

# Online teaching: Why they do it, Why they might stop.

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Educational Theory and Practice and  
College of Computing and Information  
University at Albany  
State University of New York



# Topics

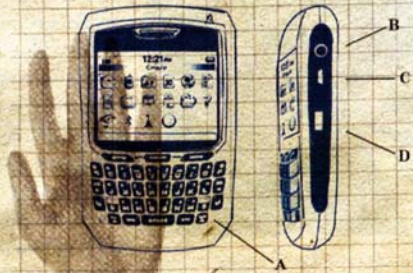
- What are the problems to which online teaching is the solution
- Why do faculty teach online?
- Why might they stop?
- Why does that matter?

# Innovation

- Topic – Online Education
- Talking about a recent innovation
- Brief history of other innovations that may be relevant...

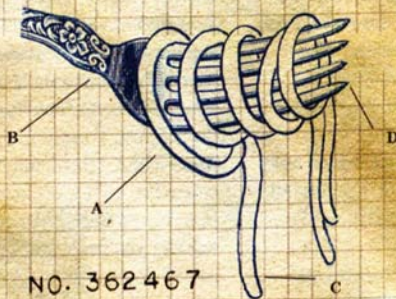
Original  
**PATENTS**

BY  

  
**EVAN EISENBERG** | **DAVID PLUNKERT**  
 WORDS | DRAWINGS



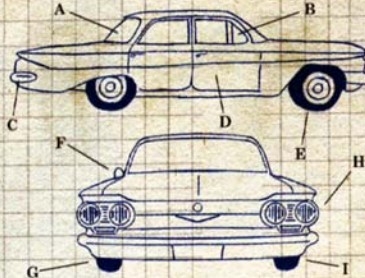
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Device for Increasing Length  
Of Workweek to 168 Hours



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Device for Distributing  
Tomato Sauce Randomly  
Across Shirtfront



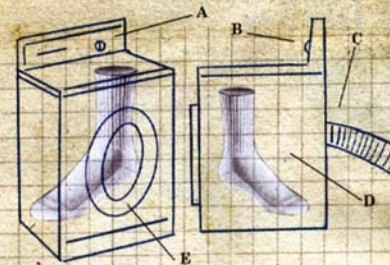
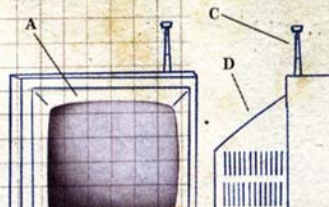
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Planetary Heater



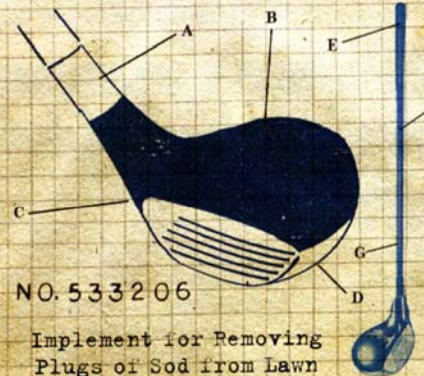
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Birth Control  
Apparatus  
(Abstinence Type)



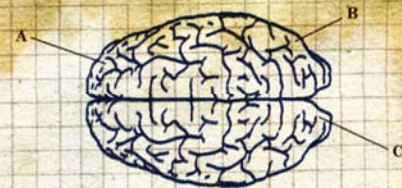
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Centrifuge for Separating  
Individual Socks from Same Pair

