



University of North Carolina Wilmington  
Information Technology Systems Division

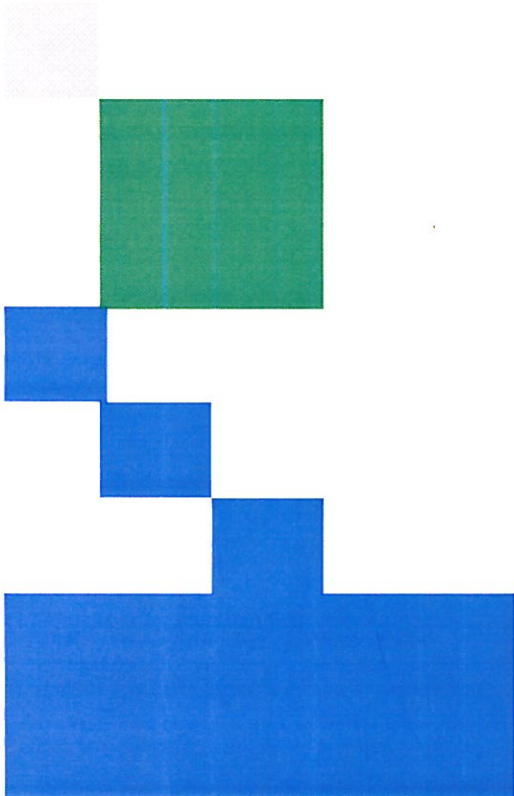
UNC Teaching and Learning with  
Technology Conference  
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# **The Impact of Social Dynamics on the Teaching and Learning Process**

Dr. Robert E. Tyndall

Vice Chancellor for Information Technology  
Systems Division  
and Associate Provost





## I. Technology as a Social Force

- Technologies are a social force driving institutional and personal changes
- Emerging technologies have always challenged the social order from the discovery of fire to the invention of the wheel, to the light bulb, to the Internet.
- ♦ The rapidity of change will force increased ambivalence between embracing the future and longing for the past.

## II. Today's learners

- Digitally literate
- Mobile
- Knowledge arrogant
- Always on
- Experimental
- Community Oriented



◆ --Chuck Dziuban



## II. Technology and Behavior

The technologies available as a generation matures **influence their behaviors, attitudes and expectations.** People internalize the technologies that shape information access and use as well as the ways they communicate.

◆(Net Generation Intro 6.2)



### III. Technology Driven Change and Higher Education

- Higher Education is at a point of general uneasiness about its future and the role of the academy in the new “education industry.”
- “Students are buying access to intellectual and mental resources that if pursued with rigor and diligence may yield a wide range of intellectual and life benefits.”

-- John Hitt, UCF

- ♦ We are struggling to reconcile the language of temporary markets with the language of the academy.



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#### IV. Space Configuration Which Blends the Physical and Virtual





## IV. Space Configuration Which Blends the Physical and Virtual

**The New Classroom:** is a free-floating array of information, ideas and experiences which can be pre-arranged, self-selected or a work in progress.

- Interactive lecture hall
- Handheld computers in class
- SR Systems
- iPods
- Threaded discussion groups
- Whiteboards
- Theme lounges
- Online portfolio locker
- Pervasive wireless networks
- Virtual team pods
- Learning commons
- Brokering pits
- Conversation pits





## I. Technology and the Machine:



*“...man seeks to extend himself through technology.”*

*“...the machine is the child that technique bore.”*

◆ Jacques Ellul





## I. The Machine and its Technology:

- *“The significant outward forms of the civilization of the western world are the production of the machine and its technology.*
- *...In its effect upon men’s external habits, dominant interests, the conditions under which they work and associate,*
- *whether in the family, the factory, the state, or internationally, science is by far the most potent social factor in the modern world.”*

philosopher John Dewey

- ◆ J. Dewey, *Philosophy and Civilization* (New York: Minton, Back & Company, 1931), 318.

