when the general question is asked, the respondent provides the information requested by the probes, you do not need to ask the probing questions. In addition to providing additional information, asking the probing questions may help move the interview pace or may prompt a less talkative respondent. Keep the tone conversational and comfortable.

- To the extent that this information can be retrieved from other data sources (e.g., school records) beforehand, document that information below prior to the interview. During the interview, prompt the Mathematics Coach to confirm its accuracy if his or her initial response does not do so.

BACKGROUND ON ROLE AND EXPERIENCE

Let's begin with some information about you.

1. Can you tell me a bit about your background and how you came to serve as an instructional coach for [school name]?

Listen for:

- o How long have you worked for [employer/district name] and at [school name] specifically?*
- o How long have you served as an instructional coach?*
- o What experience do you have having teaching mathematics?*

2. Could you briefly describe your primary job responsibilities?

Listen for:

- o Do you have job responsibilities other than coaching?*
- o How many schools do you work with?*
- o How much of your time is devoted to coaching responsibilities at [school name]?*

OK, thank you for sharing some information about yourself. For the remainder of the interview, I'd like to get your perspective on the instructional coaching activities for Algebra I specifically. I'd like you to focus on that subject area alone when you respond to these questions, OK?

Note to interviewer:

If the respondent is reluctant to speak to Algebra I specifically, try to focus the scope of the interview as closely as possible on Algebra I. For example, ask the respondent to speak to instructional coaching activities for math education in high schools before asking the respondent to provide perspective on math education more generally.

For ease of reference, I plan to use "coaching program" as an umbrella term that encompasses all the specific resources, activities, initiatives, and materials for Algebra I coaching collectively. If there is a more fitting label for that, please let me know.

IMPETUS FOR AND DEVELOPMENT OF THE INSTRUCTIONAL COACHING PROGRAM

I'd like to get a general idea of how the coaching program came about.

3. Do you know what the main reasons for developing the coaching program were?

Listen for:

- o *To improve specific types of instructional practices in Algebra I?*
- o *To support lesson planning?*
- o *To support the implementation of algebra or other mathematics curriculum?*
- o *To transfer knowledge and/or instructional practices emphasized in professional development to the classroom?*

4. **Does the instructional coaching program fit into a broader professional development program or Algebra initiative?**
5. **Were you involved in the development of the instructional coaching program? If so, did you feel like your contributions were valued and reflected in the current model?**
6. **We understand that your district/school provides tools to support the implementation of instructional coaching for Algebra I. What was the process for developing these tools?**

Listen for:

- o *Who was involved and what were their roles?*
- o *Did school-level staff have the opportunity to provide input?*

IMPLEMENTATION OF INSTRUCTIONAL COACHING PROGRAM

Now, I'd like to know more about the instructional coaching program and how it is implemented.

Implementation Features and Context

7. **What types of teacher knowledge or skills do you emphasize in your work with teachers? How is this emphasis determined? Does it change or progress over time?**

Listen for:

- o *Unit, lesson, or task planning*
- o *Lesson delivery*
- o *Presentation of algebra content (clarity, coherence, precision of language, explanations)*
- o *Use of examples and counterexamples*
- o *Techniques to identify and debug student misconceptions*
- o *Techniques to promote student engagement*
- o *Lesson summary or closure*
- o *Lesson reflection to inform future lesson planning*
- o *Analysis of student work or student assessment data*

8. What types of activities do you engage in to help teachers improve their knowledge or skills in these areas?

Listen for:

- o Joint unit, lesson, or task planning*
- o Lesson observations and debriefs*
- o Lesson studies*
- o Modeling of instructional practices*

9. Can you give me a specific example of the type of feedback you might provide to a teacher?

10. If respondent indicates an observation-based activity: Please walk me through the procedure for the observation-based activity from beginning to end.

Listen for:

- o How is the observation conducted (e.g., in-person or video)?*
- o How is feedback provided?*
- o Is there any follow-up afterward? If yes: Please explain what the follow-up entails.*
- o What are teachers expected to do as a result of this activity?*

11. Do all Algebra I teachers at this school participate in the activities you've described? If not, how is teacher participation determined?

12. How often do you meet with teachers to conduct these activities? Do these meetings take place throughout the year? Do you meet with certain teachers more than others?

13. How do the instructional coaching activities interface with other types of professional learning opportunities that Algebra I teachers at this school receive?

Tools Supporting Implementation

14. You provided us with a copy of the {insert planning tool}. In what ways are teachers expected to use this tool to support what they are learning through the coaching program?

