

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

**Appendix E: Protocols for
Double-Dose Algebra**

March 2014

PROMOTING STUDENT SUCCESS IN ALGEBRA I
Double-Dose Algebra Topical Area
District Mathematics Coordinator 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 teachers, mathematics department leaders, school administrators, and district staff about the "double dose" or "double period" algebra course. With respect to district officials, we are interested in your perspectives on the impetus for the double-dose algebra program; how the program was implemented; how tools and artifacts, such as lesson plans, were developed; and the program's success at achieving its goals. To be more specific, I'll be asking you about topics such as your roles and responsibilities and how you support the development and implementation of your double-dose algebra program at [school name]. 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 18 hours for double dose algebra, 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. Could you tell me a bit about your background and how you came to serve as a mathematics coordinator for this school district?**

Listen for:

- o How long have you worked in the district?*
- o How long have you served in your current role?*

- 2. Please describe your current role in the district. What are your primary responsibilities?**

Listen for:

- o What are the main priorities for your work?*
- o Do you work with the school leaders or teachers at [school name]?*

IMPETUS FOR AND DEVELOPMENT OF THE DOUBLE-DOSE ALGEBRA PROGRAM

Now I'd like to know more about the development of the double-dose algebra program at [school name].

- 3. What prompted [school name] to consider adopting a double-dose algebra program?**

Listen for:

- o Was the program part of a larger district initiative?*
- o What was the rationale for using this strategy and why?*
- o Did the district participate in the decision-making process? If so, how?*

- 4. Were you involved in the development of the double-dose algebra program? If so, do you feel like your contributions were valued and reflected in the current program?**

- 5. Can you briefly describe how the double-dose algebra program at [school name] was developed and what role the district played in its development?**

Listen for:

- o Who was involved in developing the program 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?*

- *Did the district facilitate development across schools or support each school individually in developing its own programming to suit school-specific needs?*

6. What role (if any) did the district play in selecting or developing curricular or supplementary resources for the double-dose algebra program at [school name]?

Listen for:

- *Who was involved?*
- *How much time was needed for curriculum development?*
- *Who was responsible for developing the resources?*

7. How was the double-dose algebra program initially funded, and how is it being sustained?

Listen for:

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

IMPLEMENTATION OF DOUBLE-DOSE ALGEBRA PROGRAM

I am now interested in understanding the district’s role in supporting [school name’s] implementation of double-dose algebra.

Implementation Features and Context

8. Can you describe any district requirements or guidelines for how double-dose algebra courses should be implemented? What is the rationale behind these requirements?

Listen for:

- *Which students participate and for how long*
- *Which teachers and other staff members participate*
- *The program’s setting—is it classroom based, or does it adhere to another format?*
- *Minimum or maximum class size*
- *The amount of instructional time involved and how that time is scheduled*
- *The use of particular instructional approaches*
- *Teacher planning and collaboration*

9. Can you describe how students are recruited or enrolled in the course? Is there a specific district policy that dictates which students take double-dose algebra?

Listen for:

- *To what extent does your school adhere to the policy?*

- *Are students enrolled on the basis of a measure of prior proficiency or performance? If so, what measure? What is the cut point?*

Tools Supporting Implementation

Now, we would like to ask specific questions about tools or resources that the district provides to support [school name's] implementation of double-dose algebra.

10. Has the district developed a specific curriculum for the double-dose algebra course? Can you describe the curriculum?

Listen for:

- *Are there stages to the curriculum? How does it unfold over the course of the year?*
- *How does the curriculum interface with the standard Algebra I course?*
- *Are the curricular resources required or suggested for teachers?*

11. You have already shared with us a specific lesson plan or curricular tool in advance of this interview. Can you describe how this tool is intended to be used in the classroom?

12. What are the algebra-related learning objectives for this curricular tool, and how does it address those learning objectives?

13. What are the limitations of this curricular tool and how might the tool be improved?

14. Can you describe any tools (e.g., formative assessments, software or other technology) that the district provides for teachers to use to assess what students need most during extended learning time?

