Survey seeks faculty clues about future of universities

By Greg Brown

Should a university: Foster creativity? Require proficiency of a set of accepted academic skills? Be an instrument for social change?

This week, the faculty will be surveyed for its opinion on the values and themes that should guide university teaching and research in the next decade and beyond.

The collective responses will be used to stimulate dialogue during the conference on “The University of the Future,” to be held at Ohio State May 7-9. The conference, which is open to the entire community, is organized by the Center for Comparative Studies on behalf of the College of Humanities.

The scope of the symposium agenda is vast regarding academic and social issues. Speakers will probe the relationships of American universities to science and technology, the marketplace, creative thinking, and how values are established through education.

National leaders in education and related professions are scheduled to make presentations at the conference. They include: Jonas Salk, who discovered the polio vaccine; Robert Payton, president of the Exxon Educational Foundation; Germaine Bree, scholar from Wake Forest University who specializes in French literature and the humanistic values of education; Kenneth Keller, president of the University of Minnesota; and Lewis Branscomb, former director of research at IBM.

“One of the primary needs in preparation for this conference is to find out what professionals in the field think higher education should be,” says Richard Bjornson, professor of Romance languages and literatures. He is co-chair of the conference along with Marilyn Waldman, associate professor of history and director of the comparative studies center.

“Ohio State is a particularly good setting for such a survey because of the breadth and sheer numbers of our faculty. Everything is represented here,” says Bjornson.

The questionnaire will take approximately 15 minutes to answer, Bjornson estimates. It focuses mainly on the general goals higher education should advance, rather than on specific tasks to be accomplished.

For example, the survey asks if a university should: Facilitate upward social mobility; cultivate an off-campus environment that reinforces its educational mission; and play an important role in conserving the cultural heritage of the western world.

“The answers to these questions should be of great value at Ohio State, especially as the University grapples with changes in the undergraduate curriculum,” says Bjornson.

The survey should be completed and returned to the comparative studies office by April 17 to ensure compilation by the start of the conference. The results are to be published in the May 7 edition of onCampus.

In addition to its national focus, the symposium is designed to provoke a campuswide examination of Ohio State’s own academic and community future.

“At the symposium, we hope to engage faculty, staff, students and the general public in a wide-ranging discussion of what we’re about and how we might achieve the goals we’ve set for ourselves,” Bjornson says.

To that end, other programs will augment the conference.

• A film festival of feature-length movies that explore popular images of higher education will be held at the Drexel North Theatre, 4250 N. High St. Films and dates include: “The Male Animal,” April 5; “Educating Rita,” April 12; “Sheer Madness,” April 19; “Paper Chase,” April 26; and “Jonah who will be 25 in the year 2000,” May 3. All films will begin at 5 p.m.
• A continuing education course, offered two Saturdays prior to the conference and one following it, will examine many of the same issues the conference will address. During the two-hour sessions, the writings of many symposium participants will be studied. In addition, attendance at the meeting will be part of the course.

For more information about the symposium, the film festival or the continuing education course, call the Center for Comparative Studies at 292-2559.
Governor, others to probe future fate

By David Tull

Gov. Richard Celeste on May 8 will discuss his vision for the future of higher education and its relationship to state government in an address to the Seventh Annual Symposium in the Humanities. Celeste will speak at 9 a.m. in the Ohio Union Conference Theater.

The symposium, which is scheduled May 6-9, will bring national leaders in education, science, arts and the humanities to campus to discuss "The Educated Citizen and the University of the Future." Symposium sessions will be in the Ohio Union.

A complementary short course beginning April 25 will focus on the writings of and the speakers at the symposium.

Both the short course and the symposium are open to the public. The symposium is free.

The short course will be made up of three two-hour sessions, in the mornings of April 24, May 2 and May 16. These sessions will meet in 2050 Drake Union, under the direction of Barbara Reeves, instructor in the Center for Comparative Studies in the Humanities. There is a fee, which includes reading materials. The charge is $35 for the general public and $10 for Ohio State students, faculty and staff and their dependents.

Symposium speakers, whose writings will be used in the short course, include Germaine Brée, a literacy critic and scholar from Wake Forest University and the author of works on the human condition in the 20th century; Harry Edwards, a sociologist who has written on the role of athletics in the university; Vera John-Steiner, author of works on education and creativity; Evelyn Fox Keller, author of Reflections on Gender and Science; and Jonas Salk, discoverer of the Salk polio vaccine.

