

Empowering Teachers Through the Virginia 21st Century e-Teacher Graduate Series

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Abstract – The Virginia 21st Century e-Teacher Graduate Series prepares teachers to meet the needs of learners in today's classroom. This program, unlike some one-time professional development programs, equips teachers with the knowledge to embed today's technology tools into curriculum and instruction building relevance to learning. The program teaches in-service educators to become life-long learners themselves, enabling them to keep abreast of the latest technological innovations in today's ever-changing world.

Keywords: online, professional development, technology, integration, 21st century tools

BACKGROUND

An alliance of non-profit and education interests has formed in Virginia to support the 21st Century e-Teacher Graduate Series. This graduate professional development empowers teachers to respond to the urgent need to prepare students for life in the digital world. It is the belief of this alliance that every teacher in the Commonwealth should work toward becoming a 21st Century e-Teacher by 2014.

The Virginia 21st Century e-Teacher Series equips teachers with the knowledge and skills to embed today's technology tools into curriculum and instruction, building relevance for student learning. Through the development of Professional Learning Communities (PLS), this series sets the framework for participants to become life-long learners themselves, enabling them to keep abreast of the latest technological innovations in today's ever-changing world.

The framework and foundation for this program has been set by a team of professionals representing education and non-profit organizations. The School of Continuing and Professional Studies at the University of Virginia provides the pedagogical basis and structure for a forward reaching teacher professional development program. Core content is provided by LearniT-TeachiT's 21st Century e-Teacher Initiative, a project that was piloted by The National Institute of Aerospace (NIA) and Virginia Beach City Public Schools. LearniT-TeachiT and NIA bring cutting edge science, technology, engineering, and mathematics (STEM) content and deep understanding of technology and its application in the classroom to the team.

THE PROBLEM

Considerable media attention has been given to the concern that the United States is losing its global leadership in economic, scientific and political arenas. Frequently, these articles cite a public school system that inadequately prepares students to be competitive in the global marketplace as the cause of this decline. Education is commonly

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recognized as the key to success in today's world and this education must reflect the realities of our world society, a society that is pervaded by technology. [Partnership for 21st Century Skills, 2]

This technology has profoundly changed the lives of students. The Internet has provided them with nearly limitless access to information. Other advances in technology have changed the way they interact - with each other as well as with their environment. The students of today communicate synchronously (cell phones, instant messaging, texting) or asynchronously (MySpace, Facebook, blogs) at almost any time they wish. They control not only what TV shows they watch but when they watch them (TiVO, DVR). They download their entertainment on demand (iTunes music and video). They find the answer to most any question instantaneously (Google, Wikipedia). However, if we wish to create digitally literate students, they must possess the skills not just to access information but to analyze, synthesize, and evaluate multiple sources to arrive at valid conclusions. [Partnership for 21st Century Skills, 2]

Access and control permeate almost every area of students' lives - except for school. The school these students attend each day mirrors the school their parents attended twenty, thirty, or forty years ago. Although technology tools such as computers, LCD projectors, and interactive white boards are used in schools today, these tools merely substitute for TVs, VCRs, and chalkboards, with the result that teachers use these new tools to teach in old ways. [Prensky, 4] This disconnect between what happens within school walls and outside them is what disconnects students from learning. We must reconnect them to learning by using technology in a manner that reflects how they experience the rest of their lives. Achieving this goal demands powerful professional development experiences for teachers.

Historically, the Commonwealth of Virginia has taken the lead in providing an exceptional foundation for its teachers and exemplary learning standards for its students. Virginia continues to lead the way by leveraging technology to change the learning environment to one that reflects the realities of the 21st Century. Not only will this produce students prepared to compete in the global economy, but it will increase the number of students with skill sets that make them competitive. Technology can be the great equalizer for all Virginia students. All students whether in the city or on the farm, northeast in Fairfax or southwest in Lebanon, must have access to the knowledge and information they need through the use of technology.

Teacher professional development must evolve to meet the needs of this transformed learning environment. Teachers need to learn how to manage learning and how to be life-long learners themselves in order to keep pace in this ever-changing technology environment. Ongoing professional development experiences must recognize the innate potential of teachers, meet them at their present level of understanding, and assist them in pursuing a personalized set of experiences that enables them to grow, share their knowledge with other professionals, and learn from their colleagues. [DuFour, 1] Only then will they be able to truly fulfill the Virginia Board of Education's vision statement to "create an excellent statewide system of public education that derives strength from our diversity and that ensures equality of opportunity for each student in a safe and healthy learning environment that prepares all students to be capable, responsible, and self-reliant citizens in the global society."