Listen for:

- *How often do teachers use these tools and for what specific purposes?*
- *To what extent are these tools useful in identifying and addressing student needs?*

15. Can you describe any other tools or resources that the district provides to teachers or school leaders such as additional planning time, textbooks, software or technology, or student data to support implementation?

Listen for:

- *What was the intended purpose of the resource?*
- *Are teachers or school leaders required to use the resource?*
- *What resources, financial or otherwise, are needed to provide these resources?*

16. What additional tools or resources are needed based on your experience?

Teacher Selection and Support

Now, we would like to ask specific questions about how teachers are selected to teach double-dose algebra and the ways in which you support them beyond providing the tools and resources we've discussed.

17. What is the district's role in hiring or selecting teachers to teach double-dose algebra?

Listen for:

- o What criteria are used to select teachers for the course?*

18. What are the characteristics of a successful double-dose teacher?

19. What types of training or professional learning opportunities does the district provide for double-dose teachers? What about mathematics department chairs or instructional coaches? School leaders?

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?*

20. In what other ways do you as a district mathematics coordinator support double-dose algebra teachers, teacher leaders (e.g., mathematics department chairs), or school administrators?

Listen for:

- o How frequently does the district math coordinator meet with them individually or collectively? For what purpose?*
- o To what extent does the district math coordinator monitor progress (at the school, teacher, and student levels) in helping struggling students succeed in the course throughout the academic year?*

- *Does the district math coordinator serve as a coach to double-dose teachers? Does she or he conduct classroom observations or walkthroughs? If so, how often? Does she or he provide feedback to teachers and/or administrators?*

21. Do you feel that administrators and teachers at [school name] are adequately supported in implementing the program?

Listen for:

- *Did you receive any specific training on how to administer and monitor a double-dose algebra program?*
- *What additional support is needed?*

Implementation Challenges

Now, we would like to ask specific questions about the challenges you have faced in supporting [school name's] implementation of the program and how the district has addressed these challenges.

22. What are the major challenges that teachers and/or administrators at [school name] face in implementing the program? How does the district help them address these challenges?

Listen for:

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

23. What challenges has the district encountered in supporting this program? In what ways have you addressed these challenges?

Listen for:

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

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

OUTCOMES OF DOUBLE-DOSE ALGEBRA PROGRAM

Next, I would like to talk about outcomes of the double-dose program.

25. How is success of the double-dose program measured?

Listen for:

- *Course grades or failure rates*
- *Student achievement measures*
- *Graduation or drop-out rates*

o *Other metrics*

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

27. Does the program appear more successful for some groups of students than others?

If yes:

Which students benefit the most? Why?

Which students benefit the least? Why?

FINAL THOUGHTS AND CONCLUSION

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

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

29. What do you think that struggling Algebra I students need the most?

30. 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
Double-Dose Algebra 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 teachers, mathematics department leaders, school administrators, and district staff about the "double dose" or "double period" algebra course. With respect to your role as principal, we are interested in your perspectives on the impetus for the double-dose algebra program; how the program was implemented; how tools and artifacts, such as lesson plans, were developed; and the program's success at achieving its goals. To be more specific, I'll be asking you about topics such as your roles and responsibilities and how you support the development and implementation of your double-dose algebra program at [school name]. 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 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 principal at [school name]?**

Listen for:

- o How long have you worked at [school name]?*
- o How long have you served as principal?*

IMPETUS FOR AND DEVELOPMENT OF THE DOUBLE-DOSE ALGEBRA PROGRAM

Now I'd like to know more about the development of the double-dose algebra program.

