Students construct meaning from text through conversation and social interaction. This research examines how the use of an online, threaded discussion, as a discourse support, can facilitate deeper levels of student understanding. The basic assumption being tested is that using discourse supports, applying various discussion strategies like reciprocal teaching, creates an underpinning to do intellectual work and that these supports can be employed in an online discussion environment. Four online discussions were conducted over a period of 2 months, 2 in Advanced Placement American Government classes, and 2 in college-prep American Government classes. In an online discussion, the students and the teacher have a visual record of the conversation and the quantitative and qualitative aspects of the conversations. The online discussion environment allowed more students to participate in a class discussion and increased the amount of their participation. Appendixes include: a course outline; several sample screens from the classes; and a threaded discussion evaluation form. (Author)
Using Threaded Discussions As A Discourse Support

Gregory Gray
4321 Walnut Avenue
Irvine High School. Irvine
California, 92604
(949) 936-7036.
ggray@iusd.org

Key Words: Scaffolding, Reciprocal Teaching, Content Literacy, Threaded Discussions

Abstract

Students construct meaning from text through conversation and social interaction. The aim of this research was to examine how the use of an online, threaded discussion, as a discourse support, can facilitate deeper levels of student understanding. The basic assumption being tested is that using discourse supports, applying various discussion strategies like reciprocal teaching, creates an underpinning to do intellectual work and that these supports can be employed in an online discussion environment. Four online discussions were conducted over a period of two months, two in my Advanced Placement American Government classes, and two in my college-prep American Government classes. In an online discussion, the students and the teacher have a visual record of the conversation and the quantitative and qualitative aspects of the conversations. The online discussion environment allowed more students to participate in a class discussion and increased the amount of their participation.

Preface

I have based my research activities on presentations made to the California History-Social Science Project-TRIP participants, the professional reading I did prior to starting my project, and conversations with my wife, a reading specialist, who has been participating in RISE, a San Diego-Orange County Project to educate secondary teachers and administrators on the importance of content literacy by helping participating schools develop their own content literacy plans. As I write this, I have not received any in-service training on the classroom use of reciprocal teaching strategies.

I would like to especially acknowledge University of Michigan Professor Robert Bain for his contributions to my understanding about the use of discourse supports.

Introduction

Students constructing meaning from text through conversation and social interaction, teachers creating scaffolds to support those activities – these are ideas that I have only recently begun to consciously apply to my teaching strategies. Intuitively and through my model for teaching, the Socratic method, I know I have been basically doing the good things for my students. However, I realize that I have missed the theoretical underpinnings that might allow me do more or be more consistent in what I do. Equipped with a better theoretical understanding, I am energized by the prospect of creating a stronger environment for my students in both classroom work and the use of the Internet as supports for learning.
What started this journey for me was that during my course coverage of the 2000
Presidential election in my AP American Government, I had written a short editorial about
the irrelevancy of the minor political parties and posted it on my web site, The Learning
Porch. The students’ assignment was to read the editorial, write a short reaction, and post
it on the discussion board section of the web site. Since I had not used a web site with
my classes before, this assignment was just an experiment without any expectations other
than that they complete the assignment. I was amazed by what happened as they did
their homework.

Not only did they complete the assignment, but they also replied to the posted
messages of their classmates. The amount of unprompted dialogue was extensive. Their
work reflected serious thinking about the subject and demonstrated as much learning as
any other activity I had done in my classroom.

For the rest of the semester, I tried, but could not come up with an idea to
duplicate the experience and still cover the AP course content. I believe part of the
reason for my lack of repeat success was that I was operating without a clear idea about
the application of constructivist learning theories in my classroom strategies.

My weekend experience as a member of the CH-SSP TRIP project, in early
February 2001, provided the inspiration to research the use of online discussions as a way
to support deeper understanding of course content. It motivated me to investigate the
literature about constructivist ideas and learn about discourses strategies like reciprocal
teaching.

