

Final Project

by

Max Hodgen

April 25, 2010

LT 716

Contents

Project Proposal	Pages 3 – 5
Design Document	Pages 6 – 9
Production Document	Pages 10 – 12
Develop and Deliver Document	Page 13 – 14
Appendix	Pages 15 – 16
Reflective Journal	Pages 17 – 20

Project Proposal

Introduction

The Madison Central school district strives to educate all students to fully achieve their personal and academic potential as lifelong learners skilled in communication, problem solving, and global responsibility. In an effort to maximize the academic potential of our students, it is important to align Madison Central's math curriculum with the state content standards. I see the potential to strengthen our math curriculum by identifying gaps in instruction throughout the district. Furthermore, I believe it is only a matter of time before the Federal Government's present proposal of mandating common core standards across the nation becomes a reality.

A valuable assessment tool, Achievement Series, can be utilized to review the scope and sequence of our math curriculum k-12; identifying the strengths and gaps in learning within the instruction. By identifying learning gaps, we could effectively map out our math curriculum; assuring alignment with the state content standards and better fulfilling the mission of our district. I propose devoting four, two hour blocks of the district's in-service time to training the instructors of the math department on how to incorporate Achievement Series as part of their formal assessments.

As a high school math instructor at Madison Central I believe that we owe it to our students to investigate the scope and sequence of our math curriculum district wide. Achievement Series is a great starting point in the review process; it will provide meaningful data that is compiled for easy evaluation. The following proposal contains: the project definition, schedule and budget, and qualifications.

Project Definition

The project goal is to train all of Madison Central's math teachers to use Achievement Series as part of their formal assessments in class. The use of Achievement Series will allow the district to gather and compile data for every student relative to their academic performance in mathematics. This data can thus serve as the starting point for a larger goal of the district; which is aligning its math curriculum to the South Dakota content standards. Achievement Series is a great choice for our district because it is provide free by the state and all of the assessments are codified according to the South Dakota content standards. The audience for instruction would include every math instructor in the district. Most are technically proficient and appear to have a willingness to learn and use new technologies.

The instruction will focus on four outcomes:

1. Create classes and input students into Achievement Series.

2. To create, edit, and share tests from the provided test bank of content standards.
3. To input questions from outside resources such as Exam View.
4. How to analyze the compiled data.

The final instructional product will consist of training sessions and tutorials of how to implement Achievement Series into the classroom. The training sessions consist of four two hour work-shops conducted during in-services throughout the upcoming year. Learners will be guided in a face-to-face setting by an instructor on meeting the four outcomes stated above. Learners will be encouraged to bring in relevant content so their creations can be implemented and then further reviewed during subsequent training sessions (#4). PowerPoint or OneNote will be utilized by the instructor during the group in-services. The second component will consist of a OneNote tutorial that will be placed on the districts share drive. The OneNote notebook can be divided into four sections covering the previously state outcomes, and the sections can then be divided into pages highlighting specific steps. This tutorial will provide learners a valuable resource if they get stuck on their own.

Schedule and Budget

Timeline

March 20	Proposal Submitted
March 27	Objectives submitted for review
April 2	Activities and Assessments submitted for review
April 9	OneNote Tutorial submitted for review
April 16	Complete revisions to the activities, assessments, and tutorial
April 23	Pilot Test
April 30	Complete final revisions
May 7	Deliver final product

Cost

The Madison Central school district pays \$16.80/hr for curriculum development conducted outside regular school operating hours. Since the service of Achievement Series is provided free and all other necessary equipment/software is already provide by the district the only costs for this project would include: the development of the instructional product and the delivery of instruction. I estimate a total of 20 hours developing the product and eight hours of provide instruction, resulting in a total cost of \$470.40.

Assumptions

To accomplish the goal of gathering data from students, the instructors participating must buy into the instruction. The administration must reiterate the importance of aligning the curriculum with the content standards and that the first step in that process is gathering data using Achievement Series. If we wish to effectively map our curriculum we need up-to-date data reflecting the achievement of students in every grade. Finally, it is assumed that the Department of Education will continue to fund Achievement Series for South Dakota public schools.