- 2. What prompted the school to consider adopting a double-dose algebra program?**
- 3. Were you involved in the development of the double-dose algebra program? If so, do you feel like your contributions were valued and reflected in the current program?**
- 4. Can you briefly describe how the double-dose algebra program at your school was developed?**

Listen for:

- o Who else was involved in developing the program 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?*

- 5. Can you describe briefly how curricular or supplementary resources for the double-dose algebra program at your school were selected or developed?**

Listen for:

- o Who was involved?*
- o How much time was needed for curriculum development?*
- o Who was responsible for developing the resources?*

- 6. How was the double-dose algebra program initially funded, and how is it being sustained?**

Listen for:

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

IMPLEMENTATION OF DOUBLE-DOSE ALGEBRA PROGRAM

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

Implementation Features and Context

- 7. Can you describe the required components for how double-dose algebra courses should be implemented? What is the rationale behind these requirements?**

Listen for:

- *Which students participate and for how long*
- *Which teachers and other staff members participate*
- *The program's setting—is it classroom based, or does it adhere to another format?*
- *Minimum or maximum class size*
- *The amount of instructional time involved and how that time is scheduled*
- *The use of particular instructional approaches*
- *Teacher planning and collaboration*

- 8. Can you describe how students are recruited or enrolled in the course? Is there a specific policy that dictates which students take double-dose algebra?**

Listen for:

- *To what extent does your school adhere to the policy?*
- *Are students enrolled on the basis of a measure of prior proficiency or performance? If so, what measure? What is the cut point?*

- 9. Can you briefly describe any other supplementary learning opportunities offered at [school name] for students who may be underprepared for Algebra I?**

Listen for:

- *Extent to which students participate in other opportunities*
- *Whether the school offers general mathematics courses for struggling students who are not proficient in skills considered essential for Algebra I (e.g., fractions, integers, number sense)*
- *How these other opportunities interface with double-dose algebra or a standard Algebra I course*

Tools Supporting Implementation

Now, we would like to ask specific questions about any tools or resources that your school uses to support implementation of the double-dose algebra.

10. Does your school use a specific curriculum for the double-dose algebra course? Can you briefly describe the curriculum?

Listen for:

- o Are there stages to the curriculum? How does it unfold over the course of the year?*
- o How does the curriculum interface with the standard Algebra I course?*
- o Are the curricular resources required or suggested for teachers?*

11. Can you describe any curricular tools that your school has provided to teachers and the ways in which they are expected to use these tools?

Listen for:

- o Are teachers required to use the tool?*
- o Are the curricular tools useful?*

12. Can you describe any tools (e.g., formative assessments, software or other technology) that your school uses assess what students need most during extended learning time?

Listen for:

- o How often do teachers use these tools and for what specific purposes?*
- o To what extent are these tools useful in identifying and addressing student needs?*

13. Can you describe any other tools or resources provided to teachers such as additional prep time, textbooks, software or technology, or student data to support implementation?

Listen for:

- o What was the intended purpose of the resource?*
- o Are teachers required to use the resource?*
- o What additional resources, financial or otherwise, are needed to provide these teacher resources?*

14. What additional tools or resources are needed based on your experience?

Teacher Selection and Support

Now, we would like to ask specific questions about how teachers are selected to teach double-dose algebra and the ways in which you support them beyond providing the tools and resources we've discussed.

15. Can you describe how teachers are selected to teach double-dose algebra?

Listen for:

- o What criteria are used to select teachers for the course?*

16. What types of training or professional learning opportunities do teachers 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. In what ways do you as a principal support double-dose algebra teachers and teacher leaders (e.g., math department chairs)?

Listen for:

- o Does the principal meet with them individually or collectively? For what purpose?*
- o To what extent does the principal monitor teachers' progress in helping struggling students succeed in the course throughout the academic year?*
- o Does the principal serve as an instructional leader to double-dose teachers and teacher leaders? Does she or he conduct classroom observations or walkthroughs? If so, how often? Does she or he provide feedback to teachers?*

18. Do you feel that you are adequately supported by the district administration to implement the program?

Listen for:

- o Do you receive any specific training or guidance on how to administer and monitor a double-dose algebra program?*
- o In what ways are you supported, and who provides the support?*
- o What additional support would you like to receive?*

Implementation Challenges

Now, we would like to ask specific questions about the challenges you have faced in implementing the program and how your school has addressed these challenges.

19. What are the major challenges your school has faced in implementing the 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 program to increase its success?

OUTCOMES OF DOUBLE-DOSE ALGEBRA PROGRAM

Next, I would like to talk about outcomes of the double-dose program.