THE SOLUTION

Clearly, the new U.S. administration sees the need for educational reform as evidenced by the inclusion of funding for this reform and the current *Educate to Innovate* campaign. It is time for government, private business, educational institutions, and non-profit organizations to come together to reshape the educational landscape. Working together, these groups can empower teachers to prepare our children for ever-changing and demanding workforce needs. [Partnership for 21st Century Skills, 3]

The University of Virginia's School of Continuing and Professional Studies, the National Institute of Aerospace (NIA) and LearniT-TeachiT have joined forces to create the Virginia 21st Century e-Teacher Series to transform teacher professional development in Virginia. This new series will enable teachers to accomplish the systemic changes needed to implement 21st century teaching and learning throughout the Commonwealth.

Each of the partners has specified responsibilities in this initiative. Those areas of responsibility are delineated below.

The University of Virginia -School of Continuing and Professional Studies is developing and administering the 21st Century e-Teacher Series; ensuring the recognition of curriculum by appropriate credentialing body; providing services for student participants and instructor facilitation through its regional centers; and assisting with marketing and promotion of series initiative.

LearniT-TeachIT is developing and providing license to core course content to serve as the basis for the curriculum to be used in the Virginia 21st Century e-Teacher Series; providing the technical mechanism(s) for core course content management (CMS) distribution and delivery; improving and expanding curriculum through pilot feedback and partner consultation; and assisting with marketing and promotion of series initiative.

National Institute of Aerospace is providing STEM subject matter expertise and course development assistance; ensuring that course curriculum, supplemental materials, and instructor facilitation is consistent with University of Virginia standards and procedures; and assisting with marketing and promotion of series initiative.

PILOT

The Graduate Series contains four three-credit graduate classes. It is completely online and asynchronous, eliminating distance and time constraints. Albemarle County Public Schools and Virginia Beach City Public Schools are core participants in the pilot running the Spring and Summer 2010 semesters. Statewide implementation of the Graduate Series is scheduled for Fall 2010.

Each school system has identified a cadre, on average, of 25 educators to complete this series. In turn, through the fourth and final course of this series, each person trained will develop and deliver online professional development for at least 20 teachers in their home school system.

Following this model, by Fall 2010, 1050 teachers will be trained to deepen and support instruction through the effective use of technology through this online professional development pilot.

Participation in the pilot enables these school systems to: develop internal leaders, trainers and early adopters to support internal 21st century e-Teacher training, leading to systemic change and improvement; be included in the program's evaluation component and showcased in statewide and national reporting; and gain skills as content producers to harness the value of free and open education resources

Courses and Time Frame

The four courses include:

- Introduction to Lesson Planning, Research and Collaborative Tools for 21st Century e-Teachers
 - February 15 – March 28
- 21st Century e-Teacher Project-based Technology Skills
 - April 12 – May 23
- Practical Applications and Sustained Support for 21st Century e-Teaching
 - June 21 – August 1
- Facilitating Online Professional Development Practicum
 - August 16 – August 29 -- Facilitation Training
 - September 20 – November 7 – Practicum
 - November 8 – November 14 -- Reflection

These courses are in review by the University of Virginia to be considered for a graduate certificate. They are also being reviewed by the National Education Association (NEA) to be considered for inclusion in the NEA Online Academy.

CONCLUSION

Our goal is to build an alliance dedicated to training Virginia teachers and educational administrators to meet the challenges in preparing today's learners to be successful in the global marketplace. By implementing the Virginia

21st Century e-Teacher Series, the Commonwealth will lead the way in changing, at a fundamental level, teacher professional development and will secure its position as a leader in preparing its learners for the challenges of the 21st century.

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Sharon Bowers is a teacher in Virginia Beach City Public Schools working as an Educator-in-Residence for the National Institute of Aerospace (NIA). She has taught science for more than 25 years and her work with children earned her recognition as a Secondary Science Presidential Award Winner for Virginia. Through her work with NIA, Sharon works with LearniT-TeachiT to develop resources that model best practice in the use of instructional technology to support 21st Century teaching and learning.. She is an instructor for the Mickelson ExxonMobil Teachers' Academy, writes activities and trains teachers for the AIMS Education Foundation and has been a writer and reviewer for Harcourt Science. Sharon earned her undergraduate degree, in biology and education, as well as her master's of education in Special Education at McDaniel College, formerly known as Western Maryland College.

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K. Edwin Brown is the director of the Hampton Roads Center of the School of Continuing and Professional Studies at the University of Virginia. He has worked in the field of education in Virginia for 45 years. For thirty-six years, he worked in the Virginia Beach City Public Schools as a teacher, principal, director of research and planning, and assistant superintendent. For five years, he served as a consultant on school improvement as well as gifted education. He has served as an instructor for George Washington University, Virginia Commonwealth University, and the University of Virginia. Edwin earned his undergraduate degree in history and his master's degree in education at the College of William and Mary. His doctorate in curriculum is from the University of Virginia.