Qualifications

I have a B.S. in Technology Management, a B.S. in Physics, and am currently working on a M.S. in Educational Technology. I have been teaching high school mathematics and science for the past 11 years. For the past four years I have been using Achievement Series in the classroom and have presented the benefits of incorporating it into educator's assessments at multiple forums throughout the state.

Design Document

Executive Summary

One component of Madison Central's mission is to educate all students to fully achieve their academic potential. This instructional workshop will devote four, two hour blocks of the district's in-service time to training the instructors of the math department on how to incorporate Achievement Series as part of their formal assessments. The Achievement Series workshop will enable the math educators in Madison Central's school district to gather data on the academic performance of its students in mathematics. This data can then be used to guide the administration to better align the districts mathematics curricula with the South Dakota content standards. The project goal of educating math instructors to utilize Achievement Series in their classrooms for assessments is in essences the initial process of a larger goal for the district.

Each training session will progress in a linear fashion requiring the participants to develop assessments specific to their classrooms. Each successive workshop in the training will allow participants an opportunity to present their finished products to the group. Learners in the workshop will be actively engaged throughout the process. The key deliverables of the instruction will be demonstrated using OneNote. The learners will be guided through a step-by-step process on how to meet the objectives of the training, which are outlined below. They will be provided a two week time span between the subsequent training sessions to apply the training in their classroom.

Learning need/market opportunity

Achievement Series is a web based assessment tool provided free to all South Dakota public schools. Schools opting to use Achievement Series are provided with a site identification number and user passwords for each individual educator and student. The assessment questions were developed by a collection of educators throughout the state and classified according to the content standards. Additional questions can be imported into Achievement Series by the educator on their own or through supplemental materials such as Exam View.

Using Achievement Series can help assist curriculum designers in an effort to better fulfill the district's mission. Currently, as a district we are struggling to identify gaps in learning. Mapping the scope and sequence of our math curriculum has been a difficult task in the past. Most attempts were met with resistance and a defensive position by those educators who felt there wasn't any real data to support the claims that gaps or weakness in instruction existed.

Using Achievement Series will provide the metrics to support change and paint a clearer picture of our math curriculum. To fully reap the benefits of Achievement Series, educators must be trained on how to implement it into their assessments.

Instructional goals

Teachers who complete the instructional training will be able to create classes, and develop and administer assessments using Achievement Series. Teachers will also learn how to navigate the tutorial when working on their own. The Madison Central school district will be provided with increased statistical measures that can guide them in the review process of curriculum development.

Audience definition

Every math instructor in the Madison Central school district will be required to complete the instructional training. The instructor's ages range between 25 and 55 years old. All have a minimum of a bachelor's degree and are proficient at using computers. It is expected that most will be interested in the training, however, it is possible to experience resistance by some of the veteran instructors. It has been my experience in attending and training during workshops that there is less excitement among some veteran teachers about learning new technologies. Most educators above the age of 40 were not trained with the technologies of today.

This resistance can be overcome if the learners realize the importance of the training and see the big picture. It is important for the trainer to create a learning environment where the learner feels comfortable about asking for help. Another strategy to employ when teaching a step by step process on the computer is to partner up a weaker student with a stronger one.

Delivery environment

The initial instruction will be delivered synchronously in a classroom environment lead by an instructor. The classroom setting is divided into four, two hour blocks spread out over a two month period. Learners will be required to bring their computers. All computers will require an Internet Explorer browser to access Achievement Series. All learners will be provided with a site identification and login password that is unique for all Madison Central users. A tutorial detailing all the activities completed throughout the instruction will be placed on the district's share drive. The learners can expect to spend between 4-8 hours to complete the training.

General outcomes

1. Create classes and input students into Achievement Series.
2. To create, edit, and share tests from the provided test bank of content standards.
3. To input questions from outside resources such as Exam View.
4. How to analyze the compiled data.

Assessment strategies

The instructional product and tutorial will be four sections in OneNote covering each outcome. Each training session will address one outcome. Learners will demonstrate mastery of the day's outcome by developing a finished product they can use in their classroom. Presentations from participants can then be shared with the entire group during the following training sessions. The instructional product will provide instruction and time for the learners to develop assessments in Achievement Series. The effectiveness of the instructional product will be assessed through a small-test group in which participants will complete an attitude survey (Appendix A1). Further evaluations on the small test-group will be completed by the instructor of the group.