President Jennings will address the symposium at 8 p.m. May 6. Frederick Turner, Founders Professor of arts and
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humanities at the University of Texas at Dallas, will give the keynote address at 1:30 p.m. May 7 on the topic "A New Logic of Human Studies."

The symposium will consist of six sessions during three days, each addressing a different perspective on how to produce an educated citizenry.

The May 7 morning session will focus on "The University and its Publics." The morning session May 8 will explore "The University and Science and Technology." The afternoon session will be on "The University and Creative Thinking."

The May 9 morning session will focus on "The Structure of University Education." The afternoon session will be on "The University and the Information Processing Revolution."

Among the symposium speakers, in addition to those mentioned, will be Kenneth Keller, president of the University of Minnesota; Philip Jordan Jr., president of Kenyon College; Robert Payton, former president of the Exxon Educational Foundation and professor in the Miller School of Public Affairs at the University of Virginia; Wendy O'Flaherty, professor of history of religions, University of Chicago, whose special interest is comparative religion; Howard T. Odum, professor of environmental engineering, University of Florida, and Kate Wilhelm, novelist.

The College of Humanities sponsors the symposium, with the assistance of the Center for Comparative Studies in the Humanities and the Graduate School. Major funding for this event has been provided by the Ohio Humanities Council and the Corporate Council on the Liberal Arts.

The symposium and the short course both will address basic questions on the nature of the educated citizen in the society of the future, the goals and functions of the university in that society, and the role to be played by the traditionally privileged values and perspectives.

A film festival of feature-length movies that explore popular images of higher education began earlier this month at the Drexel North Theatre, 4250 N. High St. Remaining films include "Paper Chase," April 26, and "Jonah Who will be 25 in the Year 2000," May 3. Both begin at 5 p.m.

Additional information, and registration for the short course may be obtained at the Center for Comparative Studies, 306 Dulles Hall, or call 292-0128. Registration also may be accomplished through the Office of Continuing Education, Department of Conferences and Institutes, 292-4230.
OSU offers look at future

By Ruth Hanley
Dispatch OSU Reporter

What will the educated citizen need to know in the society of the future?

What must a university do to produce those educated citizens?

National leaders in education, science and the humanities will try to answer those and other questions at an Ohio State University symposium that starts Wednesday and ends Saturday.


SECTIONS WILL be in the Ohio Union. The programs are free, and the public is invited.

"We want to provoke discussion at the university, and we'd like to get the public engaged in the debate," said Richard Bjornson, an OSU professor of Romance languages. Bjornson and Marilyn Waldman, an associate professor of history and director of the Center for Comparative Studies in the Humanities, are coordinating the event.

Bjornson said Ohioans have a stake in public universities because, in addition to educating students, the institutions contribute to the state's economic development and cultural diversity.

Ohio residents can and should ask, "What am I getting out of this university?" he said.

The symposium, which has been planned for more than a year, is especially timely in view of recent criticisms of higher education, Bjornson said.

U.S. SECRETARY of Education William Bennett recently denounced colleges and universities for raising student costs but failing to ensure quality.

In a November report, the Carnegie Foundation for the Advancement of Teaching charged that undergraduate education is typically "driven by careerism and overshadowed by graduate and professional education."

In the symposium's opening address at 8 p.m. Wednesday, OSU President Edward H. Jennings will discuss "The University of the 21st Century."

Celeste will examine the relationship between state government and higher education at 9 a.m. Friday.

Each of six other sessions will take a different perspective on how to produce educated citizens: "The University and its Publics" from 9 a.m. to noon Thursday.

"A New Logic of Human Studies," the keynote address by Professor Frederick Turner of the University of Texas, from 1:30 p.m. to 3 p.m. Thursday.

"The University and Science and Technology," from 9:30 a.m. to 12:30 p.m. Friday.

"The University and Creative Thinking," with Jonas Salk among four panelists, from 2 p.m. to 5 p.m. Friday.

"The Structure of University Education," with Minnesota President Kenneth Keller and Kenyon College President Philip Jordan, from 9 a.m. to 12:30 p.m. Saturday.

"The University and the Information Processing Revolution," from 2 p.m. to 5 p.m. Saturday.