Listen for:

- o What are its distinguishing features?*
- o Is it available online?*
- o How is it linked to the district's algebra curriculum?*

15. You also provided us with a copy of the {insert reference tool}. In what ways are teachers expected to use this tool to support what they are learning through the coaching program?

Listen for:

- o What are its distinguishing features?*
- o Is it available online?*
- o How is it linked to the district's algebra curriculum?*

16. Can you describe any other tools (e.g., frameworks, video or other technology) that are used to support implementation of the coaching program?

Listen for:

- o Who is intended to use these tools and for what specific purposes?*
- o What limitations do they present?*
- o What additional resources, financial or otherwise, are needed to provide these resources?*
- o How, when, and by whom are these tools refined?*

17. Are there additional tools or resources you think are needed to improve the coaching program for teachers?

Coach Professional Learning and Support

18. What types of training or professional learning opportunities do you receive as a coach?

NOTE: These could include, but are not limited to, workshops, webinars, instructional coaching, and professional learning communities.

Listen for:

- o What is the format for this training (e.g., webinar, in-person, Web-based materials to review)?*
- o Who provides the training, and who receives it?*
- o When and how often does the training occur? Is training provided only once or repeated regularly (e.g., annually, biannually)?*
- o What are the training objectives?*
- o Is there anything that is not currently covered in the training that should be?*
- o What resources, financial or otherwise, are needed to support this training?*

19. In your experience, what types of knowledge or attributes do you think an Algebra I coach needs to have to be successful?

Implementation Challenges

20. What are the major challenges you have faced in implementing the coaching program? In what ways have you addressed these challenges?

Listen for:

o What strategies did and did not work and why?

21. What changes would you make to the coaching program to increase its success?

OUTCOMES OF THE INSTRUCTIONAL COACHING PROGRAM

Next, I would like to talk about outcomes of the instructional coaching program.

22. How is the success of the instructional coaching program measured?

Listen for:

- o Changes in observed teacher practices*
- o Student achievement measures*
- o Course grades or failure rates*
- o Graduation or drop-out rates*
- o Other metrics*

23. Has the program been successful according to these measures? Why or why not?

24. Reflecting on the coaching program as a whole, in what ways has it helped Algebra I teachers in the school?

Listen for:

- o Student engagement or student-teacher relationships*
- o Teachers' own content knowledge*
- o Lesson planning for algebra instruction*
- o Overall pedagogical principles or techniques for Algebra I education*
- o Specific instructional practices or materials to teach a particular concept, or help students' overcome a learning challenge*

25. Does the coaching program appear to be more successful with certain types of teachers or students than others?

- Which teachers or students have benefitted the most? Why?
- Which teachers or students have benefitted the least? Why?

FINAL THOUGHTS AND CONCLUSION

OK, please take a step back to provide some key take-away thoughts from this interview today.

26. What do you think are the key components—the active ingredients—of a successful instructional coaching program?

27. Do you have anything else that you would like to add before we conclude this interview?

Those are all the questions I have. Thank you for your time and for participating in this project.

PROMOTING STUDENT SUCCESS IN ALGEBRA I

Instructional Coaching Topical Area

Principal Interview

| | |
|------------------------|---------------|
| Name: | Title: |
| District: | State: |
| | |
| Interviewed by: | Date: |

INTRODUCTION AND BACKGROUND

Good morning/afternoon. First of all, thank you so much for being here and for being willing to participate in this project for the U.S. Department of Education. Before we start, we would like to introduce ourselves, provide a little background on our work, and answer any questions you might have.

My name is [name], and this is [name of the other site visitor]. We are researchers from American Institutes for Research and Windwalker Corporation, organizations that conduct research and technical assistance in education. We are here today to interview you as part of a collaborative effort to provide program developers and administrators with information to promote student success in Algebra I. We are particularly interested in Algebra I because it’s a gatekeeper course in that it’s a prerequisite for subsequent high school mathematics and science courses considered essential for getting into college. So, it is an important stepping-stone for success in high school and college.

As part of this project for the U.S. Department of Education, we are speaking with district staff, school administrators, math department chairs/leaders, and teachers about the approach to instructional coaching practices and how it may contribute to student success in Algebra I. We’re particularly interested in your perspective on how [school name] has contributed to instructional coaching for Algebra I education. The data we collect will be used to develop technical assistance tools to help program developers and administrators implement similar programs to support struggling students.

I’ll talk more about the topics of this interview, but for now, are there any questions about the project or why we are here?

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Next, I’d like to say a few things about the process for this discussion. During our session today, I’ll be asking you some questions, and [another site visitor] will be taking notes on what you are saying. [S/he] will not record your names. If you don’t mind, I would also like to record our conversation simply for note-taking purposes. No one outside of our project team will hear the recording; it will just be for our own reference. If you would like us to turn off the recorder at

any point, just let me know. Would that be OK?

