



EDUCATIONAL
SERVICE
DISTRICT 112



THE SUSTAINABLE CLASSROOM PROJECT

High School Case Study: Jodi

Project designed and developed by the
ESD 112 Educational Technology Support Center
Debbie Tschirgi, Director
2500 NE 65th Avenue
Vancouver, WA 98661
Phone 360.750.7505

Research design developed, conducted and
reported by MLaCounte Services
Dr. Marlene LaCounte, Principal Investigator
6134 SE Sigrid Street
Hillsboro, OR 97123
Phone 503.577.2263



<http://edtech.esd112.org>

About Jodi

Jodi has been teaching history and literature for eight years. She currently teaches in a small city of about 12,000 people on the Cowlitz River and I-5 corridor in southwest Washington. Jodi has an undergraduate degree in education with endorsements in History and Language Arts from Pacific Lutheran University, and a Master's Degree in education. She gained National Board Certification in 2002.

Jodi is a leader in technology and school change in her district and region. She was a participant in the Technology Leadership Project in 2000 and has continued to work with the project as an assistant instructor, lead instructor, and regional coordinator. In addition, she became a technology mentor for several teachers in her building when the school district received a TTEL grant (Technology Training for the Emergent Learner), a grant designed for teachers to help other teachers to implement more technology into their teaching. In addition to leadership in technology-related areas, Jodi helped write an Advanced Placement (A.P.) incentive grant which was funded to encourage teachers to receive training from the College Board to become qualified A.P. teachers, and has been involved in facilitating "vertical teaming" between content area middle school and high school teachers in the district. Currently, Jodi is a participant in a building-level study group that reads materials on school change (such as *Breaking Ranks II*) and discusses reform options for their school.

Jodi began using technology in her classroom in 2000 through the Teacher Leadership Project, which supplied her classroom with seven computers, a scanner, and printer. Since then, she has written additional grants to acquire digital still and video cameras and a projector, and received another printer, a document camera, and three more computers.

Jodi described a typical week's use of technology in her classroom in this way:

Students in my advanced classes are working on creating annotated bibliographies that demonstrate the scope of their review of the literature related to their chosen guiding question for their final research project. The products they will create from their research vary; some will create PowerPoint presentations while others create and edit videos, create websites, build interactive games and write historical fiction. My regular history class is re-enacting the struggle between the Chinese nationalists and communists prior to 1949 in small cooperative groups. They are taking 10 still photos, incorporating them into a PowerPoint presentation, writing a script, and narrating their slides to tell the story with themselves as the actors.

Jodi uses technology in her history and literature classes. She uses the document camera to display visuals, work on grammar with the whole group, and show and revise student work. Students use Microsoft Word's "tracking changes" feature to comment on documents, go to websites to practice skills, and create movie trailers for literary pieces they've read. Her history classes have been enriched through access to interactive video presentations on current affairs published by the New York Times, interviews, online conferences with historians, music, maps, etc. Jodi uses technology to stay organized, communicate with others, and continually update her content and pedagogical knowledge.

Jodi's Classroom



Introduction

In her application to participate in the Sustainable Classroom Project, Jodi wrote:

I am excited about the term “sustainable” in the grant title. Since I have begun integrating technology into my teaching, I have seen that it is crucial to develop a sustainable level of technology in the classroom. Some of my original equipment is beyond the ability of the school to maintain at a high level of functionality. I would feel like my right arm was cut off to try to return to a classroom without the tools to which my students have become accustomed.

During the 2005-06 school year, Jodi taught A.P. World History, World Literature, and A.P. U.S. History to 102 sophomores and juniors. Her classes contained more female than male students (66%/34%) and 94% of her students were 15 and 16 years old. Her average class size was 23 students.

In terms of socio-economic status, Jodi stated that most of her students came from middle class families who worked at non-high-tech, blue-collar jobs, 10% from lower-income families and 5% from upper income families. The ethnic make-up of her students was approximately 85% non-Hispanic white with Hispanic, African-American and Asian students making up the remainder.

The Book Study

CHAPTER 1: BEGINNING THE STUDY

Jodi began the Sustainable Classroom Project with mixed feelings about the research and enthusiasm about the opportunities the technology provided. She wrote:

I'm not sure how I feel about the “science” part of teaching. I'm glad there are people doing the research so that I can try strategies that should work in my classroom, but the numbers kind of scare me away.... I'm glad that this is making me think more about where my students are coming from. Not only do I need to consider what happens in the classroom, but I need to be aware of what students bring with them.

