

THE POSITIVE AND NEGATIVE EFFECTS OF USING VIDEO TO DEVELOP HIGHER ORDER THINKING AND COMMUNICATION SKILLS

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Executive Summary

The use of video resources in education can be an engaging and controversial subject. While this type of multimedia has been used for decades, the Internet has changed the way video resources are delivered and consumed, and this is no more clearly illustrated than in today's youth. Video is ubiquitous in the media, entertainment, and social networks, so that students of today are participating in a video culture. There is so much potential in using this powerful medium in education, but it must be carefully implemented for maximum effect. My research question concerns the positive and negative effects of using videos to develop higher order thinking and communication skills, such as, but not limited to, observation, analysis, evaluation, and evidence-citation.

There is a multiple of research evidence revolving around the use of video in the classroom that has influenced how I approached my research question. As I searched for the positive and negative effects of using video, I found evidence of several learning theories that are bolstered and typified by the use of video. Cognitive learning theories claim viewing and discussing video aids brain development (Bailey & Ledford, 1994; Berk, 2009; Spiro & Deschryver 2012). Teachers claim that video can be used for increasing cultural awareness (Chislett, 2009) and understanding multiple perspectives (Cortes & Thompson, 1990; Jenkins, 2006). There is much evidence that using video can increase student engagement in learning and foster critical thinking skills (Cortes & Thompson, 1990; Dressel, 1990; D'sa, 2005; Jenkins, 2006). I also found several studies cautioning against misuse and overuse of video (D'sa, 2005; Hobbs, 2006; Russell, 2006). However, one of the most interesting finds was a research study that showed the

use of video can lead to better test results (Paska, 2010), and this study inspired my own research intervention, as I now want to seek more proof of this theory.

The research led me to the conclusion that the appropriate use of video can have many positive effects on learning. I want to confirm that watching a video to obtain and retain content knowledge can be more effective than a teacher's lecture or students reading from a book or an article. However, with the myriad of benefits of watching video listed in the research, I not only want to research the effects on a knowledge-based test. I also want to see how the use of video affects the thinking and feeling of my students. As a teacher, I want my content to come alive to students and change the way they see the world. As we study social problems, I want to engage the hearts of my students, not just the heads. So I decided to research how the use of video can also lead to deeper understanding and empathy. When I read about something like the Rwandan genocide of 1994, I might understand the causes and effects of that war and have theories on how situations like that could possibly be prevented in the future. However, watching the movie *Hotel Rwanda* makes me feel the pain and the conflict, and I despise ethnic violence in my heart. I believe this can be a powerful impact on the lives of students and I want to study the possibilities.

My plan is to investigate this research question using a quantitative quasi-experimental method. I will have two experimental groups who watch a video and one control group who listen to a lecture and read an article. I will give all the students a pre-test and post-test to see if there are differences in content knowledge acquisition with the different teaching methods. Also, I will give an exit survey to every student to measure empathy and a deeper understanding of the various perspectives. I hope to have a clear picture of the potential of video to bring out a variety of learning outcomes in a more effective way.

Appendix A - Introduction & Background

I don't remember very many of the lectures, discussions, or learning activities from my days attending elementary through high school. However, I remember images and scenes from most of the videos and movies I watched in those classes. I still remember scenes from movies and videos that I watched in elementary school. I vividly remember scenes from movies I watched in my high school History classes. Why do I remember these things from 20 years ago and yet forget most of the content from my

textbooks as well as the things the teachers taught? I believe video has a transformative power and influence in the minds of human beings, and especially in the minds of young people. There have been numerous studies done on the negative influence of violent video games or too many cartoons on the minds of children and adolescents. If there are strong arguments for the potential impact of these images, why then are there not more case studies and arguments for the effectiveness of using movies and videos in education? I believe that today's students have grown up in a video culture and that the education world should adjust to this reality and provide more video resources in and out of the classroom. We need to leverage this highly effective technology to give our students a more meaningful learning experience.