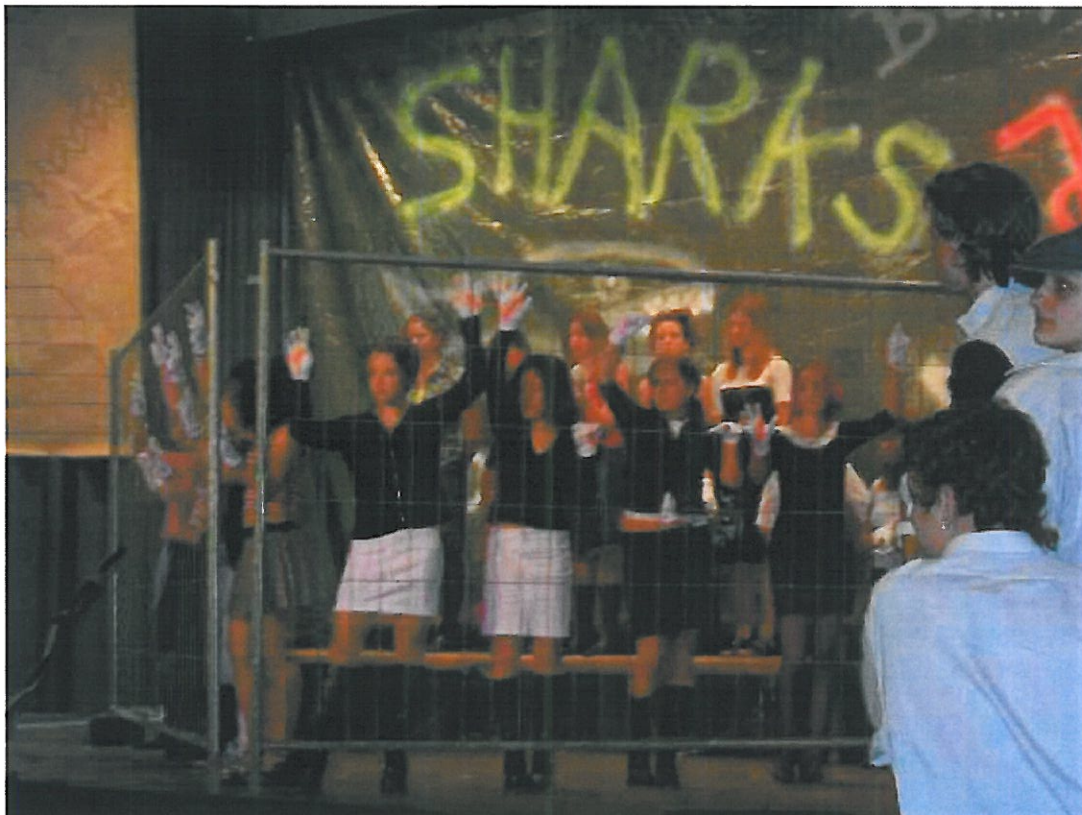


## II. Among other differences are:

- **Their ability to read visual images**—they are intuitive visual communicators
- **Their highly developed visual spatial skills**—perhaps because of their expertise with games they can integrate the virtual and physical
- **Their comfort with inductive discovery**—they learn better through discovery than by being told
- **Their attention deployment**—they are able to shift their attention rapidly from one task to another and may choose not to pay attention to things that don't interest them
- **Their fast response time**—they are able to respond quickly and expect rapid responses in return
- **Their sense of audience**—they live in a world of watching and being watched.

◆(Net Generation Intro 2.4-2.5)

*rapping*



“Life in  
the e-hood.”

◆ --Chuck Dziubon





***“Today’s kids preferred style of problem solving is bricolage: sorting through resources at hand (objects, tools, documents, data) and rearranging them until they work. ”***