Jodi continued:

This week it has been exciting to hear my students feeling good about what they are learning in here and how it is making their world bigger as they can enter into conversations that were previously over their heads. I also like the new technology in my classroom, as do the students. I am glad that I have had a few weeks to become familiar with it before this project really got moving.

INSTRUCTIONAL STRATEGY 1: SIMILARITIES AND DIFFERENCE

Unit Topic: AP World History– Heroes
Technology Used: Interactive whiteboard

Jodi was enthusiastic about what she read in *Chapter 2: Similarities and Differences*. She journaled:

WOW! I was excited to reread this chapter because I use similarities and differences so much in my classroom already, and I'm always ready to find new ways to think about ways to help students make comparisons. I am more likely to ask them to compare two known items, such as Greeks and Romans, rather than to ask them to compare to an abstract. However, I need to give this more thought.

In thinking about the upcoming experimental lesson, she wrote:

I ... want students to think about how the hero concept has shifted, and would like students to compare one of [the] epic heroes to a figure considered a hero in our own culture. I would like them to consider both similarities and differences, and to arrive at some conclusions about the values of our society based upon their comparison. I think that this might accomplish several important objectives ... I am also intrigued with the possibilities of creating analogies, although this looks scarier than the simile/metaphor route. I wonder if I could use this as a hooking activity as I continue to think about my heroes. Could I say that bravery is to Achilles as _____ is to Batman? This might be a fun way of setting up the idea and getting some superheroes into the discussion as well! Hmmm.

The goal Jodi decided on for her experimental lesson was that students would compare heroic qualities in text with heroic qualities of today and reflect on societal values. In addition, they would practice critical thinking about similarities and differences between a past society and today's society, and they would work on comparative writing skills. For her lesson Jodi intended to use both the interactive whiteboard and the wireless response system. Using the interactive whiteboard, she would lead a comparative discussion on heroic qualities found in classical heroes in the text and those in heroes of today and, students would brainstorm heroes of today and values found in today's society. Students would use the wireless response system to vote on the values they ranked the highest. Next, students would create analogies relating heroes to societal values. Finally, students would use a teacher-created graphic organizer that she installed on classroom computers to write a comparative paper on a hero of the past and one of today.

In analyzing the lesson, Jodi recounted:

I enjoyed putting more energy and thought into my lesson on hero comparison. Since I am trying to teach both thinking and writing skills during this lesson, it is fairly complex; however, I sensed a new level of enthusiasm based on my revised lesson plan. [The students] really enjoyed taking charge of the [interactive whiteboard] to nominate and then narrow their list of heroes today, and creating the analogies helped them to think critically about the values of our own society.

She continued:

I ran out of time to use the [classroom response] system to survey their views on the highest value in our society based upon the list they arrived at by creating the analogies, but I don't think this was a critical piece – it was more a chance to cement the concept by having them vote. We then moved on to writing a comparative piece about Achilles, Hector or Aeneas and their chosen hero or superhero. Here I sensed them still struggling, but not with the concepts as much as the writing process. I'll just keep hammering. They knew the qualities they wanted to talk about. They still struggle to be specific in their evidence rather than general. I need to find some great examples and analogies of my own to help them grasp the importance of being specific.

Finally, Jodi wrote:

I was further frustrated because I had created a template in Inspiration that would help them to organize their ideas, and I had thought that I got it downloaded on every student computer. However, it did not show up unless I was logged in, so most students did not use this option.

In using the wireless response system to evaluate the lesson:

- ◆ 97% of the students in Jodi's class voted that they absolutely or mostly understood the lesson ideas;
- ◆ 94% indicated that the instructional strategy helped them absolutely or mostly understand the ideas;
- ◆ 89% indicated that the technology helped them absolutely or mostly understand the ideas; and
- ◆ 56% absolutely or mostly liked the way they learned the lesson.

INSTRUCTIONAL STRATEGY 2: SUMMARIZING AND NOTE-TAKING

Unit Topic: AP World History – World Trade DBQ

Technology Used: Interactive whiteboard

Previous to reading *Chapter 3: Summarizing and Note-Taking*, Jodi had given “a great deal of thought” to these skills. “However,” she wrote, “I realized that I had never given students the basic three rules of summarization. That could be extremely helpful to them.” It didn’t seem, to Jodi, that the instructional strategy was “terribly dependent upon the use of technology” and she expressed concern whether the time it would take to use the technology for summarizing was worth the potential educational benefit.

The goal of the experimental lesson Jodi developed on World Trade was for students to correctly summarize and group documents to use as evidence in arguments about world trade. Also, she wanted them to learn a framework for summarizing documents, grouping, analyzing points of view, creating theses and outlines for essays. The outside observer watched the first day of the lesson.

