Using Storytelling Strategies
to Improve Student Comprehension in Online Classes

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Abstract

Previous research shows that presenting class material in story formats can improve student learning in lecture classes. This pilot study of eight sociology classes investigates the efficacy of using storytelling as a means to improve student comprehension in online classes. Our findings show that when material is presented in story format rather than traditional text book format, student comprehension of difficult theories and concepts improves and grades improve. This paper outlines the storytelling strategies we tested and makes suggestions for using storytelling across disciplines in online classes.

Keywords: Student comprehension, teaching strategies, online teaching strategies.

A major frustration of online teaching is that even when assignments are structured so that students must read class material, we are not always certain that they comprehend what they are reading. Unlike with face-to-face lectures, we cannot gauge facial expressions in online classes to determine the students' level of understanding. Additionally, online students often fail to ask relevant questions because they believe they understand the material until a poor test score proves them wrong. Thus, we often fail to identify and resolve misunderstandings and misinterpretations until after graded assignments or exams. Because of this, some students fall behind and have a difficult time catching up.

As we struggled to find ways to improve student comprehension in our online classes, we analyzed which, if any, of our lecture methods might translate well to the online format. While discussing our classroom successes, we discovered that both of us rely heavily on illustrating lecture material with storytelling in our face-to-face lectures. One difference we quickly identified was that although we both employ ample examples in our online discussion boards, neither of us told "stories" as we do in the classroom. Aside from the fact that both of us successfully use stories as a means to improve comprehension in our lecture classes, a short perusal of the literature convinced us that many others use storytelling to improve student comprehension.

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Teaching Through Storytelling

Teaching through storytelling dates back thousands of years (Kosa, 2008). According to Coulter, Michael, and Poyner (2007) and Sanchez (2005), storytelling offers much more than casual entertainment within academic settings. Instead, storytelling is a tool that helps students understand the world around them. Storytelling enables students to visualize themselves in similar situations as the characters of the story (Combs & Beach, 1994) and see the relevance of concepts (Eldridge, 2009). Harris (2007) posits that stories allow us to see similarities in our experiences even when we are divided by cultural differences. In addition, stories make learning more fun and help students remember relevant material (Frisch & Saunders, 2008).

Kosa (2008) asserts that one benefit of storytelling is that stories help teachers reach students of all skill levels because even challenging concepts and theories are easier to understand in story format. Educators ranging from kindergarten teachers through college professors claim that storytelling helps improve student comprehension (Bonney, 1985). For example, Hadzigeoriou (2006) uses storytelling to help create a sense of anticipation and curiosity about difficult concepts in his physics classes. Grose (2010) teaches her law students not only to construct legal arguments, but also to deconstruct the stories they hear from clients and other attorneys through storytelling. Carruthers (2008) claims that storytelling benefits teachers as well as students because it forces teachers to think more critically about the material they present.

Since both our personal experience in the classroom and research literature indicates that storytelling can help students learn, we decided to test the effectiveness of storytelling in our online classes. Since we were uncertain about how well storytelling would work in the online setting, we conducted a pilot study that would not reflect on any of our students' grades. We recruited volunteers from eight Introduction to Sociology classes to take part in the experiment. Because theory is one of the more difficult and misinterpreted subjects we teach, we tested the effectiveness of our strategy by using two sociological theories as the subject matter.

Data and Methods

We recruited 112 volunteers: 88 females and 24 males from eight undergraduate sociology classes. Our volunteers were directed, through email, to a set of documents on Blackboard that contained the instructions, theories, and quizzes for our project. Volunteers were instructed to read two sociological theories posted online. One theory was copied directly from a theory textbook, and one was rewritten as a story. The storytelling version relied heavily on analogies, metaphors, and short examples from everyday life. The stories had named characters engaged in situations that illustrated the explanatory power of the theory. We used Hochschild's (1979) concept of surface acting as Theory 1 in our experiment. Table 1 illustrates the difference between the standard text format and the storytelling format that we presented to students.

Table 1. Test Theory 1 in Standard Text and Storytelling Format.

Theory in Standard Text Format	Theory in Storytelling format
In surface acting, the expression on my face or the posture of my body feels "put on." It is not "part of me." **Surface Acting** To show through surface acting the feelings of a Hamlet or an Ophelia, the actor operates countless muscles that make up an outward gesture. The body, not the soul, is the main tool of the trade. The actor's body evokes passion in the *audience's* soul, but the actor is only *acting* as if he had feeling. This is surface acting–the art of an eyebrow raised here, an upper lip tightened there. The actor does not really experience the world from an imperial viewpoint, but he works at seeming to. What is on the actors mind? The audience, which is the nearest mirror to his own surface. According to Stanislavski, the famous Method acting teacher, the limitations of surface acting are that it is less profound than beautiful. It is more immediately effective than truly powerful. It acts more on your sense of sound and sight than on your soul. The effect is sharp but not lasting.	Arlie Hochschild claims that all of us do a certain amount of acting to manage our feelings. Did you know that a large part of being successful in your career will depend on your ability to become an accomplished surface actor? Surface acting is when we act like we feel something we don't really feel. Let's look at the following example of surface acting: Sally works in the music department at Barnes and Noble. During the rush of the Christmas holiday, the department was very busy, and check-out lines were long. One customer was very upset because he had to wait about five minutes while Sally helped another customer. He complained loudly so all of the people around the counter could hear him. He said things like: "I can't believe how slow this girl is. Her middle name must be Snail." and "They need to get some competent help in here." Sally could feel herself getting angrier and angrier, but she knew she couldn't let it show because the store had a policy about treating customers nicely. She didn't want to risk her Christmas bonus just to say what she really felt. When the man got to the counter, Sally pasted a big smile on her face and was extra helpful to him. Sally was surface acting. She was acting friendly and nice when she really felt like yelling at the man and slugging him in the nose. Surface acting is presenting an emotion to the public that we don't really feel.