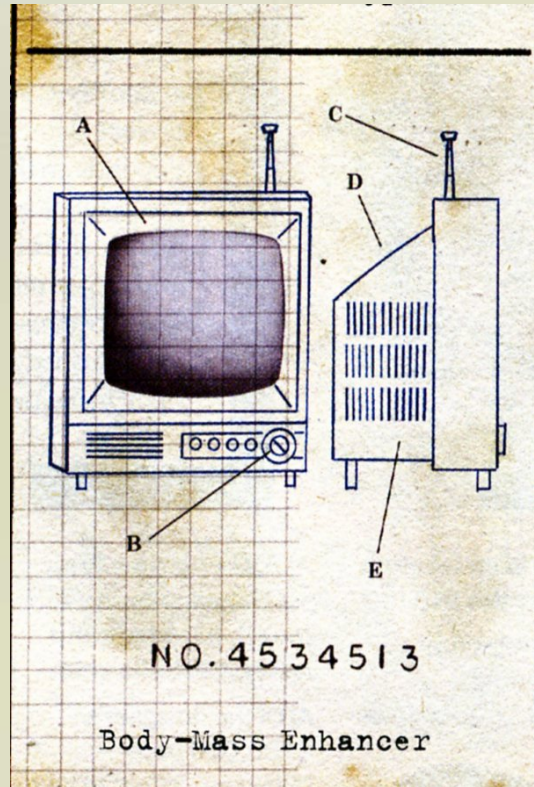


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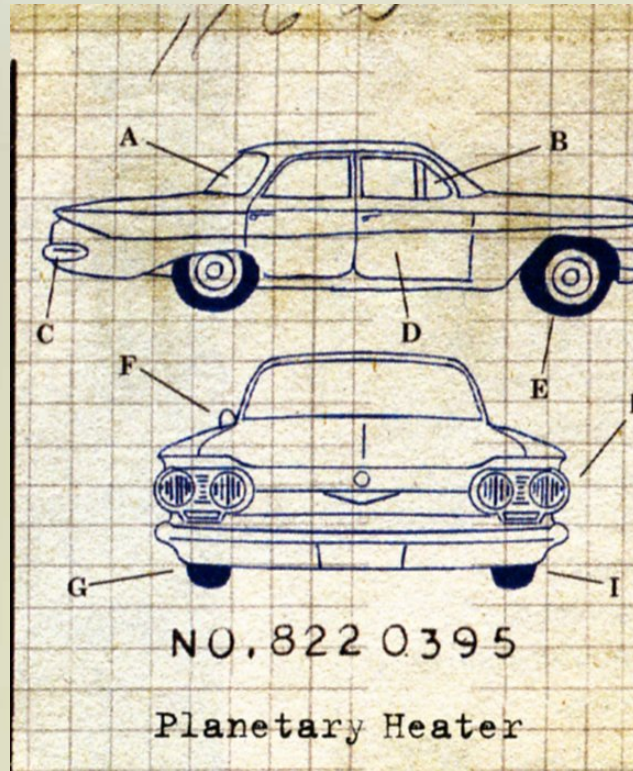
Implement for Removing  
Plugs of Sod from Lawn  
Or Other Grassy Expanse