When I was doing my student teaching, I remember feeling an uncomfortable tension. My mentor teacher was showing lots of movies for his History classes, particularly for World War II. We watched *Saving Private Ryan*, *Band of Brothers* (10 hours!), and *Schindler's List*. Fresh out of college, I had many ideas for learning activities and various pedagogical methods to engage the students and make the content come alive, and this reliance on movies that my mentor teacher demonstrated was a bit deflating. However, nowadays I find myself on the other side of the struggle. Our principal has said he feels movies and videos are used too often in some classes and should be evaluated more carefully before being used. I get nervous as my principal or head teacher walk by my classroom when I am showing a video or movie. I want to be able to defend my use of videos of all kinds, and I know I need to do more research to find the positive and negative aspects of using video in education. I want to learn more about how much video use is too much and how to strike the proper balance. Mainly, I hope to discover insight and advice that I can share with my colleagues and incorporate into my teaching philosophy.

In my initial research, it was a little difficult to find resources on my research question. There are loads of studies done on video games but seemingly less done on using video in education. The negative consequences of using video that I have read about or heard in the past include that too much screen time is bad for the eyes or brain, that it makes students less attentive in the long run, and that it discourages reading, writing, and even critical thinking. "Teachers in the USA report that their colleagues frequently use media for non-educational purposes, including to fill time, to keep students quiet, as a break from learning, or as a reward for good behavior" (Hobbs, 2006). I also found several studies done on the positive effects of using video in the classroom. One study I found lists 20 positive learning outcomes from using video and says the use of video in the classroom best engages students' brains by tapping into their multiple intelligences and learning styles (Berk, 2009). I believe there needs to be more

research done on the positive and negative effects of using video resources in the high school Social Studies classroom, particularly how it relates to developing critical thinking skills and communication skills.

Appendix B - Literature Review

Introduction

The topic

The research topic concerns the positive and negative effects of using videos to develop higher order thinking and communicative skills, such as observation, analysis, evaluation, and evidence-citation. Research that focuses on the types of videos employed in the classroom is also of interest, but the critical focus is on the implementation of videos or movies, the methods and motives behind their use, and the effects on learning.

General overview of the literature

The research literature reveals many positive effects of using video in classroom instruction, supplemented by a few cautionary examples. Whether through theoretical articles or extensive research studies, there is strong evidence that video is a powerful resource with the potential to increase student engagement in learning and foster critical thinking skills. Many articles and reports give advice on the best practices of using video, which is based on research and teacher testimony. There are also a few research studies on negative effects from inappropriate use of film, such as reducing cognitive load, not connecting video to instructional purposes, and not discussing the video.

Rationale

The core reason for reviewing the literature has been to discover evidence for the positive and negative effects of using video in the social studies classroom. There was an abundance of research on digital literacy and web-based technologies, but effort was made to limit the scope to just video, which includes feature films, TV shows, documentaries, and short videos by amateurs or professionals. Studies and theories specifically focused on the teaching of history or the social sciences were also of particular interest.

Body

Kinds of work reviewed

The variety of work reviewed for this research action project includes research reviews, theoretical articles, doctoral dissertations, and case studies. Much of the data in the research on video use is qualitative in nature. There were surveys done of teachers (Hobbs, 2006) asking what they had observed in regard to video use. There were studies done on which pedagogical method led to better test results (Paska, 2010). There was much evidence of qualitative research based on learning theories, such as cognitive learning theories (Bailey & Ledford, 1994; Berk, 2009; Spiro & Deschryver 2012), increasing cultural awareness (Chislett, 2009), fostering critical thinking (Cortes & Thompson, 1990; Dressel, 1990; D'sa, 2005; Jenkins, 2006), the effective use of video (Russell, 2006), and understanding multiple perspectives (Cortes & Thompson, 1990; Jenkins, 2006). Cognitive learning theory research shows the effective use of video can lead to greater cognitive functioning because different areas of the brain are stimulated when consuming multimedia such as video. There is a wealth of evidence arguing that viewing and discussing a variety of video resources helps students develop critical thinking. The research also brought forth theories on the future of learning, such as the importance of digital literacy (Bruce, 2002). One example of quantitative data found in the research was the dissertation that examined which pedagogical method led to better test results (Paska, 2010), in that students were counted and test results were measured. Another possible example of quantitative data came from the teacher survey (Hobbs, 2006), as teachers were asked to rate how frequently they used various media and how frequently they observed the use of non-educational media by their colleagues. The research on effective use of film (Russell, 2006) could also be considered quantitative in that seventy teachers were observed and data was collected, but the results are more qualitative in nature. The research shows that teachers with more years of teaching experience and graduates of teacher training programs were more effective in their implementation of video in the classroom.