Observation #1:

Jodi’s classroom was first observed at 8:55 a.m. on November 17, 2005, while she used ideas from *Chapter 3: Summarizing and Note Taking* in the book *Classroom Instruction That Works*. There were fourteen 10th grade students in the AP World History class. The classroom was equipped with 10-12 computers situated along two walls of the classroom, an interactive whiteboard in the front center of the room by Jodi’s desk, a laptop and document camera on the desk, and a ceiling-mounted projector. During the course of the lesson, the interactive whiteboard, document camera, wireless response system, and classroom sound system were in use.

At the beginning of the class period, Jodi passed out papers as the students checked in using the wireless response system and reviewed chapter information during the reading of announcements over the PA system. The next ten minutes were spent in a short discussion about the samurai and a student giving a report on Romanesque architecture using the document camera to display explanatory photos.

The lesson of the day started with Jodi asking an open-ended question on how historians analyze documents. Students analyzed a statement displayed on the interactive whiteboard and suggested ideas about how to analyze documents. After a short discussion, Jodi suggested another way to analyze documents – using framing questions, and displayed four questions on the whiteboard: What is the document about? What information can be used as evidence? What are possible cultural consequences? Why is this person saying (doing, writing) this? The students analyzed the questions, and freely and comfortably suggested alternative ideas.

Jodi displayed a historical document on the interactive white board and asked students to analyze the document. A lively discussion ensued. She then handed out packets of selected documents with a grid worksheet containing the framing questions. Students worked in small groups analyzing the documents.

Jodi displayed the framework grid on the interactive whiteboard and asked students to write their responses in spaces on the grid. Students were comfortable with the technology. When the grid was filled in, Jodi led a full class discussion on responses and students provided additional ideas that were added to the grid. Students were all engaged.

Students were told that on the next class day they would continue working on this lesson, summarizing documents, completing graphic organizers, and using their notes to write paragraphs, theses, topic sentences, etc.

Jodi wrote in her second journal, “I think I learned some things from experimenting with summarizing and note-

taking that I will continue to use, starting earlier in the year next year so that by this time they are habitually thinking in terms of rules-based summary....”

She continued:

...the downside of the trade DBQ lesson was that I taught the first day on Thursday and couldn't get back to finish until the following Monday. It would have been more effective to put the two days in a row. However, they seemed to do a decent job of summarizing information from the documents using the frame questions that I created. This was evident in the way that they chose to group the documents and formulate a thesis based on their findings. I will definitely use the graphic organizers I created for this lesson the next time I do this.

In evaluating the lesson using the wireless response system:

- ◆ 90% of Jodi's students indicated that they absolutely or mostly understood the ideas in the lesson;
- ◆ 80% voted that the activity used in the lesson absolutely or mostly helped them understand the lesson ideas;
- ◆ 85% said they believed the technology absolutely or mostly helped them understand the lesson ideas; and,
- ◆ 80% absolutely or mostly liked how they learned the lesson.

INSTRUCTIONAL STRATEGY 3: REINFORCING EFFORT AND PROVIDING RECOGNITION

Unit Topic: General – Reinforcing Effort and Providing Recognition
Technology Used: Interactive whiteboard

Jodi had an immediate application in mind for the strategies in *Chapter 4: Reinforcing Effort and Providing Recognition*. She wrote:

I am glad that I read this chapter because I have been thinking a lot about how to boost the effort in one of my classes. The students in the class are as intelligent as students in the other class, but they are not investing the needed effort so the afternoon class is achieving at much higher levels. I spent time talking about how to study, etc. – I think part of their lack of effort is that they really don't know how to put forth effort – they've never had to do it before!

After thinking about ways she could incorporate the ideas into her curricular content, Jodi decided to directly deal with the issue. She reflected:

Before Christmas break, I had been fretting about the fact that my morning class was falling behind my afternoon class – not because people were not as smart – I couldn't really put my finger on what was wrong – something in the class dynamic. I determined that the morning class was putting in way less effort, and as a class they were OK with that. Based upon the research in classroom instruction that works, I attempted some intervention, and decided to try it with both classes to see what happened. I shared some of my own experiences with effort – my 25 year long quest for a bachelor's degree, for starters. I then had them create a pledge on the [interactive whiteboard] – we signed it and I printed it off on sports-bordered paper to remind them about the pledge they had made. I then asked students to keep track of the effort they put into their assignments for two weeks, giving themselves a score between 1 and 10 on every paper they turned in to me. It was interesting to watch since some had never really thought about effort before and didn't know themselves well enough to determine how much effort they employed.