Franklin University President Paul Otte will conduct a workshop on the urban university of the future from 7:30 p.m. to 9 p.m. Thursday. Another workshop, "University Communities: The Off-Campus Learning Environment," will be coordinated by Linda Ridhalgh, director of the University District Organization, from 7:30 p.m. to 9 p.m. Friday.

OSU's College of Humanities is sponsoring the symposium with assistance from the Center for Comparative Studies in the Humanities and the Graduate School.
Future university topic of session

By Nancy R. Reid
Lantern staff writer

President Edward H. Jennings will speak on "The University of the 21st Century" in the opening speech of a four-day symposium tonight at 8 in the Ohio Union.

The symposium is entitled "The Educated Citizen and the University of the Future." It will run Wednesday through Saturday and feature speeches from several nationally prominent educators.

The speakers will address the relationship between the educated citizen and the university and the role of the university in producing educated citizens.

Speakers will include Gov. Richard F. Celeste, polio vaccine developer Jonas Salk, and the presidents of Kenyon College and the University of Minnesota.

The symposium has been planned for more than a year, said Marilyn Waldman, associate professor of history and director of the Center for Comparative Studies in the Humanities. Waldman and Richard Bjornson, professor of Romance Languages, are coordinators of the symposium.

Waldman said the topic of the symposium was chosen because of past critical reports on higher education. The symposium will allow the community to explore these issues, Waldman said.

The structure of university's educational systems and the quality of education it offers to students will be discussed along with the relationship between the university and the public. Also, the impact of the computer revolution on the university will be considered.

Waldman said she wants to get students involved in the symposium.

"Our feeling is that students have more at stake, in a way, on these issues then we do," Waldman said. Also, it will be today's students and their children who will face the hardest issues, she said.

Gov. Richard Celeste will discuss the relationship between state government and higher education at 9 p.m. Friday.
Jennings sees bright future for universities

By Rob Mosbacher
Lantern staff writer

The public university is the university of the future, said President Edward H. Jennings Wednesday during his opening remarks for the Seventh Annual Symposium in the Humanities.

Jennings spoke to a crowd of about 80 people in Stecker Lounge in the Ohio Union.

The symposium, which will continue until Saturday, is titled "The Educated Citizen and the University of the Future."

"America's public universities have been pursuing a strategy that ideally prepares them for the future," Jennings said.

The size, accessibility and diversity of public institutions, as well as their interdisciplinary endeavors, will move them to the forefront of secondary education in the 21st century, he said.

Jennings said public universities benefit from economies of scale, which enable them to sustain extensive libraries and scientific research, but such resources are a substantial investment that may well be beyond the means of smaller institutions.

Jennings said that while size and accessibility of public institutions are no guarantee for diversity, they can generate diversity.

"Diversity encourages the debate of new ideas by new generations of students and generous interactions among individuals of different cultural heritages," Jennings said.

He said public universities have an advantage over private universities because they don't need private funding to operate.

Although there is a bright future for public universities, Jennings said he doesn't foresee the demise of the small, private institution.

Other prominent educators who will speak at the symposium will include Jonas Salk, who developed the polio vaccine, and Gov. Richard F. Celeste.

Salk will be part of a panel that will discuss "The University and Creative Thinking" at 2 p.m. Friday. Celeste will speak at 9 a.m. Friday about the relationship between state government and higher education.

Both events will take place in the Conference Theater of the Ohio Union.
Jennings kicks off OSU symposium

By Graydon Hambrick
Dispatch Staff Reporter

Looking ahead 13 years, Ohio State University President Edward H. Jennings said last night that public universities will be the next century's leaders in education.

"I believe that (OSU) will be among the leaders" to help educate the successful individual of the 21st century, a person who will be "flexible, innovative, creative, adaptable and comfortable with things new and different," he said.

That person will be "one who has learned how to learn and, for all our sakes, to act ethically on assimilated knowledge," he said.

Jennings presented the keynote address at the OSU College of Humanities' seventh annual symposium on "The University of the Future." He kicked off a three-day series of discussions designed to define the university of the future.

Humanities Dean Michael Riley said that the discussions on the next century's university "will lend a framework for reforms in progress," he said he hopes the conference will offer intellectual direction for the university.