I want to assure you that we will treat the information you provide in a confidential manner. The recorded interview will be transcribed by a member of the project team, and only selected research staff will have access to the data, except as required by law. We will not use your name or attribute any quotes to you, instead, we will use pseudonyms in practice profiles. All efforts will be made to keep the description of the site general enough so that a reader would never be able to determine the true name or identity of the site or individuals at the site. Therefore, no one who reads the profiles of practice will know that the statements came from you.

I'd like to ask you to sign a consent form before we begin. It outlines some of the issues I've just mentioned with regard to anonymity and confidentiality. Please take a minute to read it and let me know if you have any questions.

Are there any questions before we get started?

Notes to interviewer:

- Throughout the interview, possible probes are set aside following each general question. We would like to gather information relative to each of those probes. If, when the general question is asked, the respondent provides the information requested by the probes, you do not need to ask the probing questions. In addition to providing additional information, asking the probing questions may help move the interview pace or may prompt a less talkative respondent. Keep the tone conversational and comfortable.

- To the extent that this information can be retrieved from other data sources (e.g., school records) beforehand, document that information below prior to the interview. During the interview, prompt the Principal to confirm its accuracy if his or her initial response does not do so.

BACKGROUND ON ROLE AND EXPERIENCE

Let's begin with some information about you.

1. **Can you tell me a bit about your background and how you came to serve as the principal here at [school name]?**

Listen for:

- o How long have you worked for [district name] and at [school name] specifically?*
- o How long have you served as the principal?*
- o What, if any, experience do you have having teaching mathematics?*

2. **Could you give me a general overview of your primary tasks and responsibilities as principal? What does a typical day look like for you?**

Listen for:

- o What is your role with regard to professional learning opportunities for mathematics teachers?*
- o How much of your time is dedicated to professional development responsibilities?*
- o How much of your time is dedicated to Algebra I issues specifically?*

OK, thank you for sharing some information about yourself. For the remainder of the interview, I'd like to get your perspective on the instructional coaching activities for Algebra I specifically. I'd like you to focus on that subject area when you respond to these questions, okay?

Note to interviewer:

If the respondent is reluctant to speak to Algebra I specifically, try to focus the scope of the interview as closely as possible on Algebra I. For example, ask the respondent to speak to instructional coaching activities for math education in high schools before asking the respondent to provide perspective on math education more generally.

IMPETUS FOR AND DEVELOPMENT OF THE INSTRUCTIONAL COACHING PROGRAM

I'd like to get a general idea of the coaching program and how it was developed.

3. **Do you know what the district's main reasons for developing the coaching program were?**

Listen for:

- o To improve specific types of instructional practices in Algebra I?*

- o To support lesson planning?*
- o To support the implementation of algebra or other mathematics curriculum?*
- o To transfer knowledge and/or instructional practices emphasized in professional development to the classroom?*

4. Were you involved in the development of the coaching program? If so, what was that process like and did you feel like your contributions were valued and reflected in the current model?

Listen for:

- o Who was involved in the developing it, and what were their roles?*
- o What specific roles did district representatives have compared with school leaders or teachers?*
- o How long did it take to develop the program?*

5. Could you explain any underlying principles that guided the development of the coaching program?

Listen for:

- o Extent to which philosophy/principles were informed by data and/or research*
- o Enactment of math content knowledge in the classroom*
- o Support for implementing specific instructional activities, including technology-based interventions*

6. We understand that your district/school provides tools to support the implementation of instructional coaching for Algebra I. What was the process for developing these tools?

Listen for:

- o Who was involved and what were their roles?*
- o Did school level staff have the opportunity to provide input?*

7. How was the coaching program initially funded, and how is it being sustained?

Listen for:

- o Federal or district support; grant funding*
- o Strategies for and steps taken to promote efficient use of resources*
- o Strategies for and steps taken to promote sustainability*

IMPLEMENTATION OF THE INSTRUCTIONAL COACHING PROGRAM

Now that we have a better sense of how the instructional coaching program was developed, I am interested in how it is implemented.

8. What roles and responsibilities do you have in supporting the implementation of the coaching program?

Listen for:

- o Have you supervised program staff (e.g., coaches)?*
- o Have you monitored teacher participation/engagement or teacher incentives?*
- o Have you overseen or directed any of the coaching activities?*
- o Have you played a role in monitoring or evaluation?*

9. If respondent or preliminary research indicates significant coaching responsibilities: What sorts of professional learning opportunities or materials have you had to help you with your responsibilities related to the coaching program? Which have you found most useful for your work related to the coaching program?