In her assessment of the lesson, Jodi explicated,

Instead of journaling, I ...held a brief discussion about what they had learned. At least some said that they saw a relationship between how hard they worked and their grades in this class. I am hoping to convince them that it is not about how smart they are – it is about how hard they work. I

think that the morning class is beginning to catch on; however, some are still content with just enough to be able to play basketball . . . in other words, the amount of effort required to do well in this class isn't worth it to them right now.

To further emphasize the value of effort, Jodi brainstormed a new strategy:

On the day before Christmas break, I took two old trophies, put a big letter E on them for Effort, and awarded one in each class to the student I felt had really demonstrated great effort over the past two weeks. I hope to continue presenting these trophies throughout the rest of the year, perhaps every two weeks, to recognize effort when I see it and to keep the concept in front of them. The kids seemed to respond positively to this gesture. I hope to start on this effort campaign earlier in the year next year so that all these smart students can figure out what effort is all about early in the year.

Student evaluation of the lesson indicated: 92% said they absolutely or mostly understood the key lesson ideas and believed the activities they used helped them understand the ideas; 100% believed the technology absolutely or mostly helped them understand the lesson ideas; and 92%, absolutely or mostly liked how they learned the lesson.

INSTRUCTIONAL STRATEGY 4: HOMEWORK AND PRACTICE

Unit Topic: AP World History– Homework

Technology Used: Document camera, wireless response system

Because she worked predominantly with advanced placement students who expected to do homework, Jodi appreciated the opportunity provided by *Chapter 5: Homework and Practice* to reconsider her practices. She noted, “I paid attention . . . to ways suggested in the book for setting up expectations. I also was affirmed in that I usually give feedback for the work they do, although not always.” In terms of use of technology for this strategy, Jodi said,

I love using the [wireless response system] to tell if they have read and if they understood what they read. This is a great way to get feedback on their reading, and good practice for the exam. I will use the document camera to have students share their work for the next chapter, and will therefore give them choices about how they will choose to take notes on this chapter. I think it will provide them another way to look at their reading, and sharing their decisions will help them think more like historians and gain practice with the lenses of history – comparative, change over time, etc.

The lesson Jodi planned for the chapter was designed to teach students to use historical lenses to make sense of their reading. She wanted her students to choose logical historical lenses to take notes and organize significant information from their reading. To begin the process, Jodi reviewed the historical lenses with her students and assigned the next day’s readings. For homework, the students were to select a historical lens with which they would organize their notes on the readings. She told students that the next day they would be asked to use the document camera to share their notes with others in the class.

Jodi analyzed the lesson:

Today my students brought in their chapter summaries. Several stepped up willingly to share their work with the class, giving me a chance to do some tweaking of concepts and expanding on the ideas on paper. I was really happy with what I saw happening; although they said that this method took them longer, they also felt like they had a better grasp of the material in the chapter than they got by answering the focus questions. I think their summaries will help them more, and will give them the practice they need to develop historical habits of mind.... I have learned from this that while they need to do their reading at home, they can also be developing their historic lenses through practice.

Student evaluation of the lesson was as follows:

- ◆ 95% said they absolutely or mostly understood the ideas of the lesson;
- ◆ 100% indicated that the activity used absolutely or mostly helped them understand the lesson ideas;
- ◆ 90% believed the technology used in the lesson absolutely or mostly helped them understand the lesson ideas; and
- ◆ 100% absolutely or mostly liked how they learned the lesson.

INSTRUCTIONAL STRATEGY 5: NONLINGUISTIC REPRESENTATIONS

Unit Topic: AP World History – Britain: the perfect place for the Industrial Revolution
Technology Used: Interactive whiteboard, document camera, wireless response system

“I feel like I’m on my home turf here,” Jodi wrote about *Chapter 6: Nonlinguistic Representations*. She continued,

I have sometimes been called the marker queen because we do charts, timelines, webs, etc. I also enjoy singing with the students to help them remember what they have learned.... I try to build non-linguistic triggers into just about every lesson, and I’m looking forward to experimenting with some new varieties of ways to elaborate upon their knowledge.

Jodi’s goal for the lesson was that students would understand factors leading to the Industrial Revolution as a baseline for understanding other industrial revolutions. In addition, she wanted her students to know how the factors leading to the Industrial Revolution worked together and contributed to this historical era. Finally, she wanted her students to be able to reference these ideas when looking at other industrial revolutions in the world and in understanding why some countries never industrialized.