After presenting a brief background on the development of the university, from its roots in Europe to the present, Jennings said:

"As we approach the year 2000, we can for the first time in our history focus all our resources — human, financial and intellectual — on excellence.

"Qualitative growth is now the single dominant force moving us forward, the force that will lead Ohio State and our public university colleagues to pre-eminence in the 21st century." And public, not private, institutions will lead the knowledge explosion and be the dominant teacher.

Jennings said four factors led him to that conclusion. They are size, public universities' support for interdisciplinary endeavors, diversity and accessibility to massive numbers of students.

"The signs are so clear that the question to be answered in the coming years is not whether public universities will dominate, but which ones will emerge at the forefront."

He said, "The comprehensive public university is best suited to create, nurture and sustain those who thrive on the fundamental ingredient of a great modern university.

"It is public universities that have been doing the educational job for this country and that will continue to do it to an even greater degree in the future."

The opening session last night of the symposium was at the Ohio Union, where Jennings addressed about 75 deans, faculty members and university community people.

He said, "Higher education will continue to be the heart of modern society and a key factor in maintaining our leading position in an increasingly international economy."
Faculty say problem-solving is the most important skill

Approximately 20 percent of Ohio State's faculty recently expressed their opinions of what should be the goals and objectives of a university.

The poll was conducted last month in conjunction with the symposium, “The Educated Citizen: The University of the Future”, taking place through May 9 in the Ohio Union Conference Theater. The symposium is sponsored by the College of Humanities with the assistance of the Center for Comparative Studies in the Humanities and the Graduate School.

“One of the most striking results of this survey is the widespread faculty commitment to general educational goals, both in the undergraduate and graduate curriculum,” says Richard Bjornson, associate professor of Romance languages and literatures and symposium co-director.

Among 16 possible goals of undergraduate student education, faculty regarded the development of problem-solving skills as the most important, he says. A total of 70.9 percent of the more than 600 respondents rated problem-solving “very important.” Other qualities highly rated were sharpening the quality of students’ minds (58 percent) and fostering creativity (52.6 percent).

A total of 41.1 percent believed it is “extremely important” for undergraduate education to promote familiarity with a defined, general body of knowledge.

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In contrast, respondents tended to view other commonly cited rationales for undergraduate education as considerably less important, Bjornson says.

"For instance, although American colleges and universities are often regarded as vehicles of upward social mobility, nearly half of the respondents felt this goal was of little or no importance in defining a university's mission," he says.

Also, they tended to consider fostering self-awareness among ethnic and religious groups as peripheral. However, 69.3 percent felt that an increased awareness of social issues such as those related to race, gender or poverty is moderately or very important in undergraduate programs.

While familiarity with scientific methods and comprehension of basic scientific principles were rated by most faculty members as very important, only slightly more than 30 percent believed such goals are extremely important.

Faculty support for general education goals extended into their attitudes toward graduate education and professional training. Only 21.5 percent of the respondents felt pre-professional training should be an "extremely important" part of undergraduate education. Only 6.9 percent strongly agreed with the statement, "Undergraduate education should constitute a preparation for graduate study."

"In general, faculty members were convinced that it's possible to identify a body of knowledge that every undergraduate student could reasonably be expected to acquire before graduation," Bjornson says.

The university should provide an environment that fosters the generation of new knowledge, nearly all the faculty members agreed.

"There was far more concern for this objective than for the preservation of Western cultural values, which are often associated with the institution of the university," he says. In addition, the respondents were even less interested in cultivating the understanding of non-Western cultures.

More than half, 60.4 percent, expressed the conviction that private donors and federal funding agencies should not be allowed to set research priorities in exchange for financial support.

Opinions were sharply split on the question of athletics, with about 40 percent saying major sports detract from the education mission and about 40 percent saying that sports do not detract.

A majority of faculty members (55.1 percent) agreed that the university should promote economic development in society. Less than half (36 percent) thought academics should act as a moral conscience for society, and 40.8 percent believe that the university should encourage social change. A small majority (51.3 percent) said the university is justified in taking a public stance on issues of overriding moral or political concern.

"The surprisingly strong support for general educational goals also could be seen in the faculty's conviction that graduate education should include them in some form," Bjornson says.