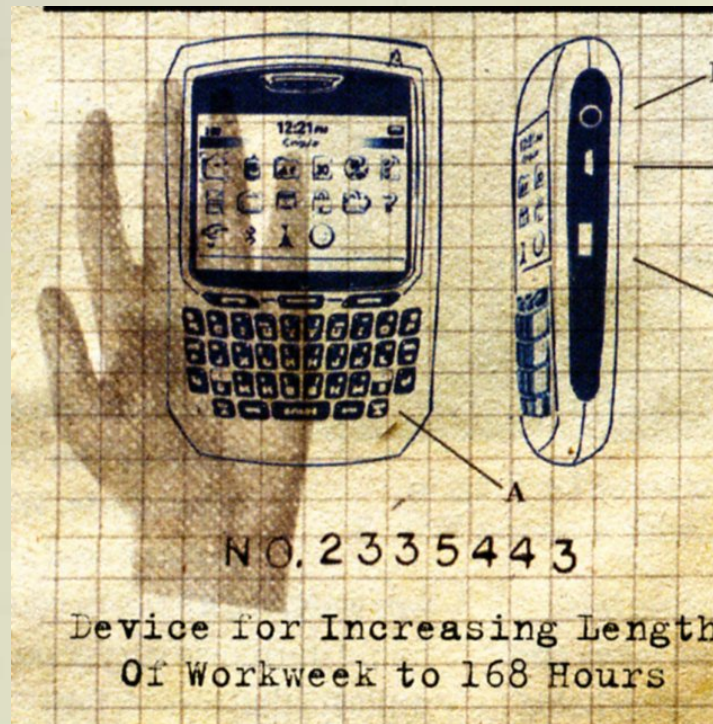
# Body-Mass Enhancer



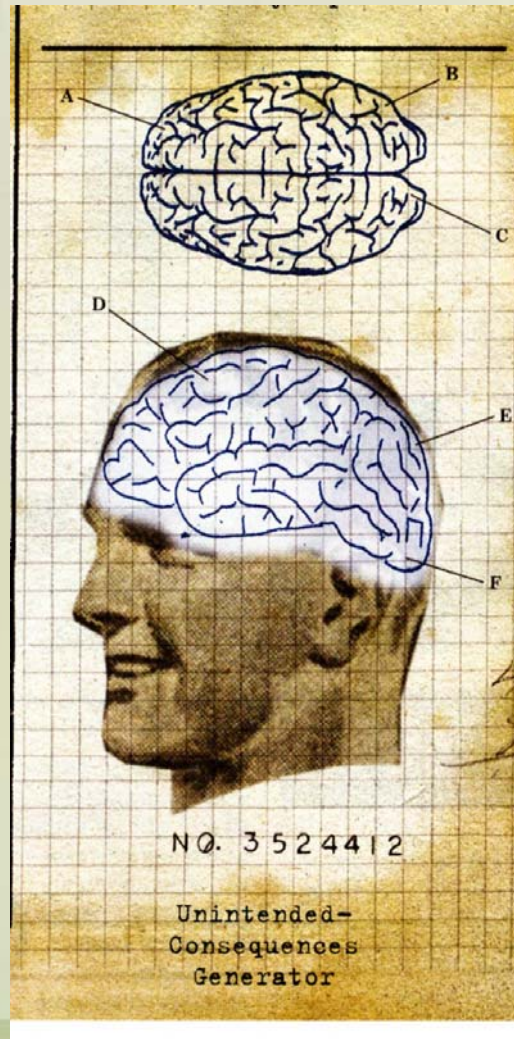
# Planetary Heater



# Device for increasing the length of the workweek to 168 hours



# Unintended Consequences Generator



# Background

- Research supported by SUNY System Administration
- Also by 2 Sloan Foundation Grants
- Develop studies with two other institutions
  - UCF - Students (Chuck Dziuban)
  - NJIT - Faculty (Roxanne Hiltz)
- This presentation reports on the NJIT collaboration

# Things that go up...

- Costs to institutions (as state support for higher education declines)