21. How is success of the double-dose program measured?

Listen for:

- o Course grades or failure rates*
- o Student achievement measures*
- 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 program appear more successful for some groups of students than others?

If yes:

Which students benefit the most? Why?

Which students benefit 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 program?

25. What do you think that struggling Algebra I students need the most?

26. 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
Double-Dose Algebra Topical Area
Mathematics 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 teachers, mathematics department leaders, school administrators, and district staff about the "double dose" or "double period" algebra course. With respect to your role as a mathematics chair, we are interested in your perspectives on the impetus for the double-dose algebra program; how the program was implemented; how tools and artifacts, such as lesson plans, were developed; and the program's success at achieving its goals. To be more specific, I'll be asking you about topics such as your roles and responsibilities and how you support the development and implementation of the double-dose algebra program at [school name]. 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 Coordinator 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 mathematics department chair at [school name]?**

Listen for:

- o How long have you worked at [school name]?*
- o How long have you served as the mathematics department chair?*

IMPETUS FOR AND DEVELOPMENT OF THE DOUBLE-DOSE ALGEBRA PROGRAM

Now I'd like to know more about the development of the double-dose algebra program.

- 2. What prompted the school to consider adopting a double-dose algebra program?**
- 3. Were you involved in the development of the double-dose algebra program? If so, do you feel like your contributions were valued and reflected in the current program?**
- 4. Can you describe in detail how the double-dose algebra program at your school was developed?**

Listen for:

- o Who else was involved in developing the program 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?*

- 5. Can you describe in detail how curricular or supplementary resources for the double-dose algebra program at your school were selected or developed?**

Listen for:

- o Who was involved?*
- o How much time was needed for curriculum development?*
- o Who was responsible for developing the resources?*

- 6. How was the double-dose algebra program initially funded, and how is it being sustained?**

Listen for:

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

IMPLEMENTATION OF DOUBLE-DOSE ALGEBRA PROGRAM

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

Implementation Features and Context

- 7. Can you describe the required components for how double-dose algebra courses should be implemented? What is the rationale behind these requirements?**

Listen for:

- *Which students participate and for how long*
- *Which teachers and other staff members participate*
- *The program's setting—is it classroom based, or does it adhere to another format?*
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- *Teacher planning and collaboration*

- 8. Can you describe how students are recruited or enrolled in the course? Is there a specific policy that dictates which students take double-dose algebra?**

Listen for:

- *To what extent does your school adhere to the policy?*
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- 9. Can you briefly describe any other supplementary learning opportunities offered at [school name] for students who may be underprepared for Algebra I?**

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- *Extent to which students participate in other opportunities*
- *Whether the school offers general mathematics courses for struggling students who are not proficient in skills considered essential for Algebra I (e.g., fractions, integers, number sense)*
- *How these other opportunities interface with double-dose algebra or a standard Algebra I course*

Tools Supporting Implementation

Now, we would like to ask specific questions about any tools or resources that your school uses to support implementation of the double-dose algebra.

10. Has the school developed a specific curriculum for the double-dose algebra course? Can you describe the curriculum?

Listen for:

- o Are there stages to the curriculum? How does it unfold over the course of the year?*
- o How does the curriculum interface with the standard Algebra I course?*
- o Are the curricular resources required or suggested for teachers?*

11. You have already shared with us a specific lesson plan or curricular tool in advance of this interview. Can you describe how this tool is intended to be used in the classroom?

12. What are the algebra-related learning objectives for this curricular tool, and how does it address those learning objectives?

13. What are the limitations of this curricular tool and how might the tool be improved?

14. Can you describe any tools (e.g., formative assessments, software or other technology) that teachers use to assess what students need most during extended learning time?

Listen for:

- o How often do teachers use these tools and for what specific purposes?*
- o To what extent are these tools useful in identifying and addressing student needs?*

15. Can you describe any other tools or resources provided to teachers such as additional prep time, textbooks, software or technology, or student data to support implementation?

