

THE ADVANCING BIOLOGY EDUCATION (ABE) RESEARCH PROJECT: A STUDY OF ONLINE LEARNING FOR TEACHERS

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Does participating in an online professional development course change what teachers know, how they teach, and what their students know?

In 2007, researchers at the Education Development Center, Inc. (EDC) and partners at WGBH Teachers' Domain and PBS TeacherLine set out to examine the growing field of online educational opportunities for teachers. Our goal was to investigate how effective online professional development is at helping teachers—and consequently, their students—learn.

At the heart of the project is an randomized control trial of the effectiveness an online professional development course aimed at improving learning outcomes for New York state high school biology teachers and their students. We recruited 144 teachers who were assigned to either a treatment group who took the online course *Teaching High School Biology* in summer 2008 or a control group who took the course in the summer of 2009. Due to study attrition, our final sample included 61 teachers. The study had two core research questions, which are summarized below, along with our main findings.

Research Question 1:
Does participating in the online course result in higher levels of teacher knowledge of genetics and evolution, pedagogy, and using digital resources?

Finding:
Teachers who took the course improved their understanding of teaching pedagogy but not

genetics and evolution concepts or how to use digital resources.

Research Question 2:
Does teachers' participation in the online course lead to higher student knowledge of genetics and evolution?

Finding:
We found no statistically significant impact on students' learning due to their teacher's participation in the online course.

UPCOMING PRESENTATIONS/ CONFERENCES

Join us at these upcoming conferences to learn more about our study findings.

- Celebration of Teaching and Learning, New York, NY, March 16-17
- National Association of Research in Science Teaching, Indianapolis, IN, March 27
- National Science Education Leadership Association, Indianapolis, IN, March 28
- National Science Teachers Association, Indianapolis, IN, March 29
- NSTA's Research Dissemination Conference, Indianapolis, IN, March 31
- American Educational Research Association, Vancouver, Canada, April 16



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For more information about our presentations and research findings, please visit our study website: abeny.cct.edc.org

SPRING 2012 COURSES**MARCH 26TH - MAY 7TH (ENROLLMENT ENDS MARCH 29TH)****INST325 Using Assessment and Evaluation:**

Delve into the full array of assessment and evaluation tools, including rubrics, journals, formal and informal assessments, and portfolios. Then, create an effective rubric based on an existing student assignment.

(30 hours)

MATH120 Fostering Cooperative Learning, Discussion, and Critical Thinking in Elementary Math:

Highly developed collaborative and critical thinking skills are what your students need to meet standards and perform in high-stakes testing. Expand your collection of strategies for sharpening these skills using classroom technology.

Discover activities designed to support collaboration and problem solving within the curriculum while addressing National Council of Teachers of Mathematics (NCTM) standards.

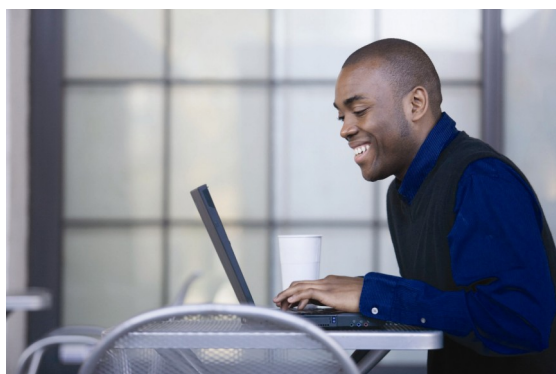
(30 hours)

RDLA340 Teaching Reading in the Content Areas:

Master new strategies to address students' reading and learning across grade levels and content areas, explore environments that promote effective learning, and examine necessary skills for reading content material successfully.

This course shares essential techniques to support independent reading and learning and identifies opportunities for students to access prior knowledge, set a purpose or target for reading, organize and summarize ideas, take notes, and reflect on their discoveries with satisfaction.

(30 hours)

ENROLL ONLINE NOW!

The PBS TeacherLine New York website is a comprehensive source for all your online professional development needs.

Enroll now for Spring courses.

Find semester dates, course offerings, how to register and other information in the course schedule.

www.thinkbright.org/teacherline

Address Common Core &

ACHIEVE SUCCESS

with PBS TeacherLine Courses



Interested in addressing the new Common Core State Standards (CCSS) for literacy and STEM in your teaching? Explore and implement current concepts and best practices for teaching reading and writing and STEM with our **research-based online courses**.

Review how our courses align to the new CCSS: www.pbs.org/teacherline/courses/common_documents/common_core.pdf

45 HOURS

RDLA152 **An Introduction to Underlying Principles and Research for Effective Literacy Instruction**, Grades K-8 (CCSS aligned)

RDLA192 **Improving Reading Comprehension**, Grades 4-6 (CCSS aligned)

STEM412 **Global Climate Change Education for Middle School**, Grades 5-8 (CCSS aligned)

STEM417 **Global Climate Change Education for Middle School**, Grades 9-12 (CCSS aligned)

Many districts reimburse their teachers' PBS TeacherLine course expenses. Ask your district for more information!

VITAL NEW YORK POWERED BY PBS LEARNINGMEDIA

PBS LearningMedia is a NEW media-on-demand service developed for educators that provides EASY access to classroom-ready, curriculum-targeted, multi-platform digital resources.

Thousands of curriculum and professional development resources come from 80+ educational producers including PBS and WGBH ... and it's FREE! What are you waiting for?



vitalny.pbslearningmedia.org

VITAL New York is brought to you by a collaboration of New York State's nine public television stations



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What is PBS TeacherLine?

PBS TeacherLine is pioneering an innovative model for on-demand, high quality, and standards-based teacher development. Focusing first in the areas of mathematics and technology, then expanding to all curriculum areas. Currently PBS TeacherLine offers more than 80 research-based courses for teachers at every grade level from pre-K to 12. Courses in math, reading, technology integration, teaching strategies, science and curriculum mapping answer No Child Left Behind requirements for high-quality professional development for teachers, and qualify for graduate credits.



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