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The Year in Higher Education: Technology

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TECHNOLOGY

Changes brought by technology have had their pluses and minuses.

But overall, any challenges around technological issues are well worth overcoming for the benefits that technology affords institutions of higher learning, our nation as a whole, and truly the world!

Although higher education in the United States has been viewed as a great success, it is also considered one of the obstacles for needed change in this new environment.

In fact, higher education institutions are viewed as increasingly expensive and resistant to change.

Despite these concerns, higher education in the United States has become one of our greatest success stories.

It continues to be viewed with envy around the world for its breadth and its depth.

Many other countries are adopting our approach to higher education. Korea, Mexico, and the European Union are adopting the American model.

Institutions of higher learning relish innovation and change. They are the natural outcome of our research and teaching.

We can and will compete effectively in this new environment.

But what are the challenges to accomplishing this?

Taxpayer support for higher education as a percentage of total cost has declined. That is a fact all of us in higher education have to deal with. It is not an invitation for institutional hand-wringing.

What’s new in technology? While everyone seems to recognize the need to invest in new technology, not enough has been done to strategically address this need.

At the same time, we know that technology investments drive up the costs of higher education at the same time we are competing with countries around the world for available faculty.

The challenge is to take a hard look at our resource streams to insure that we can deliver the quality that is expected. Public higher education institutions should look at
efficiencies, but we also need to redouble our efforts to secure increased private giving and support.

So those are the challenges. Let’s explore the opportunities.

Colleges and universities have always been leaders in innovation. The interdisciplinary collaborations that are providing exciting advances and intriguing possibilities attest to that fact.

What’s new about what’s new? The creation and dissemination of knowledge on campuses is increasing at a phenomenal rate.

However, the way we share that knowledge is, in many instances, constrained by our archaic methods.

Institutions of higher learning frequently give away intellectual resources to publishers and other entities, then buy these resources back at a later time for our their own use at a very high cost.

Here is one example. A chemistry or history professor conducts research and submits an article for publication.

Once the piece is published, the only way the college that employs the professor can obtain it is to buy the publication at a premium. The article is now owned by the publisher.

This is not a win-win situation for the professor or the school. In this new world, we need to find ways of reducing this significant financial burden.

More and more academic fields and institutions of higher learning are finding ways to publish the work of their faculty, without the added cost of the “middleman,” i.e. a publishing house that has little or no competition.

This intellectual knowledge can now be accessed easily with the use of existing technologies.

What else is new? WIRELESS.

The ability of higher education institutions to collaborate utilizing high-definition video across the disciplines is constrained only by the bandwidth that they have.

While there is access to Internet2 nationally, there are many regions in the country that are significantly underserved.

Within New York State, NYSERNet is a consortium of public and private institutions that has provided an extremely robust network across the state.
However, the network does not reach all institutions of higher education equally.

A national effort, committed to effectively and efficiently linking all institutions of higher education, is needed. That is the challenge.

Our students are pleased when our campuses go “wireless.” However, students also expect their entire community to provide wireless internet.

This opportunity is within reach. Very often, our surrounding communities ask us to help in many different ways. In some of these instances, we are not well-equipped to answer their call.

However, in the arena of information technology, colleges and universities can respond with great effect.

There are a number of examples where institutions of higher education have worked with their local communities to establish municipal networks that include all institutions of higher education, local governments, hospitals, libraries, public schools, and not-for-profit entities.

Exploration could be done to see if these infrastructures could be leveraged to provide wireless access to all citizens.

Buffalo State College played a leadership role in a citywide collaborative effort to bring this technology to the entire City of Buffalo.

This project is still in progress, but clearly, without the involvement and commitment of higher education institutions in our community, the government, business, and not-for-profit sectors would have been severely hindered in their WI-FI efforts.