The survey data were compiled by Polimetrics: Laboratory for Political and Social Research. In addition to the responses already gathered, the Center for Comparative Studies in the Humanities also will analyze narrative responses to some questions.
Computer art is vital, forum told

By Dianne Keller
Dispatch NeighborNews Reporter

Computer graphics are more than just pretty pictures, a panelist told participants yesterday at the Ohio State University conference on "The University of the Future."

"The advantage of computer graphics and animation is the capability of expanding or contracting time. Essentially, you can slow things down," said Chuck Csuri, an OSU professor in computer and information science.

"You have the technology to allow you to generate images — to restore, manipulate and retrieve them," he said.

CSURI DISCUSSED the implications of computer graphics in various fields of study during a session on "The University and the Information Processing Revolution." The four-day symposium on universities of the future ended yesterday.

Computer graphics, he said, can simulate combustion problems of gases in a chamber, electrical energy moving across the heart or physics experiments in friction and velocity.

TEN YEARS ago, Csuri said, the equipment required for computer graphics cost $250,000 million. Today, some microcomputers that can do a better job cost less than $10,000.

Computer graphics is a $6 billion industry and is expected to grow to $28 billion by 1992, he said.

"It's not unreasonable to assume that by the year 2000, you will have have supercomputers on your desk," he said.

Csuri said the potential is exciting, but that technology is costly and researchers don't know enough about how to deal with pictures.

"We have a lot to do before it is integrated in the university of the future," he said.
Sports may stifle blacks' education

By David Tull

Collegiate and professional sports have established, and are perpetuating, a plantation system for blacks, according to Harry Edwards, professor of sociology at the University of California-Berkeley.

Universities exploit black athletes principally in the revenue-producing sports of basketball and football, he said.

Because of this, black athletes frequently miss a real education. "Someone has quietly made the decision that blacks will not be educated," Edwards said. He called black athletes the "bred game" and the "production workers" of sports.

Edwards, who has focused attention on exploitation of black athletes, was a panelist in the humanities symposium's opening session on "The University and its Publics."

Most Division I basketball and football teams have a majority of black players, he said. "Within 10 years, basketball and football (at Division I schools) will be black for all intents and purposes," he said.

In the past season, 81 percent of the starters in Division I teams were black, he said.

But there are remarkably few black athletic directors and head coaches. "Blacks are woefully underrepresented in administrative and policy-making roles," Edwards said.

"Someone has quietly made the decision that black athletes will not be educated."

In an athletic conference where 68 percent of football scholarship go to blacks, less than 2 percent of the student bodies and 1 percent of the faculty is black.

Similarly, few blacks are represented in professions and in top positions in business and government. The percentages are: Less than 1 percent of lawyers, only 3.5 percent of business leaders and fewer than 3 percent of top government positions are filled by blacks, he said.

Only 4 percent of college professors are black, and many of those are in black colleges or African studies, Edwards said.

Because they view athletics as a ticket to success, many young urban blacks concentrate on sports at the expense of academic skills. This percentage of black athletes never graduate from the institutions they represent. And fewer than 1.3 percent make a payday in professional sports.

"We consume generation after generation of black athletes. They are the 20th century gladiators," he said.

When a bowl game generates revenue of $12 million, sports cannot be ignored. "Big-time sports is entertainment and big business and is getting bigger," Edwards said.

"Black athletes are burdened with the myth of athletic superiority — the dumb Negro, intellectually inferior and animalistic." Gifted blacks who succeed as athletes find that very little more is expected of them.

Sports has no corner on problems such as drug abuse. Edwards said: "We can't clean up sports without cleaning up society. Everything happens to minorities first and worst.

Urban blacks on a white campus encounter special problems, Edwards said.

"The black community uses different cues, a different lexicon, a different language. Flirting is different from flirting in a white community."

In a recent series of campus incidents, black athletes have been accused of rape or attempted rape. In most of these cases, charges were not filed, Edwards said.

The exploitation of black athletes has to be turned around, Edwards said. "This is not just a reflection on sports or on athletic departments. It reflects on where we are as a nation, where we are headed as a society, and what we are to become as a people, relative to the integrity and credibility of our schools."

Charles Odegaard, president emeritus of the University of Washington

"We must put problems on the agenda, but not just within a given discipline or a given profession."

Robert Payton, Miller Center of Public Affairs, University of Virginia

"In my experience in higher education, I've found that the humanities have been undervalued and underused."