In teaching this lesson in the past, Jodi had used the strategy of asking students to create a recipe. She pondered:

I’m not quite sure where I want to go. I usually have students try to use some form of persuasion to try and “sell” something to their friends – that might work! I use the recipe approach to the Industrial Revolution, and I also have students create photo essays – the recipe is more linguistic - a metaphorical way to think of the revolution, but the photo essays really help students understand the significance of the impact of the Industrial Revolution on people’s lives.

The external observer sat in on one class period of the lesson and described it below:

Observation #2:

The second observation in Jodi’s classroom took place at 8:45 a.m. on February 6, 2006. Jodi used strategies from *Chapter 6: Nonlinguistic Representations* to teach a lesson on the onset of the Industrial Revolution in Britain to her sophomore AP World History class. Thirteen students were seated at tables in the classroom. During the observation, the wireless response system, interactive whiteboard, Inspiration software, desktop computers, the Internet, and a digital movie clip were used.

Before students entered the classroom, Jodi set up the day’s lesson on her laptop computer and displayed a quiz on the interactive whiteboard. As students entered the classroom, they picked up clickers for the wireless response system and checked in.

Jodi began the class by reading the posted quiz question, asking students to respond with their clickers, then posted the next question, etc. Students were casual, but self-motivated. They generated discussions about the questions and then segued into world affairs. They were particularly curious about the reaction of Muslims to the Danish cartoons and offered information from news reports and opinions.

Jodi transitioned to the lesson on the Industrial Revolution by displaying a chart of factors that made the Industrial Revolution possible on the interactive whiteboard. She asked students what they noticed about the items on the chart and how the items might relate to each other. Students immediately made connections between the items with a series of fast-paced, high level comments and questions. Jodi then ran a short clip from a movie that was stored on her laptop on the interactive whiteboard. Students watched attentively and were enthusiastic about it.

Next, Jodi asked students what made Britain the ideal place for the Industrial Revolution to be born and displayed an Inspiration diagram on the interactive whiteboard. Students offered suggestions while Jodi organized them into categories and subcategories in the diagram.

Once the diagram was complete, Jodi assigned student pairs to research a particular factor that brought about an industrial revolution on the Internet and supplied students with a selection of websites to examine. Students moved to the classroom computers and began to work spontaneously. Jodi told them that they could use either Inspiration or PowerPoint for their topic reports.

Jodi moved from pair to pair asking focusing questions. The class period was shortened for students to go to an assembly about class rings, so the research and reports were continued the next day.

The next day, the students shared their research and Jodi presented a “photo essay” about the impact of the Industrial Revolution in Britain. Then, she asked students to write a recipe for an industrial revolution, giving them “Revolutionary Bread” as an example.

Jodi was satisfied with the results of the lesson and made a discovery about non-linguistic representations. She described her thought processes as she evaluated the lesson:

I completed the evaluations of my non-linguistic lesson yesterday and have spent some time thinking about what I might have done differently. My understanding about non-linguistic work has shifted – it was an area I wasn’t sure I had a handle on during the National Board process, but here’s my new thinking: non-linguistic work is creating images in the learner’s head, even if the work they do on paper is in words. That being said, the idea to write a recipe for an Industrial Revolution is a good idea – it really does utilize the imagery in their head, as evidenced by the way they described their ingredients – even their entire recipe as “Revolutionary Bread” in one instance. Deciding upon quantities also created pictures, at least in some of their heads. They imagined how it might be served, etc. – I think it will help them remember that certain “ingredients” must be a part of an industrial revolution.

Student evaluation of the lesson indicated that:

- ◆ 97% of the students said they absolutely or mostly understood the lesson ideas;
- ◆ 100% believed the instructional strategy used helped them absolutely or mostly understand the ideas;
- ◆ 100% believed the technology absolutely or mostly helped them understand the lesson ideas; and
- ◆ 100% absolutely or mostly liked how they learned the lesson.

INSTRUCTIONAL STRATEGY 6: COOPERATIVE LEARNING

Unit Topic: AP World History – The Impact of Imperialism
Technology Used: Interactive whiteboard, document camera

Jodi had a strong background in the instructional strategy *Cooperative Learning* and was an advocate of its use. However, she still struggled with portions of the philosophy. In her first journal for the chapter, she lamented,

This is an area that is paradoxical for me – I did my master’s research in this area, and yet I still feel like there is so much to learn about effectively using cooperative learning. The part I struggle

with most is assigning roles. I almost can never bring myself to do this. Instead, I try to ask each group to keep a log that shows what was accomplished by each group member. However, I'm thinking that the issues related to assigning groups might just be my own, and that I should get over my reluctance and try this for several assignments in a row.