Implementation Features and Context

10. Can you describe the key components of the instructional coaching program? What is the rationale behind these components?

Listen for:

- o The coaching's setting—is it classroom based, school-based, or another format?*
- o The content of the coaching—what types of teacher knowledge and skills do the coaches focus on with teachers, and how is this content determined?*
- o The amount of coaching time involved and how that time is scheduled*
- o The use of particular coaching practices and pedagogies*
- o Emphasis on one-on-one versus collaborative teacher coaching activities*
- o Use of technology, including video.*

11. Can you describe how teachers are targeted to participate in the instructional coaching program? How does the district or school encourage or support participation?

Listen for:

- o Is it for volunteers or are teachers required to participate?*
- o Are particular types of teachers targeted (e.g., new teachers, struggling teachers, teacher leaders, teachers from different grade levels) to participate?*
- o What types of participation incentives does the district provide to teachers or schools?*
- o What types of participation incentives does the school provide to teachers?*

12. Can you briefly describe any other professional learning opportunities offered to Algebra I teachers in your school who receive the instructional coaching?

Listen for:

- o To what extent do Algebra I teachers participate in other opportunities?*
- o How do these other opportunities interface with the coaching program?*
- o How well do you think the instructional coaching activities and other professional development opportunities align?*

Tools Supporting Implementation

Now, we would like to ask specific questions about tools or resources that are used to support the implementation of the instructional coaching program.

13. You provided us with a copy of the {insert coach tool}. In what ways are coaches expected to use this tool to support their coaching work?

Listen for:

- o What are its distinguishing features?*
- o Is it available online?*
- o How is it linked to the district's algebra curriculum?*

14. You provided us with a copy of the {insert teacher tool}. In what ways are teachers expected to use this tool to support what they are learning through the coaching program?

Listen for:

- o What are its distinguishing features?*
- o Is it available online?*
- o How is it linked to the district's algebra curriculum?*

15. Can you describe any other tools (e.g., frameworks, video or other technology) that are used to support implementation of the coaching program?

Listen for:

- o Who is intended to use these tools and for what specific purposes?*
- o What limitations do they present?*
- o What additional resources, financial or otherwise, are needed to provide these resources?*

- o How, when, and by whom are these tools refined?*

16. Are there additional tools or resources you think are needed to improve the coaching program for teachers?

Coach Selection and Support

17. Can you describe how coaches are assigned to schools or teachers?

Listen for:

- o Who selects them (e.g., district-level staff, school-level staff, teachers)?*
- o Do you feel that you have sufficient input in determining which coaches work with teachers in your school?*
- o What criteria are used to select coaches? What criteria do you think should be used?*

18. What would you say are the characteristics of a successful Algebra I instructional coach?

Implementation Challenges

19. What are the major challenges your school has faced in implementing the coaching program? In what ways have you addressed these challenges?

Listen for:

- o What strategies did and did not work and why?*

20. What changes would you make to the coaching program to increase its success?

OUTCOMES OF THE INSTRUCTIONAL COACHING PROGRAM

Next, I would like to talk about possible outcomes of the instructional coaching program.

21. How is the success of the instructional coaching program measured?

Listen for:

- o Changes in observed teacher practices*
- o Student achievement measures*
- o Course grades or failure rates*
- o Graduation or drop-out rates*
- o Other metrics*

22. Has the program been successful according to these measures? Why or why not?

23. Does the coaching program appear to be more successful with certain types of teachers or students than others?

- **Which teachers or students have benefitted the most? Why do you think that is?**
- **Which teachers or students have benefitted the least? Why do you think that is?**

FINAL THOUGHTS AND CONCLUSION

OK, please take a step back to provide some key take-away thoughts from this interview today.

24. What do you think are the key components—the active ingredients—of a successful coaching program?

25. Do you have anything else that you would like to add before we conclude this interview?

Those are all the questions I have. Thank you for your time and for participating in this project.

PROMOTING STUDENT SUCCESS IN ALGEBRA I
 Instructional Coaching Topical Area
Math Department Chair Interview

| | |
|------------------------|---------------|
| Name: | Title: |
| District: | State: |
| | |
| Interviewed by: | Date: |

INTRODUCTION AND BACKGROUND

Good morning/afternoon. First of all, thank you so much for being here and for being willing to participate in this project for the U.S. Department of Education. Before we start, we would like to introduce ourselves, provide a little background on our work, and answer any questions you might have.