Listen for:

- o What was the intended purpose of the resource?*
- o Are teachers required to use the resource?*
- o What additional resources, financial or otherwise, are needed to provide these teaching resources?*

16. What additional tools or resources are needed based on your experience and why?

Teacher Selection and Support

Now, we would like to ask specific questions about how teachers are selected to teach double-dose algebra and the ways in which you support them beyond providing the tools and resources we've discussed.

17. Can you describe how teachers are selected to teach double-dose algebra?

Listen for:

- o What criteria are used to select teachers for the course?*

18. What are the characteristics of a successful double-dose teacher?

19. What types of training or professional learning opportunities do teachers 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?*

20. In what ways do you as a math department chair support double-dose algebra teachers?

Listen for:

- o How frequently does the math department chair meet with them individually or collectively? For what purpose?*
- o To what extent does the math department chair monitor teachers' progress in helping struggling students succeed in the course throughout the academic year?*
- o Does the math department chair serve as a coach to double-dose teachers? Does she or he conduct classroom observations or walkthroughs? If so, how often? Does she or he provide feedback to teachers?*

21. Do you feel that you are adequately supported by the school or district administration to implement the program?

Listen for:

- o Do you receive any specific training on how to administer and monitor a double-dose algebra program?*

- *In what ways are you supported, and who provides the support?*
- *What additional support would you like to receive?*

Implementation Challenges

Now, we would like to ask specific questions about the challenges you have faced in implementing the program and how your school has addressed these challenges.

22. What are the major challenges teachers face in a double-dose algebra classroom? How do you as a math department chair help them address these challenges?

Listen for:

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

23. What are the major challenges your school has faced in implementing the program? In what ways has your school addressed these challenges?

Listen for:

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

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

OUTCOMES OF DOUBLE-DOSE ALGEBRA PROGRAM

Next, I would like to talk about outcomes of the double-dose program.

25. How is success of the double-dose program measured?

Listen for:

- *Course grades or failure rates*
- *Student achievement measures*
- *Graduation or drop-out rates*
- *Other metrics*

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

27. Does the program appear more successful for some groups of students than others?

If yes:

Which students benefit the most? Why?

Which students benefit the least? Why?

FINAL THOUGHTS AND CONCLUSION

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

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

29. What do you think that struggling Algebra I students need the most?

30. 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
Double-Dose Algebra Topical Area
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 teachers, mathematics department leaders, school administrators, and district staff about the "double dose" or "double period" algebra course. With respect to teachers, we are interested in your perspectives on the impetus for the double-dose algebra program; how the program was implemented; how tools and artifacts, such as lesson plans, were developed; and the program's success at achieving its goals. To be more specific, I'll be asking you about topics such as your roles and responsibilities and your experience as a double-dose algebra teacher at [school name]. 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 Teachers to confirm its accuracy if their initial response does not do so.

BACKGROUND IN TEACHING AND EXPERIENCE

Let's begin with some information about you.

- 1. Could you tell me a bit about your teaching experience and how you came to serve as a double-dose algebra teacher at [school name]?**

Listen for:

- o How long have you worked at [school name]?*
- o How long have you been teaching algebra?*
- o How long have you been teaching double-dose algebra?*
- o Do you have a degree in mathematics or mathematics education?*

- 2. Do you currently teach any mathematics classes?**

If yes:

Are you currently teaching Algebra I?

Are you teaching any of the double-dose algebra courses?

IMPETUS FOR AND DEVELOPMENT OF THE DOUBLE-DOSE ALGEBRA PROGRAM

Now I'd like to know more about the development of the double-dose algebra program.

- 3. What prompted the school to consider adopting a double-dose algebra program?**
- 4. Were you involved in the development of the double-dose algebra program or the selection/development of curricular or supplementary resources to support the program?**

If yes:

- 4a. Can you describe the role you played?**

Listen for:

- o Who was involved?*
- o How much time was needed for curriculum development?*
- o Who was responsible for developing the resources?*

- 4b. Do you feel like your contributions were valued and reflected in the current program?**

If no:

4c. In what ways would you have liked to participate in the development of the double-dose algebra program or in the selection/development of resources to support the program's implementation?