Jodi's goal for her lesson on *Cooperative Learning* was that students would understand the effects – both positive and negative – that imperialism had on both the colonized and the colonizers around the world between 1800 and 1950. In terms of skills, she wanted her students to be able to analyze, summarize and synthesize information in order to arrive at conclusions, and to be able to defend a position in writing and orally.

Jodi started the lesson by instructing students on motives and methods of imperialism through video clips, documents, and images prior to assigning cooperative student research topics. Then, small groups of students were given documents on various regions, and they were told to discuss the documents, and summarize and compile them for their assigned regions. Each group then prepared a visual to display their information and present it to class.

Jodi was uneasy about the lesson and not entirely satisfied with the results. In analyzing it, she wrote, "I finished up this lesson yesterday and evaluated it today. I have mixed emotions about it...." She explained:

In some cases, I saw students rise to the challenge of deciding how to split up the work and making sure that everyone carried a fairly equal load. The work they produced leads me to believe that they still felt rushed and did not do a quality job on some parts of the assignment, such as answering the questions related to the impact of imperialism. In this regard, I'm not sure that they really learned more. They each worked on a part of the puzzle; last year I gave each student a more holistic assignment that would have caused them not to be so dependent upon each other to learn the information ... I still feel uneasy relying upon student presentations to cover significant information since some will do a much better job with this than others, and I can't afford for there to be big gaps in their understanding with the AP exam coming up.

On a more positive note, Jodi commented:

I did relax and decide that having kids create their own roles for an assignment like this worked out OK – I did suggest that the group assign each reading to more than one student so that they could confer with each other to make sure they understood the main points of the documents. This allowed for some good discussion and also allowed groups to progress with the assignment on the second day when some group members were missing due to illness. All in all, I think I'll try this lesson again next year.

Finally, in terms of use of the technology, Jodi recounted, "Students did take advantage of the document camera for their presentations, but most fell back on PowerPoint – the projector was used, but special features of the [interactive whiteboard] were not...."

When the students evaluated the lesson:

- ◆ 100% believed they absolutely or mostly learned the key ideas in the lesson;
- ◆ 100% thought the instructional strategy absolutely or mostly helped them learn the lesson ideas;
- ◆ 97% thought the technology absolutely or mostly helped them understand the lesson ideas; and
- ◆ 97% absolutely or mostly liked the way they learned the lesson.

INSTRUCTIONAL STRATEGY 7:

SETTING OBJECTIVES AND PROVIDING FEEDBACK

Unit Topic: AP World History – Russian Revolution

Technology Used: Interactive whiteboard, wireless response system

Jodi was comfortable with the ideas in *Chapter 8: Setting Objectives and Providing Feedback*. However, she

struggled with the formation of a lesson that demonstrated both instructional strategies. She noted, “I regularly set objectives and goals for the class, and usually provide within each unit space for students to pursue some area of interest to them. I also regularly provide feedback....” She developed the idea:

I need to do much more thinking about this lesson before creating it – it’s weird, because objectives and feedback are like breathing for me in the classroom, so why am I struggling to put together this lesson? Perhaps because I have to make my thinking and work more visible and less intuitive – I’m not sure, but I hope I can figure this one out soon.

Jodi decided to focus on students setting their own objectives for the experimental lesson. The goal she set for her lesson was for students to be able to analyze the causes and effects of the Russian Revolution and be able to compare it to other revolutions, as well as to its connections to World War I. To begin the lesson, Jodi led a student brainstorming discussion about the things they would like to know about the Russian Revolution. This was followed by students conducting independent research on brainstormed topics and creating webs, charts or graphs to express their knowledge.

In her assessment of the lesson, Jodi wrote:

Well, I am once again past the Russian Revolution, and feel like students understand some parts of it well, but perhaps not as much as they might need. I used this to ask students to do some independent research to learn more about three areas of the Revolution – however, I also asked them to brainstorm the areas of research. In retrospect, I would probably give them areas of research to choose from, and then let them pick their three areas, because some areas were very difficult to find, and some students became frustrated. For example, some wanted to research the use of technology – and they looked for a long time before they realized that they were not going to find anything on this topic!

She reflected, “Perhaps this was a learning experience on its own.”

Jodi commented upon her use of technology in the lesson:

Next time – I need an activity for them to do while I input the questions into the [wireless response system] – this was a valuable part of the lesson as I asked them to write questions based on their areas of research – we ran out of time to work through all of them, and I should have finished it up the next day. Further, I would like to find a way to get the timeline we created on the [interactive white board] instead of the white board even if it takes a couple of slides, because then I can print it for everyone instead of having them scramble to copy their notes from the board.