I think many teachers have “ah ha” experiences in their classrooms without a lot
of background in the learning theory to explain the results. Similar to my experience,
they have difficulty repeating the same outcome in other elements of their teacher
strategies; successful activities become hit and miss. However, if more teachers had
access to examples of teacher research, they could use these as templates for their own
research. Far more beneficial than obtaining sample lesson plans, teacher research
models provides teachers with ways to apply sound learning theory while transforming
their classrooms into learning laboratories. This is an exciting way to teach.

**Research Question**

How can the use of an online, threaded discussion, as a discourse support,
facilitate deeper levels of student understanding?

**Assumptions**

1. Discussion engages students in more thinking than listening to lectures or just
responding to teacher questions.
   a. The discussion experience contributes to deeper understanding and retention
   of concepts. The literature concerning social constructivist theories and
   reciprocal teaching strategies emphasizes the relationship between learning,
   social interaction, and students talking to each other. Studies into the effects of
   reciprocal teaching strategies confirm the relationship between discussion and
   understanding (ncrel.org).
2. The use of discourse supports, various discussion strategies like reciprocal teaching,
create an underpinning to do intellectual work in ways that provide assistance in
deeper levels of thinking and understanding. As Professor Robert Bain has stated,
“Until internalization occurs, all performance must be assisted” (Bain, TRIP).
a. The reciprocal teaching strategies, as I used them to support content comprehension were presented and explained to the students in the following order: prediction, clarifying, summarizing, and questioning. Recognizing that the four steps can be used in different combinations, I found that for my purpose, that order worked best.

3. The use of an internet discussion board creates the opportunity to extend a discussion outside the class time, allowing for more reflective responses and create a record of the discussion that can be referred to at a later time.
   a. Online discussion strategies can also contribute to the creation of new knowledge.

The Research Plan and Observations During the Process

Phase One - Instruction in the reciprocal teaching strategies.

Using a short section of our government textbook, in my college-prep American Government classes, I read out loud a very basic introduction to the study of American Government. First, I modeled the four parts of reciprocal teaching strategies for them: prediction, clarifying, summarizing, and questioning. Second, using a couple more paragraphs from the same section, we used the reciprocal teaching steps to read it together. Finally, after organizing into groups, I assigned the class to do another short part of the text. Recognizing the students' tendency to take directions literally, I stopped them to point out that not every vocabulary term has to be dissected. Starting this process, I had one person in the group act as a "checker" to ask the group if there were any terms people didn't understand. Later, as the students became comfortable with the process, this wasn't needed.

I did the same modeling for my Advanced Placement American Government sections, but used a paragraph from Article III, Section One of the Constitution. They then read Section Two, paragraphs 1-3 as a whole class, and a short reading on judicial review in small groups.

Phase Two - Checking for understanding of the short readings and feedback on their first use of these strategies.

The initial reaction from all six of my classes was positive. These are all seniors. Not all of them are particularly willing to volunteer, to the whole class, that they just learned something helpful. Ironically, the shy or "too cool" groups of students will later find their voice in the online discussions. Other observations:

In one of the other periods, students had trouble starting the process. Does classroom environment/pressure of being viewed by others affect the participation in the activity? Or is something else? Despite the slow start, the class still gave positive feedback and recognized that support from the group aided their individual understanding and extended their thinking to other government related topics.

As I proceeded from one period to the next, I gave better directions and the students worked more effectively. The directions are part of the scaffold. Or are they a scaffold to the scaffold? I need to script the directions more precisely. That's a challenge for me, a teacher, while always prepared, still likes to improvise.

As a result of changing the directions, students did a better job of being on task and good conversations occurred at all tables, even with material that was not that all exciting. However, some groups need more prodding to do all four parts. They are not used to this kind of class activity, especially the clarifying of vocabulary. They like to
discuss/talk, but miss some of the key concepts because some will not volunteer that they have a word or phrase they would like assistance understanding.