Four classes read Theory I in the traditional format and Theory II in the storytelling format (we used Elias' (1978) theory of the civilizing process as Theory II). The presentation was switched in the other four classes with Theory I (surface acting) presented as a story and Theory II (the civilizing process) copied from the text. Our rationale was to

make sure any difference in scores between traditional and storytelling presentations was not the product of a particular theory.

After reading Theory I, volunteers immediately took a short online quiz. Following that quiz, they read Theory II and immediately took another short quiz. The quizzes were the same for each theory regardless of the presentation style. The questions were multiple choice questions designed to evaluate overall comprehension of the theory. All of the questions focused on the main premises and concepts of the theory.

Results

We found that females scored higher on the quizzes regardless of presentation style (see Table 2). On the traditional text quiz, females scored an average of 63% and males, an average of 54%. On the storytelling quiz, their respective scores were 79% and 67%. Overall, students scored higher when material was presented as stories (77%) versus the traditional text format (61%). We also found that students who scored higher on the story format quiz showed a greater improvement in their scores than the students who scored higher on the traditional format. The greatest improvement with the storytelling format was 60 points compared to an improvement of 43 points for the traditional presentation. This suggests that stories may be more effective than a textbook presentation, alone, in helping students improve their understanding of complex concepts in the online format. As a result of these findings, we increasingly use stories as a strategy to illustrate theories and concepts in our online classes.

Table 2 – Difference in Test Scores by Format

Type of Format	Females	Males	All Students
Story Format	79%	67%	77%
Text Format	63%	54%	61%

Our Storytelling Strategy

Although we do not consider ourselves "master storytellers" or even suggest that our storytelling strategies are the only or best methods for use in online teaching, the following strategies have helped us improve student comprehension in our online classes. A key feature to a good story is the *hook*. A hook should draw the reader into the story by arousing their curiosity and making them want to hear more (Freeman, 2010; Buchholz, 2011). To accomplish this, we use surprising statistics, provocative questions, or interesting contradictions to introduce the stories. These capture our students' attention by illustrating that what "everyone knows" may not be accurate or by presenting ideas they had never considered. For example, in our storytelling version of Hochshild's theory, we create curiosity by asking students whether they realize they will need to use surface acting to be successful in their careers. Provocative questions such as that motivate students to invest

their time and energy in learning the answers. We find that introducing them to some of the interesting contradictions within scientific research also works as a successful hook. Once we gain their interest, we provide a *connecting framework* so the students can understand the material. Students find it easier to understand new material when we connect it to something they already understand. Our stories use plenty of analogies and metaphors designed to help students connect new material to previous course material. In addition to connecting our concepts to previously learned sociological concepts, we also point out the connections among sociology and other disciplines. For example, we may point out that nurses, teachers, and even judges must master the skill of surface acting to be successful in their positions. This helps students grasp the idea that the theories and concepts from one discipline are not isolated facts that have no bearing on other disciplines.

We also use the "show, don't tell" strategy promoted in creative writing classes. Good stories capture the audience's imagination by showing them the unfolding of a scene and not by describing the scene (Jerz, 2011). Although educators must tell some facts, there are several ways to show our facts, as well. Instead of simply describing how a process works, we use vignettes in which personal examples or news stories illustrate social processes. Students especially enjoy the vignettes when we use them as the main characters. Using students as characters in the stories allows them to engage the material as active participants rather than passive observers, which increases their interest in the topic. One important caveat for using students in stories is to present them as honorable characters so as not to cause harm.

Finally, we craft assignments that turn our students into the storytellers. Discussion boards are especially useful for this strategy. We have good success with assignments that present a theoretical claim or concept and direct students to use a personal example or an example from everyday life to illustrate the concept. Requiring students to be storytellers improves their analytical and critical thinking skills because they must use analogies and draw comparisons among concepts. Asking students to imagine the consequences of various actions and conditions helps them understand how to apply what they are learning to their everyday lives. When students become the storytellers, they must learn to do more than simply memorize definitions and regurgitate material from the text.

Storytelling Across Disciplines

Acknowledging that some disciplines are more suited to stories than others, we believe most subject matter can be adapted to a story format to some degree. In fact, professors are already using storytelling to teach classes ranging from history, law, physics, biology, and more (e.g. see Cateforis, 2009; Eldridge, 2009: Frisch & Saunders 2008; Grose, 2010). Based on our own experiences and the strategies employed by others, we offer the following strategies for using storytelling across the disciplines.

First, situate the concepts and theories in an everyday context. For example, recent research indicates that seemingly random terrorist attacks can be predicted through mathematical patterns (Braconnier, 2011). While abstract concepts about mathematical patterns

and their predictive power may not capture student attention, discussions of real terror victims typically do. Second, populate your story with characters with whom your students can either identify or understand. Students do not identify with statistics about fatalities as well as they do to stories about how the research can impact real victims. Next, show the students how the theory works by having the characters act out the process by which the theory works. Finally, we highly recommend turning your students into storytellers to see how well they understand the material.

Conclusion

While storytelling is not a magic panacea, we find it helps our online students improve their understanding and retention of the material. Although our pilot study was conducted with volunteers and relied on exposure to only two theories rather than the more prolonged exposure of a semester long storytelling experience, the difference in scores convinced us of the efficacy of using more storytelling in our online classrooms. As a result, we have incorporated storytelling as a regular feature of our online classes. The average test scores have improved as have the average overall grades in our classes by as much as 10 points in some classes.

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