



VIEW*S* & VISIONS

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Teaching Meets Technology: The Path to Future Learning

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Dr. Tori Haring-Smith became Washington & Jefferson College's 12th president in 2005. Under her leadership, the College has grown from 1200 to 1500 students, while raising the academic profile of its students and increasing geographic, socio-economic and ethnic diversity.

In 2010, she opened the new state-of-the-art John A. Swanson Science Center, clear evidence of the College's commitment to sustaining its strong tradition of excellence in the sciences. She recently spearheaded the establishment of the Washington & Jefferson College Center for Energy Policy and Management.

Prior to coming to W&J, Dr. Haring-Smith was vice president for educational affairs at Willamette University in Salem, Oregon. She has also served as executive director of the Thomas J. Watson Foundation.

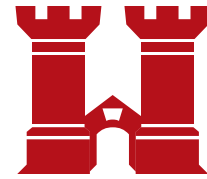
Dr. Haring-Smith is a noted director, author and speaker. She spent 16 years teaching theatre and writing at Brown University. She also chaired the Department of Performing and Visual Arts at the American University in Cairo, Egypt, and served as artistic director for the Wallace Theatre in Cairo.

Dr. Haring-Smith holds doctoral and master's degrees from the University of Illinois at Urbana-Champaign and a bachelor's degree from Swarthmore College.

The classroom in 2025 will be both very different and very similar to the classroom today because learning is essentially a human activity. The most important ingredient for successful learning is a dedicated and inspirational teacher who can reach the wide variety of students in his or her care. The principles of human interaction have changed little through the centuries. That being said, the means used by dedicated teachers to explain the world to our children are evolving at a dizzying speed because of the rapid growth and development of technology. The way we train teachers, therefore, will continue to involve studies of psychology and learning theory, but in the coming years teachers will be teaching different kinds of content and using technology to convey their knowledge in very different ways.

Technology is already allowing teachers to "flip" their classrooms, acting as coaches while students work with interactive computer programs to gain basic skills and knowledge. While this sounds very futuristic, it is little more than an updated version of the one-room schoolhouse in which students, at a variety of different levels, worked at their own speed through the subjects that constituted their curriculum. Just as the one-room schoolhouse teachers walked among students, adjusting their comments to each student's needs, so teachers in 2025 will spend more time working with individual students, responding to their specific learning needs. One student will be stuck on fractions and another will be speeding toward algebra. Proficient teachers will need to be able to pose challenging questions to students, individually or in groups, to propel their learning.

Teachers will have the technology to connect students to others in their hometown and around the world. Learning about distant societies primarily through books and films will be transformed into more direct interaction.



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Wealthy schools and families may be able to supplement the formal curricula with focused travel, but many schools will rely upon real-time technology to connect students with those across the globe. Students in Pittsburgh, Manchester, Berlin and Moscow will be able to take a common course on World War II, sharing their perspectives on that multi-national event. First-graders in Washington, Pennsylvania, will be able to learn Chinese by talking with first-graders in Beijing. To be comfortable in this setting, teachers must be proficient in the use of technology and understand language and culture.

Well before 2025, it will be necessary for teachers to teach their students the skills of evaluating the validity and bias of information sources. Librarians assess the reliability and accuracy of the holdings in their care; a library user can rely upon that filter. But now information and opinion is more readily available through the unregulated Internet, and so teachers must help students understand how to test information for validity and bias. The Aryan Nation's site will give a different picture of Martin Luther King than will that published by the NAACP or the Malcolm X Society. Without being able



to detect these differences, students and teachers will be unable to sort truth from opinion, fact from fiction.

Many of the most significant issues that humans face today can only be addressed in a multidisciplinary fashion, by individuals who can understand science as well as politics, psychology as well as economics. For this reason, teachers will find themselves called upon to be familiar not only with their fields of expertise, but also with other areas of knowledge and modes of inquiry, so that they can teach students to bridge disciplines. General education courses will be just as important as courses in a specific field or major. Of course, students also will need to work with others, and so the skills of civic interaction, like conflict resolution, effective leadership and team building, will continue to be part of the classroom day and part of teacher training.

These changes in the classroom will require changes in teacher preparation. Teachers who have narrow training in curriculum design, administration, legal aspects of education and learning theory will not be fully prepared to meet the demands of

the 2025 classroom. Instead, teachers will need to be lifelong learners who are not only experts in creating environments for learning, but who also understand history, natural and physical sciences, quantitative reasoning, geography, global cultures and languages, the nature of democracy, world religions and human communication. In other words, they will not only need focused teacher training but also a liberal arts and sciences education. Being sequestered in a “school of education” will no longer provide adequate training to coach students in academics and civic life in order to prepare them to be savvy consumers of information; competent solvers of complex, multidisciplinary problems; active lifelong learners; and engaged citizens in a participatory democracy. And teachers will do all of this in a global context.

Washington & Jefferson College is already meeting this challenge by training our teachers in the context of a liberal arts and sciences curriculum. Our methods will grow and change through the years, but we are clearly headed in the right direction, as the high demand for our graduates attests. √