Content organization

- What is Achievement Series?
- Review formative and summative assessments.
- An overview of the scope and sequence of our math curriculum district wide.
 - Inputting learners
 - Developing and sharing tests
 - Examining statistical measures provided by Achievement Series.

Content sources

The content will be provided by the designer (me). I have used Achievement Series for the past five years as part of my assessments. I will be able access past tests and data to gather content for each outcome. Through experience I understand what works well and what doesn't. The types of questions need to be: multiple choice, T/F, or matching. It is advisable to only use questions that can be viewed without causing the student to scroll up and down. This pertains to many of the graphing questions that need to be altered. It is also wise to set wider parameters on grade ranges so the designer can select from a larger bank of questions. Finally,

set up your courses as individual classes instead of one large class for easier administration and organization.

Instructional strategies

The instructional strategy will be step-by-step demonstrations, followed by practice and feedback. Learners experience greater success when implementing new technologies, when they have the ability to work with the product and receive immediate feedback when roadblocks occur. In my opinion, providing instructors with guidance and time in developing meaning content for their own instruction is the best instructional strategy for meeting the previously state goal.

Standards

The question bank within Achievement Series was developed by educators and organized in a fashion that reflects the content standards for South Dakota. For a complete review of South Dakota's mathematics content standards go to:

<http://doe.sd.gov/contentstandards/math/docs/MathStandards--Approved05-17-04.pdf>

Questions downloaded from most text book providers can be utilized in Achievement Series and are organized based on the National Council of Teachers in Mathematics. The website below is an overview of the national standards for mathematics provide by NCTM:

<http://standards.nctm.org/document/chapter3/index.htm>

Media

The step-by-step demonstrations and tutorial will be presented using OneNote. OneNote allows the user to easily organize the content, input or paste pictures, and utilizes the function of the stylist. Actual images of Achievement Series' website will be used to during the demonstrations.

Evaluation and testing plans

A small pilot test of three educators will be selected to participate in the testing of the first outcome upon completion. Any identified problems relative to usability, length of instruction, and assessment will be correct and aid in making applicable revisions for further instruction.

Production Document

Treatment

<u>Content Chunk</u>	<u>Treatment</u>
1. Introduction	<ul style="list-style-type: none">-Section 1, Pages 1-3-Express goals / Shared vision-Overview of current practices & previous experiences-Description of Achievement Series
2. Objectives	<ul style="list-style-type: none">-Objectives appear in a bullet list in Sections 2, 3, 4 on page 1
3. Demonstrate (Gain & Integrate Content)	<ul style="list-style-type: none">-Explain the steps necessary to:<ul style="list-style-type: none">-Setup a class, Section 1-Develop tests, Section 2-Share and incorporate supplemental materials, Section 3-Images, screen clip from Achievement Series
4. Practice (Take Action & Monitor Progress)	<ul style="list-style-type: none">-Learners Login-Create Tests-Check for understanding-Provide Feedback-Actual administration of their test
5. Shared Experiences (Synthesize & Evaluate Knowledge)	<ul style="list-style-type: none">-Learners reflect on successes & failures with the product, Sections 3 & 4-Specific feedback to reflections
6. Data Analysis (Extend & Transfer)	<ul style="list-style-type: none">-Explain how to access and interpret data, Section 4

User scenario

The learner is presented the content through guided demonstrations from an instructor. The content and step by step instructions can then be accessed by the learner from the share drive or copied to the learner's computer. Next, the learner will log into Achievement Series and begin to create a course and add users (students). This process is the most time consuming component of the instruction. Therefore, the learner is provided support and feedback from the instructor while being reassured that subsequent activities will go much quicker.

Once the learner has created a course, she/he will move onto creating assessments. The learner is encouraged to bring in some of her/his own classroom content in an effort to develop her next classroom assessment. The learner identifies the objectives and standards for her next

module of classroom instruction and then selects those standards within the Achievement Series test bank. Finally, the learner selects the questions she wants and saves the test.