Jig sawing the parts of the reciprocal teaching strategy helped with the clarifying piece. One person became responsible for reading for the meaning of difficult vocabulary. However, jig sawing is not quite the same as the group developing shared predictions, shared understanding of vocabulary, shared summaries, and shared questions for re-enforcing understanding.

Phase Three - Integrating reciprocal teaching strategies into the daily life of the class.

Before I could give them an assignment to use the discussion strategies online, I wanted to be sure my students were comfortable with the reciprocal teaching process. The groups, in my AP classes, read a longer, more difficult reading on judicial philosophies. The difficulty helped keep the groups on task, but the students had a good suggestion to stop at certain intervals and check for understanding. Based on my observations of their notes, group conversations, and the follow-up whole-class discussion, more of the students had a better understanding of the pertinent concepts than if they had read the article by themselves before discussing it in class.

After also practicing reciprocal teaching with readings in class, the American Government classes had their first online discussion. I used a video about the Berkeley free speech movement in the 1960’s. After the video, we went to the library and had an online discussion using the discussion board on my web site. The students had to post a reaction to the video and then reply to the posted messages of the other students. In a space of about 30 minutes, the threads of the discussion extended over several screen pages. The production by everyone exceeded what I have ever seen accomplished, in that space of time, in both whole class and small group discussions. A major difference is that sitting in front of a keyboard "forces" them to communicate their thoughts. Once posted, they start looking for people to reply to. Even if they are only replying to their friends, everyone got involved and surprisingly or not, they all stayed on the topic. It is clear that they left the experience having thought and produced important insights about the topic of free speech. When students have the opportunity to write down their thoughts in this manner, they produce thinking that become part of the dialogue about the topic. They are adding to "sum" of thinking on the subject matter; they are creating information. Produced online, it becomes available for the "world" to access and be better informed because of the students’ thoughts.

The AP students’ first online discussion using reciprocal teaching strategies was based on an editorial about IBM and the holocaust during WWII. The editorial was read and discussed in the context of studying the concepts of Judicial Activism and Judicial Restraint. Like the discussion of the Berkeley video, the students were assigned to react to the editorial and to each other. I required a minimum number of posted thoughts and replies to other students. As they started the discussion, similar results to the video occurred, but my web site started having technical problems. The issue turned out to be the FrontPage support my provider was not giving my site, forcing me to switch to another company to host my site. This delayed the online part of my project for about three weeks and reduced the number of online discussions I was able to conduct during the research phase. If the technology can fail, it probably will at some point. As teachers, we just have to adjust while keeping the focus on student learning. As a result of the web site problems, I did a few more in-class reciprocal teaching activities with short readings. I also experimented with more jigsaw activities as compared to the groups developing a
common set of reading notes because that was how the online text discussion eventually would be accomplished.

Once the web site problems were resolved, we proceeded, in the American Government classes, to using the online discussion for deeper understanding of a textbook reading. The text reading covered a number of civil liberties topics (See assignment description in the appendix.) The classes were divided into groups and had one week in which to complete their online discussion of the assigned pages. The time gave everyone, even the students without Internet access at home, adequate time to post their work. Nearly every student completed his or her online responsibilities at a percentage greater than the normal number of students completing homework. Additional observations are included in the Findings section below. Sample screen shots are also included in the appendix.

In the AP classes, after the web site was back up, we used an online discussion to support a group research project on policymaking. Because of the content that needed to be covered before the Advanced Placement exam, I was not able to do the same kind of online text discussion as the government classes. Instead, I required the students to post messages on their research progress. While there was no required structure to the online activity, other than updates on their research, the posted messages allowed group members to share written information with each other rather than information given over the phone. In addition, posted messages about useful resources helped members of other groups.

At the conclusion of the two online discussions, all of the classes, approximately 170 students, completed an evaluation of their two online experiences. The results are summarized in the findings and the form used is included in the appendix.

Findings

How can we measure the success of online discussions? Amount of participation? Length of posted information by each student? Scores on the exam following the discussion? A comparison of test results from the previous semester? Student Feedback? As a result of this research experience, answers to these questions and other questions have started to emerge; continued study should clarify the value of online discussions.