In the student evaluation of the lesson:

- ◆ 96% thought they absolutely or mostly learned the lesson ideas;
- ◆ 93% thought the instructional strategy absolutely or mostly helped them learn the ideas;
- ◆ 93% thought the technology helped them absolutely or mostly learn the lesson ideas; and
- ◆ 96% absolutely or mostly liked the way they learned the lesson.

INSTRUCTIONAL STRATEGY 8: GENERATING AND TESTING HYPOTHESES

Unit Topic: AP U.S. History – Eisenhower Presidency

Technology Used: interactive whiteboard

Although her classes were in countdown to the AP examination, Jodi found the strategies in *Chapter 8: Generating and Testing Hypotheses* feasible. She wrote, “There are many possibilities for these frameworks within a history classroom.” She enlarged upon this thought as she considered possible lessons:

I think that generating hypotheses will work well for a number of issues coming up in the next week. For example, Eisenhower's presidency is debated among historians as to how effective he really was. Since lots of interesting things happened, especially related to the Cold War, during his watch, this will be something worthy of student debate and consideration. I plan to modify the decision-making framework to fit my needs.

Time for doing a good job with the lesson was on her mind, however.

I think students will need some scaffolding in order to implement this strategy effectively. I also think that I will have to be patient and allow them to work through the entire process, not skipping steps in order to save time. Since I am really pressed for time right now, that will be a challenge for me.

The goal Jodi had for her experimental lesson was that students would decide whether or not Eisenhower was an effective president. She wanted her students to evaluate the main actions of his presidency based on their pre-determined criteria. To carry out the lesson, Jodi led a student discussion on who they consider a good president and students brainstormed a list of criterion for what makes a good president. Students were provided with a teacher-developed organizer to keep track of evidence they collected from a video they watched and their notes. Finally students formulated a hypothesis about the Eisenhower presidency and wrote a response in which they supported their decision.

Jodi wrote in her second journal entry for the chapter, "I liked structuring my lesson about Eisenhower by asking them to hypothesize – he was a good president to pick for this assignment. Students seemed to get into their discussions about who was and was not a good president so far, and then coming up with criteria by which to judge Eisenhower."

After seeing student assessments of the lesson, Jodi questioned her analysis.

I was surprised at the students who expressed their dislike for the assignment during the evaluation, and that has caused me to retreat and rethink my lesson. Did they not like it because I executed a good idea badly, or because I used a movie to teach about Eisenhower rather than allowing them to find out for themselves – I guess I should ask them and get more input before I figure out how to revise the lesson.

In a more positive vein, Jodi continued, "All in all, I think I would do it again, and I included a copy of the lesson plan in my notebook for future reference."

Student evaluations of the lesson indicated that:

- ◆ 84% believed they absolutely or mostly learned the key ideas in the lesson;
- ◆ 90% thought the instructional strategy absolutely or mostly helped them learn the ideas;
- ◆ 95% believed the technology absolutely or mostly helped them learn the lesson ideas; and
- ◆ 90% absolutely or mostly liked the way they learned the lesson.

INSTRUCTIONAL STRATEGY 9:

CUES, QUESTIONS AND ADVANCE ORGANIZERS

Unit Topic: AP World History/Literature – Tolstoy: How much land does one man need?

Technology Used: interactive whiteboard, wireless response system

Jodi wrote about *Chapter 10: Cues, Questions and Advance Organizers*, "As I start on the last instructional strategy, I find it interesting because it is so embedded in what we do as good teachers that it is almost difficult to stop and examine the process to see where it needs tweaking for improvement." As she turned her thoughts to questioning strategies, Jodi reflected:

I am going to get someone to record the questions that I ask during a class period sometime next week so I can see what my questioning patterns are and how they might need improving. I

imagine that I may need to ratchet up the level of questions. On the other hand, I actually tend to stray away from recall questions when, in fact, students may need recall questions in order to move up the ladder further. I forget this in my impatience to “get to the good stuff.”

The lesson Jodi decided upon was in the World Literature portion of the AP World History/Literature class. The goal of the lesson was for students to compare the selected Tolstoy story, *How Much Land Does One Man Need*, to other stories they have read and write a modern allegory/parable. She also wanted them to understand the genre of parable, apply moral to their lives, and compare the story to Faust and other parable-type stories they had read during the class. The outside observer sat in on one of the class sessions and wrote the following:

Observation #3:

Jodi began the class period with a geography activity in which students took turns dragging and dropping countries onto an outline map of South America on the interactive whiteboard. This was a warm-up activity that was part of an end-of-the-year focus on geographical awareness and not related to the day’s lesson.