The learner is provided instruction on how to administer the assessment to her students. Since the assessment is online and new, possible obstacles students face are addressed with the learner. Upon administering the assessment, follow-up training sessions will allow the learner to share his/her experiences with the group and progress to more advanced topics within Achievement Series.

Template

All step by step instruction provided in OneNote will follow a template. The template will identify the activity, list required steps, and then provide a visual through a screen clipping. Black text, Times New Roman size 12 font will be used on a white background. All heading will be bold and size 14. All ink comments placed on screen clippings will be done in blue. Only one activity will be place on a page.

Requirement specifications

Internet connection

Web Browser - Netscape navigator or Microsoft Internet Explorer

Microsoft Windows OS with OneNote software

Description of media assets needed

Achievement Series web pages – free to all public school districts

Screen Clippings of Achievement Series – provided by designer

Tutorial – provided by designer

Discussion board Wiki – free to educators developed by the designer

Storyboard – Outline

Achievement Series Notebook

I. Section 1 – Creating classes

Pages:

1. Goals

2. Shared Vision

3. Define

4. Login

5. Create Courses

6. Five Steps

II. Section 2 – Creating Tests

Pages:

1. Classroom
2. Normal Test
3. Step 1
4. Step 2
5. Step 3
6. Step 4
7. Selecting Grade Level Standards
8. Selecting Specific Standards
9. Selecting Questions
10. Finished

III. Section 3 – Sharing Tests

Pages:

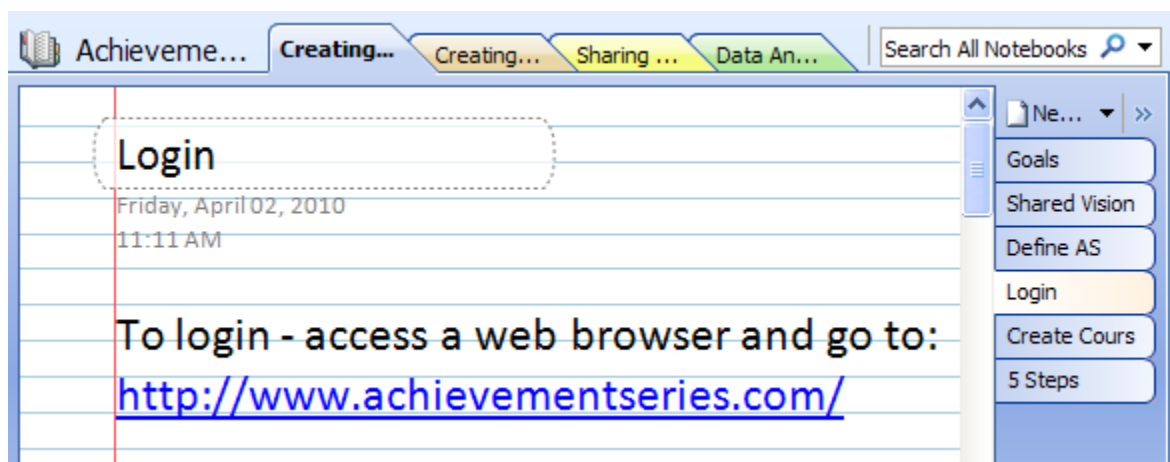
1. Sharing Tests
2. Select Test
3. Copy

IV. Section 4 – Data Analysis

Pages:

1. Results
2. Standards
3. Item Analysis
4. District Reports

Below is clip of how the sections and pages are organized within OneNote.



Prototype

A working prototype can be found on pages 4-6 in section 1. The instruction details the login process, creating courses, and adding students. The prototype is attached as PDF.

Develop & Deliver Document

Complete the development of the instructional materials.

I converted the instructional materials in OneNote over to a PDF to allow easy transfer of the documents. Each tab in the PDF represents a section of the instructional materials. It is attached with this document.

Small-Group Test

A small-group test will be conducted with three of my colleagues covering the first section of the instruction. The three test subjects will have had limited exposure to Achievement Series. The group test will run for two hours and finish up with the subjects completing an Attitude Questionnaire (Appendix – A1). The group test instruction will be delivered in a classroom setting with the content presented in OneNote on an overhead projector.