Despite having used a reciprocal teaching strategy to facilitate an online discussion of text materials only once with the American Government classes, the test scores in two of three classes slightly exceeded the test scores, on the same exam, of the class the first semester. There are many variables that can account for the differences, for example, student differences in ability and study habits. I did not change the test from one semester to the next; the test itself may be more of a product of the way I presented the same materials during the first semester. After looking at what the students produced in their online discussions, I think that my exam should have been more of a test of the students’ ability to articulate and defend their understanding of what they read as reflected in the discussions. I think that, while a one time comparison is not very reliable, I would not want test it “scientifically” by teaching one class without using reciprocal teaching strategies and one class with those strategies. There is already significant literature demonstrating the value of reciprocal teaching and the use of discourse supports to support learning. Just for the sake of having a control group, I do not want to deprive my students of those activities that will improve their ability to better understand what they are reading and increase their opportunities to communicate that understanding.
If the value of reciprocal teaching strategies has already been established by the work of others, the next step for me is to continue to examine the use of this strategy in the online environment. Next year, our district will provide the Blackboard 5™ web-based course management environment to its teachers complete with threaded discussion capabilities. This should create the stability that I was not able to consistently maintain with my web site. That stability is a critical part of the process, one recognized by the students in their evaluation of the online discussion experience. Technical problems are also a big factor deterring the less technologically experienced teacher from experimenting with the integration of technology.

One of the best indicators of the value of online discourse was the student comments in the evaluation. They are summarized below:

- Describe the things you like about participating in an online discussion.
  - I can share my ideas with the entire class
  - The people bring up points that revolutionize your thoughts on a subject and you may not even know who they are
  - It helps to further develop your own thinking if people make comments and suggestions
  - It’s cool to see the outcome of a thread
  - You know what everyone else is thinking
  - I can refer to the discussion later
  - Comparing your notes with other students
  - I like having a couple of days to work on the discussion
  - I can think about what I want to say before saying it

- How would you compare your level of participation in an online discussion vs. the amount of talking you do during teacher-led class discussions?
  - I feel more comfortable online
  - I don’t like to talk in front of people
  - During a teacher-led discussion, you don’t get to put in your opinion as much as an online discussion
  - Allows me more time to think about what I have to say
  - I like online more; it’s more fun
  - I talk more (overwhelmingly, most students replied with this comment)
  - I talk less (this comment came, predictably from the students who sometimes can dominate a class discussion if the teacher would let them)
  - I talk the same (significantly less number of these responses compared to the “more” responses)

- In what ways do you think that online discussions could aid your learning and/or understanding of course content?
  - It could provide students with clarification of something that confuses them and lets students summarize things in their own words
  - I can get ideas from other people
  - I learn from my peers
  - You receive a broader spectrum of ideas
  - Allows easy replies to clarify answers
  - I have 30 different understandings of something, including mine
• It’s like an online textbook summary, with other people’s comments aiding my understanding.
• It helps you go over what you’ve already learned.
• The postings and discussion stay there so you can go back and study them.
• I can look at what other people have said before I say something.

• In what ways do you see online discussions being the **MOST beneficial** to students?
  • You are able to go back and review the topic.
  • It helps us to interact as a class.
  • To continue to discuss a topic outside of class.
  • Allows everyone to do something, no one can zone off and not participate.
  • It’s a more comfortable environment than class.
  • Study notes for exams.
  • Shy people share their opinions.
  • It’s easier to talk to people.
  • Everyone can participate in a discussion at the same time.

• What do you consider to **obstacles** to effective use of online discussions?
  • The web site not working.
  • Students might not be interested in discussing after school.
  • It’s slow.
  • Access to computers.
  • People not putting their work in the assigned order (during a reciprocal teaching strategies online sharing of textbook reading).
  • Computer failures.
  • Learning how to post messages and reply.
  • People don’t always want to read what you have to say.
  • Some things people say aren’t correct.
  • Remembering to post things.
  • When there are too many messages to read.