Description of selected important works

The MacArthur Foundation report on Media Education (Jenkins, 2006) is a very thorough examination of the participatory culture of today's youth. They discuss the benefits of the participatory culture, "including opportunities for peer-to-peer learning, a changed attitude toward intellectual property, the diversification of cultural expression, the development of skills valued in the modern workplace, and a more empowered conception of citizenship." They also highlight some concerns that might need interventions, such as the participation gap, the transparency problem, and the ethics challenge. The most relevant section of the report for my research purposes is in the discussion of how using video content can help educators confront the challenges in advocating greater media literacy. The author encourages teachers to help students by engaging them in critical dialogues, addressing unequal access problems, reflecting on

media experiences, and developing ethical norms. The report advocates integrating knowledge from multiple sources, including video, and thinking critically about that content. Digital literacy and the important skills and abilities needed for the 21st century are also addressed.

The research on non-optimal uses of video (Hobbs, 2006) is very useful to the study of potential negative effects of using video in the classroom. The author cautions against the misuse of film. These inappropriate uses of film include: to fill time, as a reward for good behavior, as a management tool, for a substitute teacher, with no instructional purpose, without pausing or rewinding to review or discuss, only as an attentional hook, or to control behavior. The author's research methods include direct observation and a telephone survey of teachers.

The article on using docudramas to teach history (D'Sa, 2005) is very practical research and advice as well. This professor references several research studies while discussing the learning value of using film. There are three cautions mentioned: checking the historical accuracy of films, helping students distinguish fact from speculation, and the tendency toward simplification of complicated problems. The article presents various types of film (documentaries, docudramas, and historical fiction) and discusses how to best implement them in the classroom. Short clips are useful to make certain points or provide useful anecdotes in the midst of a lesson. Teachers should observe students reactions to the various parts of the film and discuss those reactions and student comments. Additionally, teachers can use film to compare the content to the historical record.

Conclusion

How my work is informed by the work of others

My work has benefited greatly from this research literature by evidence of learning theories, practical studies and advice, and positive and negative effects of using video in the classroom. I have read research on various learning theories such as constructivism, cognitive load theory, and observational learning. I have seen a wide variety of examples of how a teacher can implement video in and out of the classroom with various effects. I have read research that shows students retain knowledge better from watching a film than reading a book. I have read warnings of potential pitfalls of using video and analysis of the inappropriate methods of showing videos to students. In conclusion, there is sufficient evidence of the positive and negative effects of using video in the social studies classroom to merit fruitful discussion and continued research.

Appendix C - Research Plan

Research questions

The purpose of this review is to evaluate current research on the positive and negative effects of using video resources in the high school Social Studies classroom. As I study my students, I want to compare the effectiveness of using video and using other methods to deliver content and develop higher order thinking skills.

Methods/Intervention

The methods of intervention I intend to employ are both quantitative in nature. I want to measure the differences that learning resources, specifically video versus no video, have on learning and retaining knowledge about a subject. To measure this difference, I will use a quasi-experimental method by having two experimental groups who watch the video and one control group of students who listen to a lecture and read an article. I will give students a knowledge test before we study the content, then another test after we study the content. I can then compare the students who watched the video to the students who read articles and listened to a lecture to see if there is any noticeable difference in the knowledge they learned and retained. I also want to use a non-experimental survey after we finish studying the content to measure student attitude or belief. I want to measure empathy and understanding, and I will again compare the experimental and control groups. I believe these two pieces of information will give me evidence showing the effects of the use of video resources.

Evaluation

My initial evaluation of this intervention will be trying it out on myself and another teacher in my department. The two of us can see what we know before we read the articles and watch the video, then discuss with each other which of the resources were most helpful and memorable to learning new content and raising our own awareness. Secondly, we will select a small group of students to preview the video, taking both pre-test and post-test. We will also survey them on their attitudes and beliefs. I want to ensure the tests and surveys make sense to the students and give me clear results.

Sample

I teach three classes of year 10 IGCSE Global Perspectives. Each class has between 18-23 students. I will have my first two classes, with 18 and 23 students

respectively, be the experimental groups that will watch the video “It’s a Girl”. My third class has 21 students and they will be the control group that learns about the social problem by reading and discussing an article after listening to my lecture. I believe this sample is well suited for my research because there are a wide variety of students in these three classes. I will give all 62 students the pre-test and post-test to assess their knowledge of the content and statistics. I will also assess their attitudes and beliefs about this subject by giving them a survey.