- Cost burden born by families through...
- Higher tuition rates

But also...

- Value of higher education
- Demand for higher education

# Constrained Resources

*“Public colleges and universities are in many ways becoming private, as the percentage of state funds in their budgets is dropping—in some cases, to less than 20 percent.”*

*(Eckel & King, 2004)*

# Student Share of Tuition

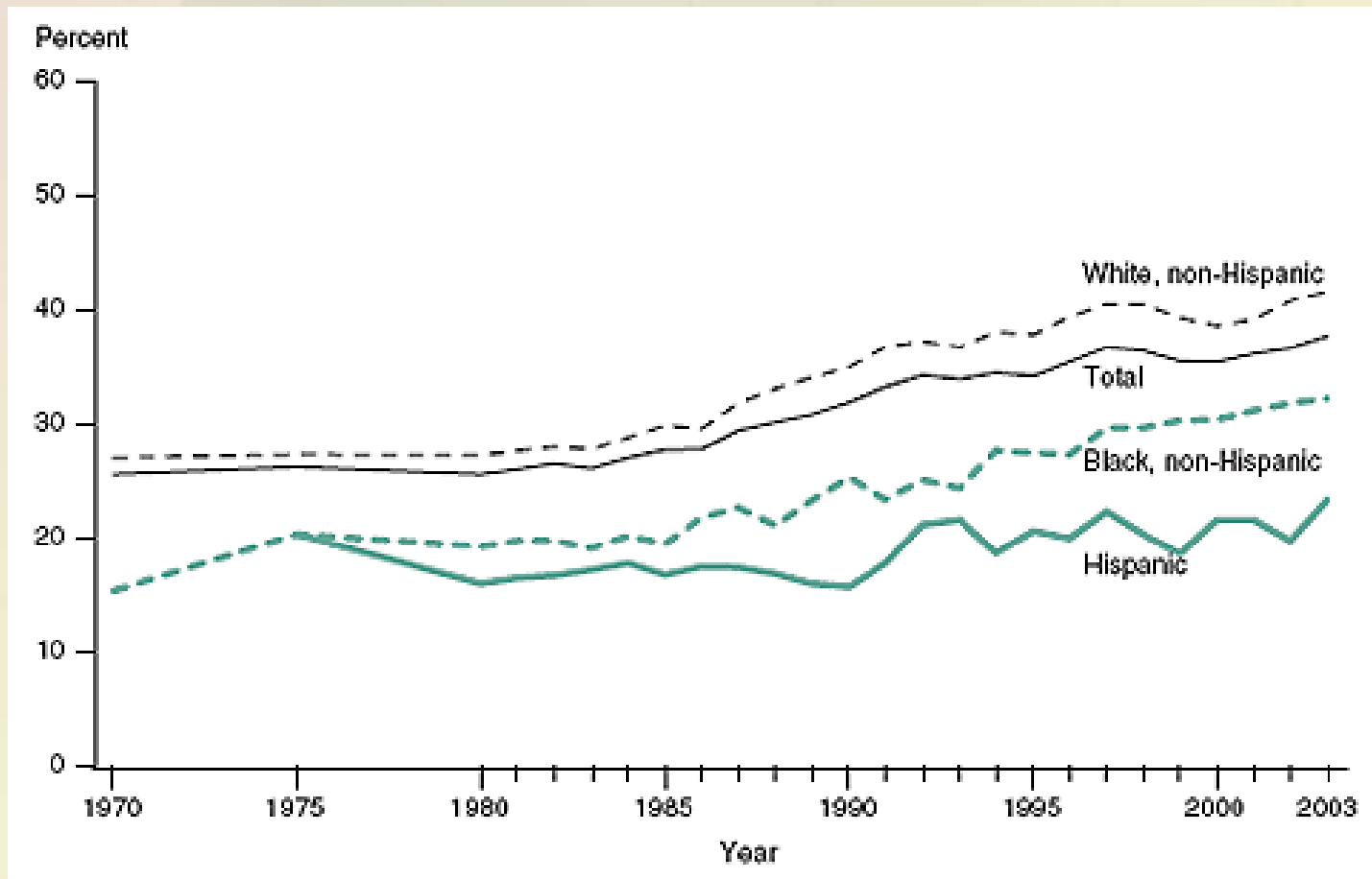
Percentage of family income needed to pay for college has risen dramatically