My name is [name], and this is [name of the other site visitor]. We are researchers from American Institutes for Research and Windwalker Corporation, organizations that conduct research and technical assistance in education. We are here today to interview you as part of a collaborative effort to provide program developers and administrators with information to promote student success in Algebra I. We are particularly interested in Algebra I because it's a gatekeeper course in that it's a prerequisite for subsequent high school mathematics and science courses considered essential for getting into college. So, it is an important stepping-stone for success in high school and college.

As part of this project for the U.S. Department of Education, we are speaking with district staff, school administrators, math department chairs/leaders, and teachers about the approach to instructional coaching practices and how it may contribute to student success in Algebra I. We're particularly interested in your perspective on how [district name] has contributed to instructional coaching for Algebra I education. The data we collect will be used to develop technical assistance tools to help program developers and administrators implement similar programs to support struggling students.

I'll talk more about the topics of this interview, but for now, are there any questions about the project or why we are here?

DESCRIPTION OF INTERVIEW PROCEDURE AND CONFIDENTIALITY

Next, I'd like to say a few things about the process for this discussion. During our session today, I'll be asking you some questions, and [another site visitor] will be taking notes on what you are saying. [S/he] will not record your name. If you don't mind, I would also like to record our conversation simply for note-taking purposes. No one outside of our project team will hear the recording; it will just be for our own reference. If you would like us to turn off the recorder at

any point, just let me know. Would that be OK?

I want to assure you that we will treat the information you provide in a confidential manner. The recorded interview will be transcribed by a member of the project team, and only selected research staff will have access to the data, except as required by law. We will not use your name or attribute any quotes to you, instead, we will use pseudonyms in practice profiles. All efforts will be made to keep the description of the site general enough so that a reader would never be able to determine the true name or identity of the site or individuals at the site. Therefore, no one who reads the profiles of practice will know that the statements came from you.

I'd like to ask you to sign a consent form before we begin. It outlines some of the issues I've just mentioned with regard to anonymity and confidentiality. Please take a minute to read it and let me know if you have any questions.

Are there any questions before we get started?

Notes to interviewer:

- Throughout the interview, possible probes are set aside following each general question. We would like to gather information relative to each of those probes. If, when the general question is asked, the respondent provides the information requested by the probes, you do not need to ask the probing questions. In addition to providing additional information, asking the probing questions may help move the interview pace or may prompt a less talkative respondent. Keep the tone conversational and comfortable.

- To the extent that this information can be retrieved from other data sources (e.g., school records) beforehand, document that information below prior to the interview. During the interview, prompt the Mathematics Department Chair to confirm its accuracy if his or her initial response does not do so.

BACKGROUND ON ROLE AND EXPERIENCE

Let's begin with some information about you.

1. Can you tell me a bit about your background and how you came to serve as a mathematics department chair/teacher leader for [school name]?

Listen for:

- o How long have you worked for [district name] and at [school name] specifically?*
- o How long have you served as the mathematics department chair/teacher leader?*
- o What experience do you have having teaching mathematics?*

2. Could you briefly describe your current role and primary job responsibilities?

Listen for:

- o What is your role with regard to professional development for mathematics teachers?*
- o What is your role with regard to instructional coaching for mathematics teachers?*

OK, thank you for sharing some information about yourself. For the remainder of the interview, I'd like to get your perspective on the instructional coaching activities for Algebra I specifically. I'd like you to focus on that subject area alone when you respond to these questions, OK?

Note to interviewer:

If the respondent is reluctant to speak to Algebra I specifically, try to focus the scope of the interview as closely as possible on Algebra I. For example, ask the respondent to speak to instructional coaching activities for math education in high schools before asking the respondent to provide perspective on math education more generally.

IMPETUS FOR AND DEVELOPMENT OF THE INSTRUCTIONAL COACHING PROGRAM

I'd like to get a general idea of the coaching program and how it was developed.

3. Do you know what the district's main reasons for developing the coaching program were?

Listen for:

- o To improve specific types of instructional practices in Algebra I?*
- o To support lesson planning?*
- o To support the implementation of algebra or other mathematics curriculum?*
- o To transfer knowledge and/or instructional practices emphasized in professional development to the classroom?*

4. **Were you involved in the development of the coaching program? If so, what was that process like and did you feel like your contributions were valued and reflected in the current model?**

Listen for:

- o Who was involved in the developing it, and what were their roles?*
- o What specific roles did district representatives have compared to school leaders or teachers?*
- o How long did it take to develop the program?*
- o How long has the coaching program been in place?*

5. **Could you explain any underlying philosophy or principles that guided the development of the coaching program?**

Listen for:

- o Extent to which philosophy/principles were informed by data and/or research*
- o Enactment of math content knowledge in the classroom*
- o Support for implementing specific instructional activities, including technology-based interventions*
- o Connection of other algebra professional development (e.g., workshops, seminars, PLCs) to the classroom*

6. **We understand that your district/school provides tools to support the implementation of instructional coaching for Algebra I. What was the process for developing these tools?**

Listen for:

- o Who was involved and what were their roles?*
- o Did school level staff have the opportunity to provide input?*

IMPLEMENTATION OF THE INSTRUCTIONAL COACHING PROGRAM

Now that we have a better sense of how the instructional coaching program was developed, I am interested in how it is implemented.