IMPLEMENTATION OF DOUBLE-DOSE ALGEBRA PROGRAM

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

Implementation Features and Context

5. Can you describe the ways in which double-dose algebra courses are expected to be implemented?

Listen for:

- Which students participate and for how long*
- Which teachers and other staff members participate*
- The program's setting—is it classroom based, or does it adhere to another format?*
- Minimum or maximum class size*
- The amount of instructional time involved and how that time is scheduled*
- The use of particular instructional approaches*
- Teacher planning and collaboration*

6. In what ways (if any) does actual implementation of the double-dose algebra courses depart from these expectations?

7. Can you describe how students are recruited or enrolled in the course? Is there a specific policy that dictates which students take double-dose algebra?

Probe if not mentioned:

- What is the policy? Are students enrolled on the basis of a measure of prior proficiency or performance? If so, what measure? What is the cut point?*

8. Do you believe this course placement policy or practice enrolls the right students in double-dose algebra—students who ultimately benefit from the course?

Tools Supporting Implementation

Now we would like to ask specific questions about tools or resources you use to support implementation of your double-dose algebra program.

9. Is there a specific curriculum that double-dose algebra teachers follow?

Listen for:

- o Are there stages to the curriculum? How does it unfold over the course of the year?*
- o How does the curriculum interface with the standard Algebra I course?*
- o Are the curricular resources required or suggested for teachers?*

10. You have already shared with us a specific lesson plan or curricular tool in advance of this interview. Can you describe how you use this lesson plan in the classroom?

Listen for:

- o Is the lesson plan merely a guide or a step-by-step instructional tool?*
- o In what ways do teachers find the lesson plan useful?*

11. What are the algebra-related learning objectives for this lesson plan or curricular tool, and how does it help you meet those learning objectives?

12. What are the limitations of this curricular tool and how might the tool be improved?

13. Do you use any tools to assess what students need most during this extended learning time (e.g., formative assessments, software or other technology)?

Listen for:

- o How often do teachers use these tools and for what specific purposes?*
- o To what extent are these tools useful in identifying and addressing student needs?*

14. To what extent do you make use of any other tools or resources provided to teachers, such as additional prep time, textbooks, software or technology, or student data, to support implementation?

Listen for:

- o What was the intended purpose of the resource?*
- o Are teachers required to use the resource?*
- o What additional resources, financial or otherwise, are needed to provide these teaching resources?*

15. What additional tools or resources are needed based on your experience and why? What types of tools or resources would help you do your job?

Double-Dose Algebra Instruction

Now, we would like to ask specific questions about your instruction for double-dose algebra.

16. What types of professional learning opportunities did you receive to support double-dose algebra instruction?

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. Are there guidelines for how you should use the extra instructional time?

Listen for:

- o What are the guidelines?*
- o To what extent do teachers follow these guidelines?*

18. To what extent do teachers at [school name] collaborate or coordinate their planning for double-dose algebra?

Listen for:

- o What is the structure and process for collaboration among teachers (e.g., professional learning communities)?*
- o Is collaboration horizontal only or vertical (i.e., across grades) as well?*

19. To what extent do you align your instruction to what students are learning in their standard Algebra I class?

20. We talked earlier about the course placement policy or practice for enrolling students in double-dose algebra. How does this course placement policy or practice affect your instruction in the classroom?

21. How do you tailor your instruction to meet the individual needs of your students?

Listen for:

- *What kinds of activities, exercises, or instructional approaches are used for students with different needs?*

22. Do you feel that you are adequately supported by the school or district administration to implement the program?

Listen for:

- *In what ways are you supported, and who provides the support?*

23. In what additional ways would you like the school or district administration to support your double-dose algebra instruction?

Implementation Challenges

Now, we would like to ask specific questions about the challenges you have faced in implementing the program and how you have addressed these challenges.

24. What are the major challenges you face as teachers in a double-dose algebra classroom? In what ways have you addressed these challenges?

Listen for:

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

25. What are the major challenges your school has faced in implementing the program? In what ways has your school addressed these challenges?

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If yes:

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FINAL THOUGHTS AND CONCLUSION

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

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

31. What do you think that struggling Algebra I students need the most?

32. 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.