Kate Wilhite, science fiction writer

"Creativity is dangerous. The schools have to be taught not to be afraid of their creative students. Our creative people are needed. They have to be here to interpret our world."

"We don't need to teach creativity. People, especially children, are creative. The real question is how some people escape the process of having their creativity extinguished in school."
Gov. Celeste says quality, access critical

By David Taft

Ohio’s universities must continue to focus on quality education and public access as they move toward the year 2000, Ohio Gov. Richard Celeste told educators at the symposium on “The Educated Citizen: and the University of the Future.”

Students must be better prepared, he pointed out. “As we’ve raised the expectations for these young people, they themselves have performed better,” Celeste said.

Universities must decide where to stress excellence, he added. “The notion of excellence isn’t something you can spread across with a brush and it touches every department and every aspect of university life in the same fashion.”

On access, Celeste said, “The cost to students is a shared responsibility. The state has to furnish resources and the uni-

Industrial ties ‘threaten’ collegial links

By Steve Benowitz

Docthy Nelkin peers into her crystal ball and warns of the impending changes that, in some cases, promise to shake the very foundation of academic research and development.

The commercial concerns of the real world have crept into the university, and the ivory tower institution of old may soon go the way of the dinosaur she told an audience of academicians in the sciences, arts and humanities.

Nelkin, a Cornell University sociologist, is a chronicler of science and technology and society. She was part of a panel of experts who addressed “The University and Science and Technology,” session 2.

Two of Nelkin’s concerns centered on funding and policy shifts. The start up of large-scale engineering research centers, backed by the National Science Foundation, was meant to entice the nation’s universities and major corporations in a gigantic effort to strengthen our international industrial competitiveness, she said.

At the same time, the Defense Department stepped up its university involvement. Today, nearly 16 percent of all federal funding for universities comes from the Pentagon.

Perhaps the most significant change of all is the recent proliferation of university-industry research ties. According to Nelkin’s analysis, industry support of universities rose more than four-fold from 1973 to 1981, though such backing still makes up only 10 percent of university research funds.

Such relationships are not new, Nelkin said. “But it’s the scale of recent changes that have sharpened their impact.”

Computer graphics more than pretty pictures

By Steve Benowitz

While Chuck Curi’s dazzling display of computer animated art danced on screen, his underlying message became clear: Computer graphics will continue to influence and expand the ways in which we view our world.

Curi, Ohio State professor of art education and computer and information science, addressed “The University and the Information Processing Revolution,” the final installment of the four-day symposium.

Curi, who directs the Computer Graphics Research Group, discussed the growing list of applications of computer graphics. Some of these uses are medical — such as color-coded images of three-dimensional slices of the brain, literally showing the mind at work, and simulations of electrical energy flowing across the surface of the heart.

The images generated are “much more informative than looking at a stack of numbers coming out of a computer,” Curi said.

The advantage of computer graphics and animation is the capability of expanding or contracting time,” he said.

“Eventually you can slow things down, and see what’s happening at certain instances in time.”

Other areas of application include robotics, flight simulation and educating deaf children about language.

“Computer graphics is more than pretty pictures,” Curi said. “It’s a way of seeing relationships graphically that you otherwise might not see. The hope is that this might allow scientists to do better science.”

Curi noted the emergence in recent years of a number of new computer and video technologies, such as five-inch compact disks that can store and play back 72 minutes of video.

Perhaps, he said, “this technology will be integrated with personal computers for the storage of pictures and text.”

At Ohio State, he told the audience, the University’s campuseswide fiber optics telecommunications system — UNITS — is capable of transmitting video and graphics from a central source to any location on campus.

An industry worth roughly $4 billion today, computer graphics is expected to grow to $23 billion by 1992.

Similarly, Curi suggested that “it’s not unreasonable to think that it’s possible by the year 2000 you might have supercomputer power on your desk.”

Many obstacles remain, he cautioned, not the least of which is the best method of taking the research results out of the laboratory and making them available to the potential user.

While the potential applications of computer graphics technology are “exciting and compelling,” he said, researchers still don’t “know enough about how to deal with pictures, about visualization, and what is involved when we try to put shapes and forms in three-dimensions.”

“It’s easy to get excited about the possibilities, especially its educational uses, but technology is very costly.”

“A great deal of work needs to be done before this technology is fully integrated into the university of the future.”