Implementation Features and Context

7. **Can you describe the key components of the instructional coaching program? What is the rationale behind these components?**

Listen for:

- o The coaching's setting—is it classroom based or school-based, or does it adhere to another format?*

- o The content of the coaching—what types of teacher knowledge and skills do the coaches focus on with teachers, and how is this content determined?*
- o The number of teachers with whom each coach works*
- o The amount of coaching time involved and how that time is scheduled*
- o The use of particular coaching activities, practices, and pedagogies*
- o Emphasis on one-on-one versus collaborative teacher coaching activities*
- o Use of technology, including video*

8. Can you describe how teachers are targeted to participate in the instructional coaching program? How does the district or school encourage or support participation?

Listen for:

- o Is it for volunteers or are teachers required to attend?*
- o Are particular types of teachers targeted (e.g., new teachers, struggling teachers, teacher leaders, teachers from different grade levels) to participate?*
- o What types of participation incentives does the district provide to teachers or schools?*
- o What types of participation incentives does the school provide to teachers?*

9. Can you briefly describe any other professional learning opportunities offered to Algebra I teachers in your school who receive the instructional coaching?

Listen for:

- o To what extent do Algebra I teachers participate in other opportunities?*
- o How do these other opportunities interface with the coaching program?*
- o How well do you think the instructional coaching activities and other professional development opportunities align?*

Tools Supporting Implementation

Now, we would like to ask specific questions about tools or resources that are used to support the implementation of the instructional coaching program.

10. You provided us with a copy of the {insert coach tool}. In what ways are coaches expected to use this tool to support their coaching work?

Listen for:

- o What are its distinguishing features?*
- o Is it available online?*
- o How is it linked to the district’s algebra curriculum?*

11. You provided us with a copy of the {insert teacher tool}. In what ways are teachers expected to use this tool to support what they are learning through the coaching program?

Listen for:

- o What are its distinguishing features?*
- o Is it available online?*
- o How is it linked to the district's algebra curriculum?*

12. Can you describe any other tools (e.g., frameworks, video or other technology) that are used to support implementation of the coaching program?

Listen for:

- o Who is intended to use these tools and for what specific purposes?*
- o What limitations do they present?*
- o What additional resources, financial or otherwise, are needed to provide these resources?*
- o How, when and by whom are these tools refined?*

Coach Selection and Support

13. Can you describe how coaches are assigned to schools or teachers?

Listen for:

- o To what extent are providers selected from outside of the district (e.g., consultants, external organizations) and to what extent are they district- or school-level staff?*
- o Who selects them (e.g., district-level staff, school-level staff, teachers)?*
- o Do you feel that you have sufficient input in determining which coaches work with teachers in your school?*
- o What criteria are used to select coaches? What criteria do you think should be used?*

14. What would you say are the characteristics of a successful Algebra I instructional coach?

15. What roles and responsibilities do you have in supporting the implementation of the coaching program?

Listen for:

- o Have you supervised program staff (e.g., coaches)? If so, how frequently do you meet with coaches individually or collectively? For what purpose?*
- o Have you overseen or directed any of the coaching activities?*

o Have you played a role in monitoring or evaluation? For example, do you observe coaching activities and provide feedback to a coaches?

16. If respondent or preliminary research indicates significant coaching responsibilities: What sorts of professional learning opportunities, training, or materials have you had to help you with your responsibilities related to the coaching program? Which of these professional learning opportunities have you found most useful for your work related to the coaching program?

Implementation Challenges

17. What are the major challenges that you as a math department chair have faced in implementing the coaching program? In what ways have you addressed these challenges?

Listen for:

o What strategies did and did not work and why?

18. What are the major challenges your school has faced in implementing the coaching program? In what ways have you addressed these challenges?

Listen for:

o What strategies did and did not work and why?

19. What changes would you make to the coaching program to increase its success?

OUTCOMES OF THE INSTRUCTIONAL COACHING PROGRAM

Next, I would like to talk about outcomes of the instructional coaching program.