Formative Evaluation Results

The small-group test involved three elementary Madison Central mathematics educators. The three educators had never used Achievement Series before. They were all proficient with working with computers, as they have all been using a Gateway 285 Tablet for the past four years in their classrooms. All the teachers have at least seven years of teaching experience.

The small-group questionnaire revealed many positive aspects about the workshop and provided valuable information for making minor revisions. The results showed that the content was easy to read on the projector and was present in a linear method that made creating classes easy for them. All three of the test subjects stated they enjoyed a workshop that actually allocates time for them to develop classroom materials while being guided by an expert. Finally, they all felt confident that they could perform the task of creating classes and adding/editing students on their own.

The educators did express that creating classes and adding students was a tedious task, confirming our initial thoughts concerning this chunk of instruction. One suggested that breaking this task into two different one hour blocks might be more beneficial. Another suggestion was to create some type of discussion board for learners to exchange ideas and trouble shoot problem areas.

Deliver instructional materials and results of the formative evaluation to your client.

I converted the instructional materials to a PDF, since OneNote can be difficult for new users to navigate and problematic to transfer through email. This PDF once checked for grammatical errors and typos would be sent to Madison Central's superintendent along with the formative

evaluation from above. I would then set up a meeting with the superintendent discussing the final project and hopefully selecting dates for utilizing in-service opportunities.

Gather feedback on your performance throughout the design process in a post project debriefing meeting.

Madison Central's administration will be asked to complete the post project evaluation. In a perfect scenario the instruction would take place during the summer, allowing the learners the school year to put into effect their training. The post evaluation will consist of survey completed by the superintendent and then a review of the data accessed through Achievement Series at the end of the year (Appendix – A2). A true success would be that 100% of the learners utilized Achievement Series to administer at least four assessments to their students.

At the end of the year a debriefing meeting would be scheduled with the administration, designer (me), and few participants of the workshop to discuss lessons learned. The meeting would allow the group to discuss what worked well with the instruction and what changes could be made to improve the program.

Calculate a cost analysis and cost-per-student index for your materials.

The designer (me) spent fifteen hours organizing and developing the OneNote presentation. At a rate \$16.80/hr the total is \$252. Achievement Series is a free service provided to all South Dakota public schools. All materials required for the instructional workshop, such as computers and overhead will be provide free by the school district. The only other cost the district would incur would be the rate at which they decide to pay their employees for attending the workshop. If the district chooses to use some of it's built in in-service days for all the mathematics instructors to attend the workshop then no addition costs would be realized.

Appendix – A1

Small-Group Questionnaire

<p>1. The OneNote presentation of the content was easy to view on the overhead projector.</p> <p>_____ No</p> <p>_____ Yes</p>
<p>2. Was the content easy to follow?</p> <p>_____ No</p> <p>_____ Yes</p>
<p>3. How would you rate the length of instruction?</p> <p>_____ Too short</p> <p>_____ Too long</p> <p>_____ Appropriate</p>
<p>4. How confident are you that you can create classes on your own?</p> <p>_____ Very</p> <p>_____ Somewhat</p> <p>_____ Not</p>
<p>5. This workshop could be improved by:</p>

Appendix – A2

Post Project Client Evaluation Form

Please circle one: 1 is the lowest, 5 is the highest

1. Overall, how would you rate our performance?	1 2 3 4 5
2. Did we meet the project goals?	1 2 3 4 5
3. Did we follow the budget?	1 2 3 4 5
4. Did we meet our timelines?	1 2 3 4 5
5. Are your employees utilizing the instruction?	1 2 3 4 5
6. What did you like about the product?	
7. What didn't you like?	
8. Additional Comments:	

Reflective Journal

Chapter 8

I was anticipating something completely different when I started thinking about the define phase. I never considered the aspect of drafting a proposal with the hopes of landing the design project. Chapter eight presented a good overview of how to research, organize, and present proposals. It highlighted for me that the success of a designer's company hinges on its ability to draft proposals that stand out from its competition. I am curious as to the number of proposals an instructional design company has going on simultaneously and how they respond if multiple proposals are accepted.

I decided to create an instructional product about how to use Achievement Series. It provides useful data and was easy for me to learn. I really think if our teachers would use it our district could solve some of its curriculum issues. On my proposal I struggled a bit trying to convey the goal of the project because the goal is really a component of a larger issue. I hope that by identifying multiple issues I have not confused the readers.