The student comments are very insightful as findings. Having worked with these young adults all semester, I know their reactions are honest, reflecting their personal experiences in the activities, and they re-enforce the literature concerning student talk as a vehicle for learning. A telling point in the students’ evaluation of the experience is the number of students who normally do not like to participate in a face-to-face class discussion indicating increased participation in the online discussions. The shyness factor seems to be overcome in the online environment.

The online experiences of my classes demonstrated, to me, the usefulness of online discussions. In an online discussion, the students and the teacher have a visual record of the conversations, both in the quantity of talk and quality of the conversations. While the teacher can give students “robust” comprehension strategies for face-to-face talk, the teacher does not usually require a transcript of the conversations. The online record creates links between assessment and student accountability.

**Concluding Thoughts about Teacher Research**

One very important question for me is how to bring in the discipline-specific scaffolding tools to "do" political science as my students cover course content? This is an
area requiring more research. Additionally, I want to improve my understanding of teacher research, constructivist theories, and the supporting teaching strategies.

Another question, which I am exploring as the semester ends, is whether or not the online conversation about a reading can improve a subsequent, whole class discussion? Can the students' understanding of the reading enable the teacher to add additional things for the students to think about? There might be issues and ideas that the students would not otherwise been able to see or reflect on without a good understanding of what they had read. This is particularly important with readings that are more difficult than the textbook, but also as a vehicle for taking students' thinking further after reading the textbook.

This project has made an impact on my teaching and creates important implications for the teaching strategies of other social science teachers, if not all content area teachers. If discourse supports are effective in increasing student understanding of content, teachers not using discourse supports in their strategies, need to alter what they are doing with students. If online use of discourse supports can extend those effective strategies even further, teachers need to rethink their use of the Internet.

Change is a big challenge for many teachers. They generally need strong incentives to transform their classes from being teacher centered to student centered. Administrators can provide those incentives and leadership to facilitate the change process. Unfortunately, administrators are to often, infrequent visitors to their teachers' classrooms. Perhaps the dissemination of the products of teacher research, rather than the simple sharing of lesson plans, can be part of the catalyst for change.

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http://www.rmcdenver.com/webproject/JILR.HTM

Appendix A

American Government
Civil Right and Civil Liberties

Textbook Coverage

1. 1. Chapter 14
      i. Search and Seizure
      ii. Guarantee of Counsel
      iii. Self-incrimination
      iv. Double Jeopardy and Cruel & Unusual Punishment
      i. Meaning of Equal Protection
      ii. Proving intent to discriminate
      iii. The struggle for equal rights
      i. Affirmative Action
      ii. Discrimination against women
      iii. Citizens’ right to know
      iv. Citizens’ right to privacy

2. 2. Chapter 15
      i. Due Process of Law

Deepening Understanding of the Textbook Materials

Starting Friday March 30 and ending on Friday, April 6, you and your group will work together to discuss these pages on line using the reciprocal teaching strategies. A group leader will be selected who will coordinate the discussion process. The leader’s job can be rotated and the leader will receive extra credit for facilitating the discussion. The web page is: http://thelarningporch.org.

You will click on the links, My Classes/American Government and then click on the link for your period. The directions will be posted on the starting page for the discussion.

Our goal is to use the reciprocal teaching strategy to support and deepen each person’s understanding of the textbook reading.
Appendix B

This page will connect you to the discussion pages of your class period.