20. How is the success of the instructional coaching program measured?

Listen for:

o Changes in observed teacher practices

o Student achievement measures

o Course grades or failure rates

o Graduation or drop-out rates

o Other metrics

21. Has the program been successful according to these measures? Why or why not?

22. Reflecting on the coaching program as a whole, in what ways has it helped Algebra I teachers in the school?

Listen for:

- o Student engagement or student-teacher relationships*
- o Teachers' own content knowledge*
- o Lesson planning for algebra instruction*
- o Overall pedagogical principles or techniques for Algebra I education*
- o Specific instructional practices or materials to teach a particular concept, or help students' overcome a learning challenge*

23. Does the coaching program appear to be more successful with certain types of teachers or students than others?

- Which teachers or students have benefitted the most? Why?**
- Which teachers or students have benefitted the least? Why?**

FINAL THOUGHTS AND CONCLUSION

OK, please take a step back to provide some key take-away thoughts from this interview today.

24. What do you think are the key components—the active ingredients—of a successful coaching program?

25. Do you have anything else that you would like to add before we conclude this interview?

Those are all the questions I have. Thank you for your time and for participating in this project.

PROMOTING STUDENT SUCCESS IN ALGEBRA I
Instructional Coaching Topical Area
Math Teacher Focus Group

| | |
|------------------------|---------------|
| Name: | Title: |
| District: | State: |
| | |
| Interviewed by: | Date: |

INTRODUCTION AND BACKGROUND

Good morning/afternoon. First of all, thank you so much for being here and for being willing to participate in this project for the U.S. Department of Education. Before we start, we would like to introduce ourselves, provide a little background on our work, and answer any questions you might have.

My name is [name], and this is [name of the other site visitor]. We are researchers from American Institutes for Research and Windwalker Corporation, organizations that conduct research and technical assistance in education. We are here today to interview you as part of a collaborative effort to provide program developers and administrators with information to promote student success in Algebra I. We are particularly interested in Algebra I because it's a gatekeeper course in that it's a prerequisite for subsequent high school mathematics and science courses considered essential for getting into college. So, it is an important stepping-stone for success in high school and college.

As part of this project for the U.S. Department of Education, we are speaking with district staff, school administrators, math department chairs/leaders, and teachers about the approach to instructional coaching practices and how it may contribute to student success in Algebra I. We're particularly interested in your perspective on how [school name] has contributed to instructional coaching for Algebra I education. The data we collect will be used to develop technical assistance tools to help program developers and administrators implement similar programs to support struggling students.

I'll talk more about the topics of this interview, but for now, are there any questions about the project or why we are here?

DESCRIPTION OF INTERVIEW PROCEDURE AND CONFIDENTIALITY

Next, I'd like to say a few things about the process for this discussion. During our session today, I'll be asking you some questions, and [another site visitor] will be taking notes on what you are saying. [S/he] will not record your names. If you don't mind, I would also like to record our conversation simply for note-taking purposes. No one outside of our project team will hear the recording; it will just be for our own reference. If you would like us to turn off the recorder at

any point, just let me know. Would that be OK?

I want to assure you that we will treat the information you provide in a confidential manner. The recorded interview will be transcribed by a member of the project team, and only selected research staff will have access to the data, except as required by law. We will not use your name or attribute any quotes to you, instead, we will use pseudonyms in practice profiles. All efforts will be made to keep the description of the site general enough so that a reader would never be able to determine the true name or identity of the site or individuals at the site. Therefore, no one who reads the profiles of practice will know that the statements came from you.

I'd like to ask you to sign a consent form before we begin. It outlines some of the issues I've just mentioned with regard to anonymity and confidentiality. Please take a minute to read it and let me know if you have any questions.

Are there any questions before we get started?

Notes to interviewer:

- Throughout the interview, possible probes are set aside following each general question. We would like to gather information relative to each of those probes. If, when the general question is asked, respondents provide the information requested by the probes, you do not need to ask the probing questions. In addition to providing additional information, asking the probing questions may help move the interview pace or may prompt a less talkative respondent. Keep the tone conversational and comfortable.

- To the extent that this information can be retrieved from other data sources (e.g., school records) beforehand, document that information below prior to the interview. During the interview, prompt the Mathematics Teachers to confirm its accuracy if their initial response does not do so.

BACKGROUND ON ROLE AND EXPERIENCE

Let's begin with some information about you. I'd like to get started with some basic questions about your experience and background.

1. First, could each of you tell me how long you have taught in this school and district? What math classes do you teach?

Listen for:

- Percentage of time focused on Algebra I
- Number of different classes for which the teachers need to prepare

For the remainder of the interview, I'd like to get your perspective on the instructional coaching activities for Algebra I specifically. I'd like you to focus on that subject area when you respond to these questions, OK?