Study Design

In order to evaluate the effectiveness of using video, I will have two experimental groups and one control group. We are studying a unit on Family and Demographics, and I want to highlight the social problem of the big gender gap in India and China. I want students to know the statistics on gender ratios in these two countries, the history of these two countries, the current policies, and the causes of this problem. I also want them to understand the nature of this problem from a variety of perspectives and develop empathy for the people involved in this situation. To measure the effectiveness of using video, I will compare two experimental groups that will watch the 2013 documentary “It’s a Girl” and one control group that study the same content from listening to a lecture and reading an article. I will give a pre-test before class and the same identical test (post-test) the day after the class to check for content acquisition. I will also give a survey to every student to measure their satisfaction with the content and their understanding of the issues.

Data Sources

I will have two sources of data for this intervention, which are the tests assessing knowledge before and after class and the exit survey assessing understanding and attitude. The pre-test and post-test will be identical so that I can accurately measure the differences in student knowledge acquisition as a result of the lessons. I will not tell the students the answers to the tests until after the post-test is completed so that students can not memorize the answers to the pre-test. The tests will measure their knowledge of the topic of the growing gender gap in China and India, and it will include demographic statistics, laws from those two countries, factors leading to this major social problem, and the consequences of the growing gender gap. Students will learn this information in the lesson; the experimental groups will learn the content from the video and the control group will learn the content from the lecture and the article. The second source of data will be an exit survey. I will measure the level of satisfaction students have from learning about this social problem as well as their understanding of various perspectives on this issue. I will again compare the experimental and control groups to see if there is a discernable difference in their answers.

Procedure

First I will give all three classes a pre-test to measure the amount of knowledge they have about the subject, including demographic statistics, laws, factors leading to this major social problem, and the consequences of the growing gender gap. Next, the two experimental groups will watch the 2013 documentary “It’s a Girl”, which presents this social problem in a compelling way. The video presents all the content on the test using graphics, stories, and pictures. The third class, my control group, will learn all the same content but will not watch the video. I will begin the control group class by introducing the topic and soliciting answers from the class to check for background knowledge. I will share the statistics and explain the historical and cultural issues that factor into the growing gender gap. The students will then read an article that fills in the rest of the content knowledge on the test. Thirdly, I will give all three classes a post-test the day after the material is learned to check for content knowledge. Lastly, I will give all students a survey asking questions about their satisfaction in learning about this topic and their attitude or beliefs about the topic.

Data Analysis

The first step in analyzing my data will be to measure the differences in the results from the pre-tests and post-tests. I will expect to see improvements in all three groups from the first to the second test and will watch closely for differences in the experimental (watched the video) and the control (lecture, reading) groups. I will compare the overall results of the test as well as individual questions that perhaps one medium of instruction covered more thoroughly. I am curious if the use of video is as good or better than lecture and reading for helping students learn and remember content. If there is a big difference in the data points, I can draw more firm conclusions about the value of this medium of instruction.

Secondly, I want to compare the results of the survey between the experimental and control groups. I want to measure the students’ understanding of this issue from multiple perspectives (the mothers, the fathers, the governments, different cultures, etc.) as well as their empathy for those involved. I will ask students to rate the importance of this issue comparing it to other global problems. I will ask students to give reasons for the problem and see if they assign blame to certain groups. Again, if there is a big difference in the data points, I can draw more firm conclusions about the value of this medium of instruction. I believe video is especially more useful in helping students see issues from multiple perspectives, as in the documentary when you hear the real life stories of the people wrapped up in this issue. I also believe the video does a better job of communicating the emotions of the problem, better helping students to feel the pain of

this social issue. So I expect there to be an even greater difference on the attitude survey than on the content test when comparing the two groups.

From these two assessments, I hope to measure any differences between the experimental and control groups. I don't necessarily need there to be a big difference in both assessments to show effectiveness, because I am measuring different things. The post-tests may be very similar, but then the survey results show students who watched the video display more empathy and a deeper understanding. It also possible that both assessments show a greater effectiveness of using video. If the control group does better on the post-test and the experimental group does better on the survey, then I would have a real problem with my theory. It would possibly show video is better for some things and worse for other things. Additionally, if there is a great difference in the results of these experiments, I would have more confidence in my conclusions.

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