



What do 2nd and 10th Graders Have in Common? Worms and Technology:

Using Technology to Collaborate Across Boundaries

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Abstract

The article is about the collaboration between two classrooms that enabled a second grade class to participate in a high school biology class. Through the use of modern video conferencing equipment, Mrs. Culbert, with the help of the Dalton State College Educational Technology Training Center (ETTC), set up a live, two way video and audio feed of the lab, across town, to Mrs. Patty Culver's 2nd grade classroom.

Keywords: E-learning, On-line learning, Technology, Virtual learning, Worms

1. Introduction

Virtual School and 21st-Century Skills, a report issued in November 2006 by the Partnership for 21st-Century Skills and the North American Council for Online Learning (NACOL), contends that online learning through virtual schools is one of the most important advancements transforming U.S. education.

The explosive growth of K-12 online learning is unmistakable. According to the 2006 *Keeping Pace with K-12 Online Learning* study, 38 states have established state-led online learning programs or policies regulating online learning, or both. The U.S.

Department of Education reports that more than one-third of all K-12 school districts offer some form of e-learning.

Crawford (2006) states broadband connectivity has allowed for an expansion of virtual learning and it is a challenge for teachers to integrate technology advances and close access and academic gaps. Bushweller (2002) several years earlier wrote the opportunity for students to access challenging courses and academic materials is afforded through technology. Kapitzke, & Pendergast (2005) discusses E-learning platforms such as Blackboard and LiveText. LiveText is used as the e-learning platform in this this project.

2. Collaboration

WORMS! The image of these slithering creatures sends shivers down many a spine, but in Mrs. Patty Culver's second grade classroom they evoke curiosity rather than a case of the creeps. "What color is the blood?" "Do they really have five hearts?" "Which end is the head?" All are questions one might hear on a visit to the classroom.

Mrs. Culver, a second grade language arts teacher at Leroy Massey Elementary School (LMES) in Chattooga County, developed a study about earthworms to give her children real world experiences to use in their writing. The 2nd graders were able to see and touch live worms and even created a website in LiveText (<https://c1.livetext.com/doc/3396732>) about their study. Students learned about procedural writing and persuasive writing, as well as writing poems, songs, and even cartoon illustrations and were very excited to publish their work to the earthworm website. During the same semester, high school students across town were also studying earthworms and preparing to dissect the little creatures

Dr. Donna Herring, Program Chair for Instructional Technology at Jacksonville State University (JSU), was aware of the studies in both classrooms and initiated a collaboration between the two classrooms that enabled the second grade class to participate in the high school earthworm dissection lab. Mrs. Culbert, a teacher at Chattooga County High School, conducted lab dissections with her students the way most science teachers do, but she added a new twist. Instead of just having the students perform the lab work for their own knowledge, she gave them an opportunity to share that knowledge with others. Through the use of modern video conferencing equipment, Mrs. Culbert, with the help of the Dalton State College Educational Technology Center (ETC), set up a live, two way video and audio feed of the lab, across town, to Mrs. Culver's 2nd grade classroom.

During the lab, Mrs. Culbert's students used technology, including a SmartBoard and an Elmo, to show the 2nd grade students the procedures as they were performed. They explained what they were doing and what they were seeing. The 2nd graders were then allowed time to asked questions. The high school students got to experience teaching others.

Mrs. Culver felt that publishing to the earthworm website increased her students' desire to write. "They wanted to add content to their webpage as often as possible," explained Mrs. Culver. The students enjoyed reading each others work on the web and were excited to be able to share the URL so that family and friends around the world could also view their work. "The collaborative earthworm dissection lab was an awesome experience for my students," Mrs. Culver said. "They loved seeing the high school students live on the SmartBoard and enthusiastically asked questions during the dissection lab."

Mrs. Culbert felt that the experience had several benefits for her high school students as well. She explained that her students had to pay more attention to their dissections because the second graders were asking questions. "They enjoyed being the teacher and the expert of the content," Mrs. Culbert stated. "The high school students were amazed that the second graders were studying similar content and were using the same words to discuss the anatomy and systems of the Earthworm." Mrs. Culbert felt that the technology made the collaborative lab much more personal since her high school students could see the second grade class on the SmartBoard as they answered questions.

Both Mrs. Culver and Mrs. Culbert received graduate degrees from Jacksonville State University. They are committed to preparing their students to face a changing world where the ability to utilize telecommunications technology is a critical skill that will enable them to express thoughts and ideas effectively. Teachers like Mrs. Culbert and Mrs. Culver, using these types of technology in the classroom is giving their students a distinct advantage.

Mrs. Judy McEntyre and Mr. Patrick Clifton provided the expertise for setting up and connecting the two classrooms. Two Polycom video conference systems with projectors were used, one in each classroom. This allowed students at each site to see the other classroom. One Elmo digital presenter allowed high school students to show the dissection and allowed 2nd graders to see up close. One computer was recording the entire session. A SmartBoard in each classroom allowed students to see the other classroom on the big screen.

Mrs. McEntyre is director of the Educational Technology Center (ETC) at Dalton State College and an adjunct professor in the Instructional Technology program at JSU.

Mr. Clifton is the Technical Support Specialist for the ETC and a graduate of JSU. Alan Gayton, Randy Ware, Paul Bellamy, and Helen Oliver, Instructional Technology Specialists at the ETC, filmed the event. A video of the collaborative lab can be viewed at: <http://www.dscttc.org/>.

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