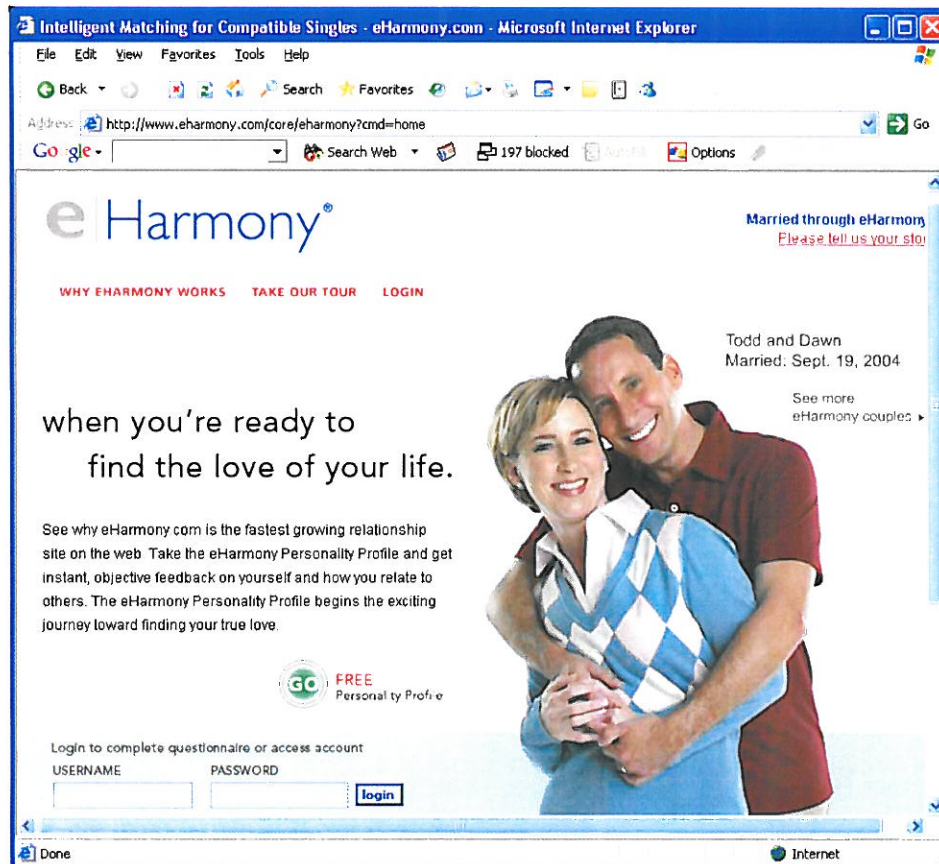
J. S. Brown, “Growing Up Digital: How the Web Changes Work, Education, and the Ways People Learn” *Change* (March/April 2000), 14.

***Claude Levi-Strauss described the process of bricolage—tinkering—through which individuals learn by exploring and manipulating objects around them.***

◆(Net Generation Intro 6.4)



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*“Young people who see the computer as evocative objects, that can serve as extensions of physical presence.”*

◆ --Vicki Suter





FROM:

*“People over 30 who see computers and technology as extensions of logic, calculation, linear, reductive and hierarchical.”*

Berkman

TO:

*“People under 30 who see the computer as providing an environment of simulation, navigation and interaction.”*

Vicki Suter

TO:

*“People under 20 no longer see the computer but are immersed in the landscape(s).”*

◆ R. E. Tyndall



### III. From experimentation to realization—

#### The changing social landscape:

- Schools without walls; expeditionary learning
- Learning communities, a reaction to personal disengagement and loss of place and connection
- Distance education has raised early warning signs of the struggle between learning and learning authority
- ♦ The Internet serves to distribute personal power on a massive scale through a commodity infrastructure



### III. Leveling the Monolith

Higher education as it has been historically organized may be fighting a losing battle with the rapid redistribution of knowledge assets

- While higher education has a higher degree of personal choice and flexibility than public schools, it has many **unresolved problems** associated with its past organizational systems.
- Static curricula, partitioned content and a “**keeper of the sacred scrolls**” mentality are colliding with knowledge confederations, broad and diverse access and learner driven timing and sequencing.
- “In its simplest form the argument goes like this: when the tasks people perform are well understood, predictable, static, routine and repetitive a bureaucratic linear structure is the most efficient.”

◆ --Complex Organizations





Carole Barone of EDUCAUSE asserts that a new academy must form if higher education is **to remain relevant and responsive** in changing times. She describes the interplay of culture and technology along with new cultural values and a new style of leadership as some of the characteristics of the new academy.

◆(Net Generation Intro 1.4)



**“The goal is an organization  
that is making its future,  
rather than defending its past.”**

◆ Valekangas, 2003



## IV. Early Indicators of Change HE

- Expansion of the “Learning Community Model”
- Blending of Traditional and Virtual Environments
- ♦ Emphasis Upon Sub Communities in Smaller Units to Provide Comfort and Identity



## IV. Proliferation of Social Software

- Blogging
- Wikis
- Common Canvas—Multiple Painters  
(Visual→Motion→Sound→Text)
- Creative Commons
  - Shared Instructional Objects
  - Knowledge Repositories
  - New Copyright Structures for Open Sharing and Re-invention
- *When knowledge moves to invention: to understand is to invent.*
  - ◆ --Piaget



**IV. The constructivist theory has important implications. The theory implies that learning is best served when it is:**

**Contextual**—taking into account the student’s understanding

**Active**—engaging students in learning activities that use analysis, debate, and criticism (as opposed to simply memorization) to receive and test information

**Social**—using discussions, direct interaction with experts and peers and team-based projects

**Problem-based learning, which encourages learners to construct knowledge based on the experience of solving problems, is significantly different from methods such as recall and repetition.**

◆(Net Generation Intro 12:5)



#### IV. This is not new wine in old bottles.

##### Cognitive/constructivist perspective:

The construction of mental structures **sparked by experiences** (1)

Students can observe the outcomes of **different paths of action** in order to form sound understandings (2)

**Successes and mistakes** are important to robust mental models (3)

*From “learning by discovery,” “hands on learning,” and “learning by doing” to easily erasable or created simulated environments*

◆ Greeno et al, 1966



## IV. Social Software as Enabling Systems

### **SOCIAL SOFTWARE:**

Social Software is a tool for enhancing the scope and depth of learning and collaborative capabilities.