The lesson started with Jodi displaying a picture of Tolstoy on the whiteboard and giving a short lecture on his background. The lecture focused on the differences between Tolstoy’s later writings and his elite birth background and the factors that generated his conversion against capitalism, renouncement of earlier works, and emergence of a philosophy of caring and morality. Jodi put the title of his parable, *How Much Land Does One Man Need?* in the center of an advanced organizer (using Inspiration software) on the interactive whiteboard and asked the key question – What does this title mean? Students provided a series of responses. Then Jodi asked student to describe other parables the class had looked at during the class. As students provided names of parables, Jodi added them to the diagram around the Tolstoy title. Students were enthusiastic in providing examples and explanations of the morals of each. When a number of titles were added, Jodi told a joke that was in parable form and asked students how a parable is like the joke she told. Students replied that it had a punch line and noted that they were further alike in that the joke did not have much character development. Jodi then began a discussion about the devil character in parables and asked students to recall devil characters in the stories/parables listed in the advanced organizer. As the students responded, she added their answers to the diagram. When they had finished, Jodi placed the question, ‘In what area of your life could you be most tempted to go against your ethics or moral beliefs?’ on the whiteboard with six choices – wisdom, health and safety, money, no pain, beauty, happiness. Students had discussed this question and responded to it several days earlier. She asked them to respond again using the [wireless response system]. After they had responded, she displayed the previous results and students noted how their responses had changed.

In final preparation for reading Tolstoy’s parable, Jodi asked the students, “How much is enough? If you had unlimited access to whatever you wanted, how would you decide when you had enough?” Students were asked to take out writing paper and spend a few minutes thinking and writing about the idea. Then, Jodi asked them to turn to the story in their textbooks and began reading aloud the first few paragraphs of the story. Periodically, she paused to ask strategic questions. Once the students were engaged in the story, she divided them into small groups that dispersed into far corners of the classroom to take turns reading out loud the next part of the story. Once they had finished the reading assignment, Jodi asked an open-ended question, “What did you learn from the story?” Several students responded with generalizations to which Jodi elicited specifics.

The class period ended with students being assigned to finish reading the story for the next day.

Jodi evaluated the lesson:

I finally used a literature lesson to demonstrate the instructional strategy, so I have covered the scope of my course work! I can tell that the pressure of having to study for the AP exam has

passed, since the atmosphere of the room is much more relaxed, and the students seemed to enjoy the advance organizer and cue questions that I used to introduce the story by Tolstoy. Because I had just talked about Faust, the connection to stories dealing with temptation were obvious, but I was pleased that they were able to make connections all the way back to the beginning of the year with regard to other parables and morality tales they had read.

Jodi was pleased with the students' evaluation of the lesson. She reflected:

I'm not very good at telling jokes, but as we were evaluating the lesson and collecting the data today, they expressed how much they liked the fact that I was able to tie the idea of a punch line in the story with a punch line in a joke – that made a connection in their minds. Overall, the lesson was a success – the students liked the [wireless response system] survey regarding their personal areas of weakness, and the fact that we did so much to set up the story enhanced the quality of the discussion about the big question “How much is enough?” afterwards. They also created some light-hearted allegories based around the moral “students should study hard” and either told the story or acted it out. All in all, they felt good about this lesson.

Student evaluation of the lesson for Cues, Questions and Advance Organizers indicated that:

- ◆ 100% believed they had absolutely or mostly learned the lesson ideas;
- ◆ 100% thought the instructional strategy absolutely or mostly had helped them learn the ideas;
- ◆ 100% thought the technology absolutely or mostly helped them learn the ideas; and
- ◆ 97% absolutely or mostly liked the way they learned the lesson.

CHAPTERS ELEVEN AND TWELVE: COMPLETING THE STUDY

Jodi used Chapter 11 as an opportunity to reflect on several of the research-based strategies covered during the year. She wrote:

Certainly we all teach in each of the ways listed, but I especially appreciated seeing the research that backs up the effectiveness of some of the strategies. For example, I knew that dramatization helped students learn – especially when they become the actors! It helps them create a story out of a timeline of events, such as the French Revolution. I also gave thought to the reminder that generalizations must not just be explained, but they must be applied in order to clearly understand them. Since I emphasize the themes of history, I realize that I must continually give my students chances to apply the generalizations that go along with these themes in order to internalize them ... We need to work at creating these opportunities for students to apply what they know and reinforce the concepts.

Finally, Jodi summarized:

I have so much information to cover during the year in my class that I sometimes forget that students need multiple exposures over a short period in order to really “get it.” I accept this challenge as I revise curriculum for next year – that I need to find creative ways to bring things back around without sacrificing the forward momentum I must maintain.

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