Wake Forest, like its colleague institutions around the country, should not be surprised that a new generation of students is arriving on its doorstep. With the class of 2005, more so than with any class in the past, both faculty members and trainers in the various sessions of ThinkPad Orientation have observed that students are comfortable members of the Internet Generation we’ve been hearing about. For the first time, a noticeable number of Freshmen brought hand-held computers such as Compaq iPAQs and Sony Clies. One Freshman Seminar instructor commented that within seconds of his mentioning a topic in class, several students will locate associated web sites and jump into the discussion with information readily at hand. The difference between this Freshman class and the Freshman class just four years ago is remarkable.

To what do we owe this change? Without a doubt, the proliferation of home computers has contributed to students’ level of comfort with a mouse and keyboard. Doing internet research, however, is probably a distant second to playing games on home computers. Where are students getting the idea that electronic devices are an integral part of many of their everyday tasks? Part of the credit must go to the technology initiatives of our nation’s K12 schools.

There are now both national and state technology curriculum standards for students and for teachers, and the standards are high. In particular, the North Carolina standards are among the most demanding in the nation.

National standards for students include the following categories:

1. Basic operations and concepts: students must understand the nature of computers and how to operate them
2. Social, ethical, and human issues: responsible and ethical use of technology, positive attitudes toward technology in support of lifelong learning and personal pursuits
3. Technology productivity tools: students must learn to use personal productivity tools
4. Technology communications tools: students must use collaboration and communication tools
5. Technology research tools: Students must use technology to locate, collect, and evaluate information, process data, and report results.
6. Technology problem-solving and decision-making tools: students use tools to solve real-life problems. (http://cnets.iste.org/sfors.htm)
North Carolina standards fall into three broad competency categories, with specific curriculum guidelines for meeting the category requirements at each grade level from kindergarten through grade 12.

These are the broad categories, with representative examples of specific skills expectations for grades 1, 6, and 12:

**Competency Goal 1:** The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer and other technologies.
*Grade 1:* Identify the Internet as a source of information; identify uses of computer at home
*Grade 6:* Demonstrate an understanding of copyright by citing sources of copyrighted materials in papers, projects, and multimedia presentations.
*Grade 12:* Identify issues surrounding complex technology environments.

**Competency Goal 2:** The learner will demonstrate knowledge and skills in the use of computer and other technologies.
*Grade 1:* Identify fundamental computer terms and word processing terms.
*Grade 6:* Create/modify a database relevant to classroom assignments.
*Grade 12:* Practice and refine knowledge and skills in keyboarding, word processing, desktop publishing, spreadsheets, databases, multimedia, and telecommunications in preparing classroom assignments and projects.

**Competency Goal 3:** The learner will use a variety of technologies to access, analyze, interpret, synthesize, apply, and communicate information.
*Grade 1:* Gather, organize, and display data; group items using manipulatives or software.
*Grade 6:* Create nonlinear multimedia projects related to content areas.
*Grade 12:* Use electronic resources for research.

( [http://www.dpi.state.nc.us/curriculum/](http://www.dpi.state.nc.us/curriculum/) )

What are the implications of these K12 standards for colleges and universities? We are seeing the results now. Students who use technology as naturally as our former students used pen and paper will expect no less of their instructors. More and more, students will challenge their instructors to present course materials in the non-linear and multi-sensory ways they have experienced in their prior education. These may not be conscious expectations on their part, but rather subconscious expectations that may leave them vaguely dissatisfied with their educational experience if these needs are unmet.

Just as groups who tried to ignore the industrial revolution became novelties and anachronisms, instructors in higher education can no longer afford to ignore the technological revolution. It is becoming increasingly critical that instructors have a baseline comfort level with computing and multimedia resources and begin using them to enhance the process of sharing their knowledge with their students. The model of the learned professor with his students listening to hour-long lectures with rapt attention is not entirely a thing of the past, but it is becoming a smaller part of the instructor-student learning relationship. Are we ready to meet the challenge?