<table>
<thead>
<tr>
<th>Period 2A</th>
<th>Period 2B</th>
<th>Period 3B</th>
</tr>
</thead>
</table>

The Current Discussion Assignment

- Chapter 14 and 15 - Civil Rights and Civil Liberties
  - You and your group will read and discuss the assigned pages using the reading assignment handout and the reciprocal teaching strategies of clarifying, summarizing, and questioning.
  - Starting Friday, March 30, groups will have one week to complete your online discussion.
  - Work on the chapter sections by using the reciprocal teaching strategies for each sub-section listed on the handout. You do not need to do pre-reading, just clarifying vocabulary, summarizing, and questioning. Develop one question for each sub-section.
  - The group leader will assign/distribute the jobs for each sub-section. Since the group leader will receive extra credit for doing this job effectively, the job can be rotated. Divide the jobs by assigning individual group members the jobs of clarifying, summarizing, and the sub-section question.
  - Use replies to ask further questions or comment on the messages. You need to check to see if anyone has replied to your posted information and you must reply to their replies. This is required.
  - Remember to only put your first name and last initial.
  - Make sure the information in the subject line is very specific.
  - The leader will also be responsible for starting the discussion thread of the leader's group.
Appendix C

section 3. Guarantee of Counsel

From: Jonelle L.
Date: 04 Apr 2001
Time: 21 52 24

Comments

1. "abridged" - a shortened form or version

2. "infraction" - a minor crime that is usually punished by a fine or a jail sentence of less than one year

3. "petty offenses" - a minor crime, usually punished by a fine rather than being arrested

Last changed: Apr 05, 2001
Appendix D

Chapter 14, Section 3 Summary

From: Elsa G
Date: 08 Apr 2001
Time: 21:03:45

Comments

I Search and Seizure: In order for police to acquire evidence against the accused person of committing a crime, the police must have a warrant in order to search houses, cars, or offices of the accused. The protection of the accused is guaranteed by the Fourth Amendment. There are special circumstances where the police do not have to have a warrant to conduct a search. For example, if the crime is committed in the presence of police. In the case Weeks v. United States, the Court established an exception rule where any illegally obtained evidence cannot be used in the federal court. Following this case was United States v. Leon where the Court ruled that if the police were in "good faith" when requesting a warrant, the evidence may be used in court even if the warrant was defective. The Guarantee of Counsel: According to the Sixth Amendment, the defendant has the right to have the assistance of counsel for his defense. In the case Gideon v. Wainwright, the Court held that states did not have to provide a
Appendix E

subsidary questions

From: Jeni
Date: 28 Mar 2001
Time: 9:56:02

Comments

1) How much should government get involved in regulating health care costs and delivery systems? What role will the federal, state, and local governments play? 2) Should health care be based on the workplace, as now, or be delivered by the government, as in most other nations? What about people (often young and healthy) who can afford health insurance but do not buy it—should they be allowed to take the chance they will become ill, with bills so high that their costs will be the public's? Or should everyone be required to carry health insurance? 3) How can costs be controlled without lowering access, choice, or quality of care? 4) How can the administration of health care be made more efficient to reduce paperwork and other costs? 5) What choices will people have in choosing health care plans and caregivers? Who decides that tests and treatments are needed? 6) How much health care can be provided to everyone, considering that resources are limited? What health care services should
Appendix F

Re: Drug Policy

From: Sean
Date: 29 Mar 2001
Time: 14:53

Comments

Once again, I believe this will lead to a very interesting project. I like how it
goes... to look at it from the different perspectives. Also, maybe you
can contrast the U.S. drug policy to other countries that are more lenient
about drugs in the country, i.e. the Netherlands.

Appendix G

Threaded Discussion Evaluation Form

NAME:

1. Have you ever used/participated in a threaded discussion before this class?

2. Have you ever used an "instant messaging" program?

3. Have you ever participated in a chat room environment?

4. Describe the things you like about participating in an online discussion.

5. Describe the things you do NOT like about online discussions.

6. How would you compare your level of participation in an online discussion vs. the amount of talking you do during teacher-led class discussions?

7. In what ways do you think that online discussions COULD aid your learning and/or understanding of course content?

8. In what ways do you see online discussions being the MOST beneficial to students?

9. What do you consider to obstacles to effective use of online discussions?
Bibliography

Bain, Robert. “Into the Breach: Using Research and Theory to Shape History Instruction.”


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