- A medium for facilitating social connection and idea exchange
- An ecology for enabling a “system of people, practices, values and technologies in a particular environment”
- ♦ An immediate application for the association, evolution and collective action of groups



## IV. Social Software as Enabling Systems

**“When using technology, student satisfaction with the learning experience increases as social engagement related to learning tasks increases.”**

◆ Tyndall, Eduprise Partners Conference, Orlando, 1998





## IV. Social Software as Enabling Systems

The implications of social software for the organization and delivery of learning:

- Something as simple as name tags which can be programmed to recognize common response patterns may have a place in classrooms or conferences of the future (or in single's bars.) (2)
- Subgroups or special interest groups organize themselves into discussion forums and begin the process of collaborative interchange and learning. (1)

◆ SOURCES:

- (1) Tyndall, R. E., NLII, Orlando, 2001
- (2) Tyndall, R. E., The Knowledge Ecology, 1998



## V. The Role of Faculty

### Sage on the Stage

*(“The university classroom is a place where young people go to be amused and to watch adults work.”)*

### Guide on the Side

- ◆ **Model, motivate, monitor, manage in the middle**



**V. The Role of Faculty**  
**“Might as well jump  
into a blender;”  
getting reticent faculty  
to use technology.**

◆ --Chuck Dziuban



## V. The Role of Faculty

- Create user groups and blogs, F2F communities
- Guide IT personnel to help make their work easier
- Establish “best practices” workshops and roundtables
- Familiarize themselves with the pedagogical power of “communities”
- Create portals of combined experiences
- ♦ Establish shared repositories for learning objects



**“Technology is not kind; it does not wait; it does not say please. It slams into existing systems while creating new systems”.**

◆ Business Cycles: A Theoretical Historical and Statistical Analysis of the Capitalist Process, Joseph Schumpeter, 1939, Pg. 172



## About IT

**‘When you dance with a bear you can’t just quit  
when you get tired.’**

◆ --Chuck Dziubon



# Hilton Grand Vacations Company

Thank you for your recent Hilton Grand Vacations Company reservation. Please review the information below and contact a Rental Counselor if you have any questions regarding your the Reservation Details or your upcoming resort vacation.

**HGVC Contact Information:**  
**Toll-free within U.S. & Canada**  
**+1 800 HGVC RENT**  
**Direct Worldwide**  
**+1 407-521-3131**

We look forward to welcoming you *home* to HGVC!

## Guest Information

Kim Kelly and Jay Kelly  
5301 Petrel Ct  
Wilmington, NC 28409

## Reservation Details

Confirmation Number: 301102210	Resort Information:
Arrival Date: October 17, 2005	HGVCCLUB AT SEAWORLD INTL CTR
Departure Date: October 22, 2005	6924 GRAND VACATIONS WAY
Total Number of Nights: 5	ORLANDO, FL 32821
Check In Time: 4:00 PM	Resort Phone: 407-239-0100
Check-Out Time: 10:00 AM	
Number of Guests: 2 adults	
Accommodation Type: 1 BEDRM	
Occupancy Limit: 4	
	<b>Late Check-in Information</b>
	24 hour Front Desk. Additional information call 407-239-0100
<b>Payment Information</b>	
Deposit Paid: \$847.96	Form of Payment: VISA

Reservation Confirmation

### Important Information Regarding Your Reservation:

- Room and package rates are quote in U.S. dollars and are subject to applicable taxes and are subject to change without notice.
- All accounts must be settled upon arrival. We are pleased to accept the following credit cards: MasterCard, Visa, American Express and Discover, as well as personal checks.
- A credit card imprint is required upon check-in.
- Guests must be at least 18 years of age to check-in at the resort.
- For your comfort and safety, occupancy limits and check-in/check-out times are strictly enforced.
- Cribs and highchairs are available at an additional charge.
- Pets are not permitted, with the exception of service animals.



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