Time spent on the define stage:

3/15 4:00 to 6:00 pm

3/16 4:00 to 6:00 pm

3/19 8:00 to 11:00 am

Comments:

Wow! This has very professional feel in tone, both in setup and vocabulary. I have no additions, only to say that I wish I would have seen yours before submitting mine! I am vaguely familiar with OneNote, but Achievement Series is used heavily where I work and it seems to be a great program! Nice work!

(Do you have in-service dates?)

How many Math instructors are there?

Well done!

Chapter 9

I thought I did ok with this section but I received the worst grade out of the four documents on this one. I didn't realize the detail you were looking for. I was kind of afraid of being repetitive.

I hoped I cleared up some of the confusion surrounding the project goal and how it is part of a larger goal for the district. I also had a hard time conveying the obstacles the instruction might have on training veteran teachers. I couldn't find any documentation or studies to validate my assumptions but my direct experiences with a few of my peers lead me to believe there will be some resistance.

Time spent

March 22 10:00 am to 2:00 pm

March 23 5:00 pm to 7:30 pm

March 24 4:00 to 6:00 pm

Comments

I was SO confused about what this section was. I copied your idea for mine 😊 Thanks!

Looks good! I had a hard time figuring out the difference between some sections on mine, but yours seems very clear. I caught a few typo things, but remember I am an art teacher so grammar is not a strong point. I especially enjoyed the notation on resistance from more experienced staff members.

Oh, and might want to take the Name _____ off the top 😊

My understanding for this section is that they are not looking at the content standards K-12 students. They are looking at what standards are out there that the instructional designers must follow. One of the examples in the book talks about creating materials in which the learner must use either APA or MLA format as the standard when talking about citing sources. In my paper, I used the W3 Consortiums standards as the standards to follow when dealing with accessibility when creating a website.

(Maybe you could describe what OneNote is.)

Great Job! This sounds interesting!

Chapter 10

This portion of the design process was the most difficult for me. I didn't fully grasp the difference between the paper prototype and the actually prototype. I also had a lot of difficulty transferring my instructional materials through email. Sending OneNote files is challenging. You have to send the whole notebook and all I wanted to send was a couple of pages to represent the prototype. Next, OneNote is specific software to those who use tablets, so many user don't even have it. I decided to use Journal, but wasn't happy with transferring three additional attachments. I think using a PDF is the way to go but I need to work with that. I am planning on playing around with Adobe to see if I can copy and organize my sections. I did create a Wiki to put all the files on, but it just doesn't look that good. The

attachments are way at the bottom of the page-I don't think user will be able to find it. I am considering using the site for a discussion board for the learners though.

Time Spent

March 29 th	4:00 to 6:00
March 30 th	4:00 to 6:00
April 1 st	5:00 to 8:00
April 2 nd	11:00 to 12:00

Comments

Treatment -(Very organized and well done!)

After completing my document and then taking a look at yours, I don't see anything at first glance that needs to be changed on yours. I was worried if I was doing the right things to complete my document but feel comfortable that I was on the right track after looking at yours.

I think it looks fine. I, too, did mine like yours, with a portion of it done and the rest laid out to be completed later. I hope that is acceptable to the professor. The others had scripts. I don't have anything to attach because I didn't see any changes.

Chapter 11

Well after looking at the feedback from my group members, my initial concerns about transferring the learning content were confirmed. Thankfully, this week I was able to play around with Adobe and organize the learning content into one file that I could attach and transfer through email.

Time Spent

April 5 th	4:00 to 6:00
April 6 th	4:00 to 6:00
April 7 th	3:00 to 4:30
April 9 th	11:00 to 12:00

Comments:

This was easier to open, Thank you! Your work is very crisp, clear, and easy to follow. The graphics add a lot as well!

This was a hard section to envision without doing. The questionnaire is a logical choice.

Good:) It is funny to read knowing that most of us did not actually do this :)

Might want to add some sort of thank you.

(Could include a comment section for questions 1 and 2 ..?)

Move this to the top of the eval form)

This looks very good. I did find a couple of typos but other than that I am not sure that there is anything else that needs to be changed.