Note to interviewer:

If respondents are reluctant to speak to Algebra I specifically, try to focus the scope of the interview as closely as possible on Algebra I. For example, ask respondents to speak to instructional coaching activities for math education in high schools before asking them to provide perspective on math education more generally.

IMPLEMENTATION OF INSTRUCTIONAL COACHING PROGRAM

I'd like to know more about your experience with the instructional coaching program.

Implementation Features and Context

2. If the program has existed for more than one year: **How many years have you been participating in the instructional coaching program?** If more than one year: **Is this year's program different in any way? If yes: How so?**
3. **Were you involved in the development of the instructional coaching program? If so, did you feel like your contributions were valued and reflected in the current model?**
4. **What kinds of coaching activities do you participate in and which of these do you find most useful?**

Listen for:

- Unit, lesson, or task planning
- Lesson delivery
- Presentation of algebra content (clarity, coherence, precision of language, explanations)
- Use of examples and counterexamples
- Techniques to identify and debug student misconceptions

- o *Techniques to promote student engagement*
- o *Lesson summary or closure*
- o *Lesson reflection to inform future lesson planning*
- o *Analysis of student work or student assessment data*

5. **Can you give me a specific example of the type of feedback you might get from the coach? How do you apply this to your classroom?**
6. **If respondent indicates an observation-based activity: Please walk me through the procedure for the observation-based activity from beginning to end.**

Listen for:

- o *How is the observation conducted (e.g., in person, by video)?*
- o *How is feedback provided?*
- o *Is there any follow-up afterward? If yes: Please explain what the follow-up entails.*
- o *What are teachers expected to do as a result of this activity?*

7. **How often do you meet with your coach to participate in any of the activities previously described? Do these meetings take place throughout the year?**
8. **How well do the instructional coaching activities align with training from other types of professional development opportunities?**
9. **Think about the coach that you work with the most. Do you think that she or he is a good match for your school and your students' needs, specifically?**

Listen for:

- o *Do you feel comfortable discussing classroom challenges with him or her?*
- o *Has he or she established an effective rapport with adults and student in your school?*
- o *Does he or she have teaching experience that is relevant for the challenges you face in your classroom?*

Tools Supporting Implementation

10. **You provided us with a copy of the {planning tool}. In what ways do you use this tool to support what you are learning through the coaching program?**

Listen for:

- o *What are the tool's distinguishing features?*
- o *Is it available online?*
- o *How is it linked to the district's algebra curriculum?*
- o *Have you adapted it in any way?*

11. You provided us with a copy of the {reference tool}. In what ways do you use this tool to support what you are learning through the coaching program?

Listen for:

- o What are the tool's distinguishing features?*
- o Is it available online?*
- o How is it linked to the district's algebra curriculum?*
- o Have you adapted it in any way?*

12. Can you describe any other tools (e.g., frameworks, video or other technology) that are used to support implementation of the coaching program?

Listen for:

- o How are these tools used and for what purposes?*
- o What limitations do they present?*
- o What additional resources, financial or otherwise, are needed to provide these resources?*
- o How, when, and by whom are these tools refined?*

13. What additional activities, tools or supports do you think are necessary to improve the coaching program? Which of these would make your job easier?

Implementation Challenges

14. What are the major challenges you, as a teacher, have faced regarding the coaching program's implementation? In what ways have you addressed these challenges?

Listen for:

- o What strategies did and did not work and why?*

15. Were there any coaching activities that you didn't really find worthwhile? If so, why don't you think they worked in your situation?

Listen for:

- o How did they fall below expectations?*
- o What can be done to make them successful or worthwhile?*

16. What changes would you make to the coaching program to increase its success?

OUTCOMES OF INSTRUCTIONAL COACHING PROGRAM

Next, I would like to talk about outcomes of the instructional coaching program.

17. Reflecting on the coaching program as a whole, in what ways has it helped Algebra I teachers at your school?

Listen for:

- o Student engagement or student-teacher relationships*
- o Teachers' own content knowledge*
- o Lesson planning for algebra instruction*
- o Overall pedagogical principles or techniques for Algebra I education*
- o Specific instructional practices or materials to teach a particular concept, or help students' overcome a learning challenge*

18. Do you think the coaching program has benefitted certain types of students more than others? If so, which students seemed to benefit more than others, and why do you think this was the case?

FINAL THOUGHTS AND CONCLUSION

OK, please take a step back to provide some key take-away thoughts from this interview today.

19. What do you think are the key components—the active ingredients—of a successful instructional coaching program for Algebra I teachers?

Listen for:

- o Specific activities/practices*
- o Policies*

20. Do you have anything else that you would like to add before we conclude this focus group?

Those are all the questions I have. Thank you for your time and for participating in this project.