Up from

- 28% to 42% in Ohio
- 24% to 37% in New Jersey
- 18% to 30% in Iowa
- 25% to 36% in Oregon

The National Center for Public Policy and Higher Education (2006)

# Demand for Higher Education Increasing (US DOE)



# Average Earnings 2004

- No high school diploma \$19,169
  - High school diploma \$28,645
  - Bachelor's degree \$51,554
  - Advanced-degree \$78,093
- 
- U.S. Census Bureau - October 2006

# Value of Higher Education

On average, over a lifetime you will earn...

- High school graduates - \$1.2 million
- Associate's degree graduates - \$1.6 million
- Bachelor's degree holders - \$2.1 million

(Day and Newburger, 2002).

# Your mother was right

- It pays to go to college...about \$962,000

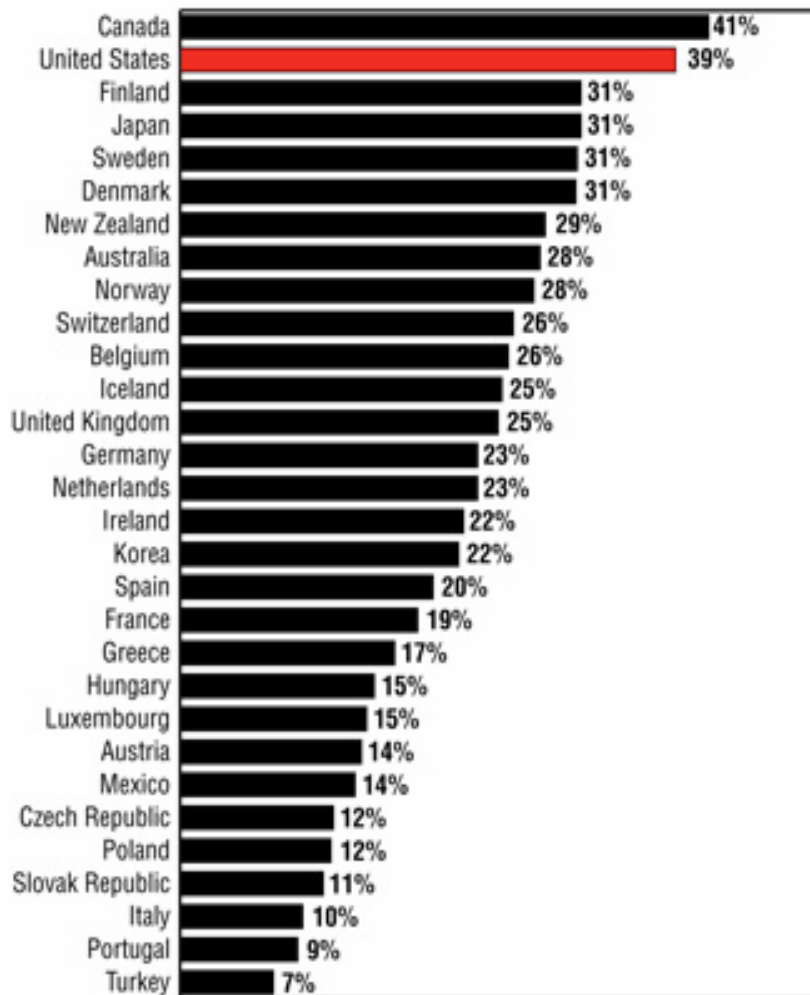
# Despite benefits US is slipping

- US is a world leader in the proportion of people 35 to 64 with a college degree (39%)
- But - US ranks seventh in this measure for 25-to-34-year-olds (between Belgium and Spain)
- Further, the US ranks in the bottom half -16th among 27 countries compared - in students who complete a college degree or a certificate program.
- Also major gaps in participation between high-income and low-income students ages 18 to 24.

– The National Center for Public Policy and Higher Education (2006)

# Fewer Younger Graduates

Older Adults (Ages 35 to 64)



Younger Adults (Ages 25 to 34)

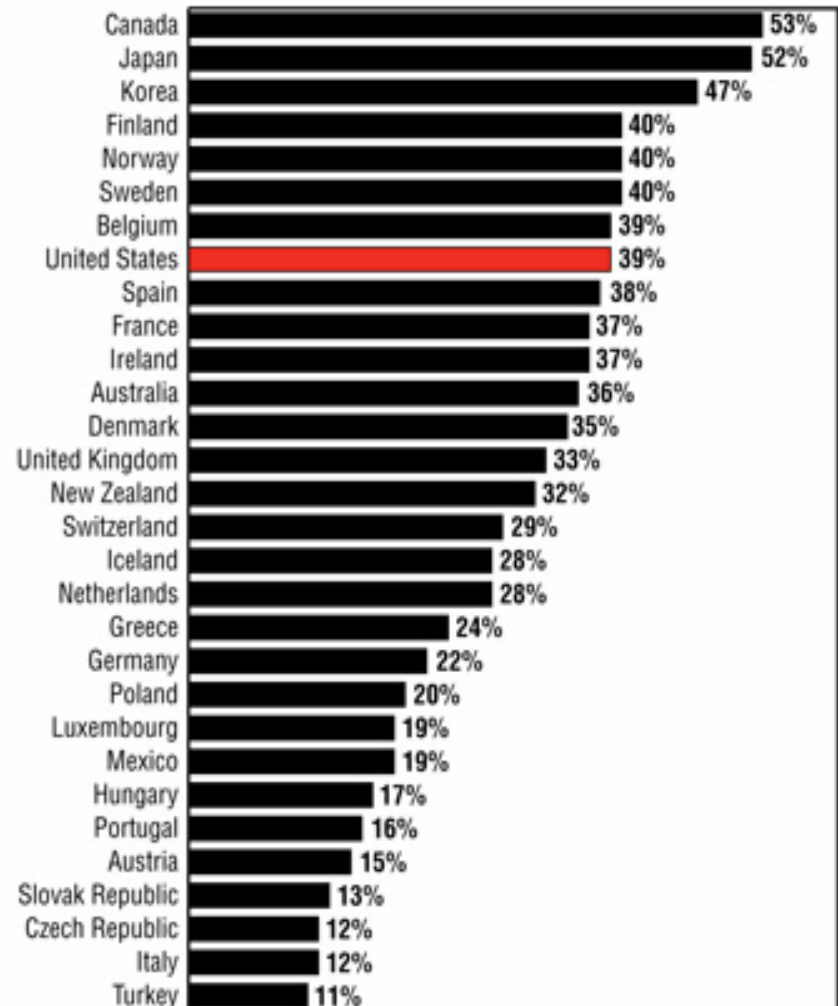
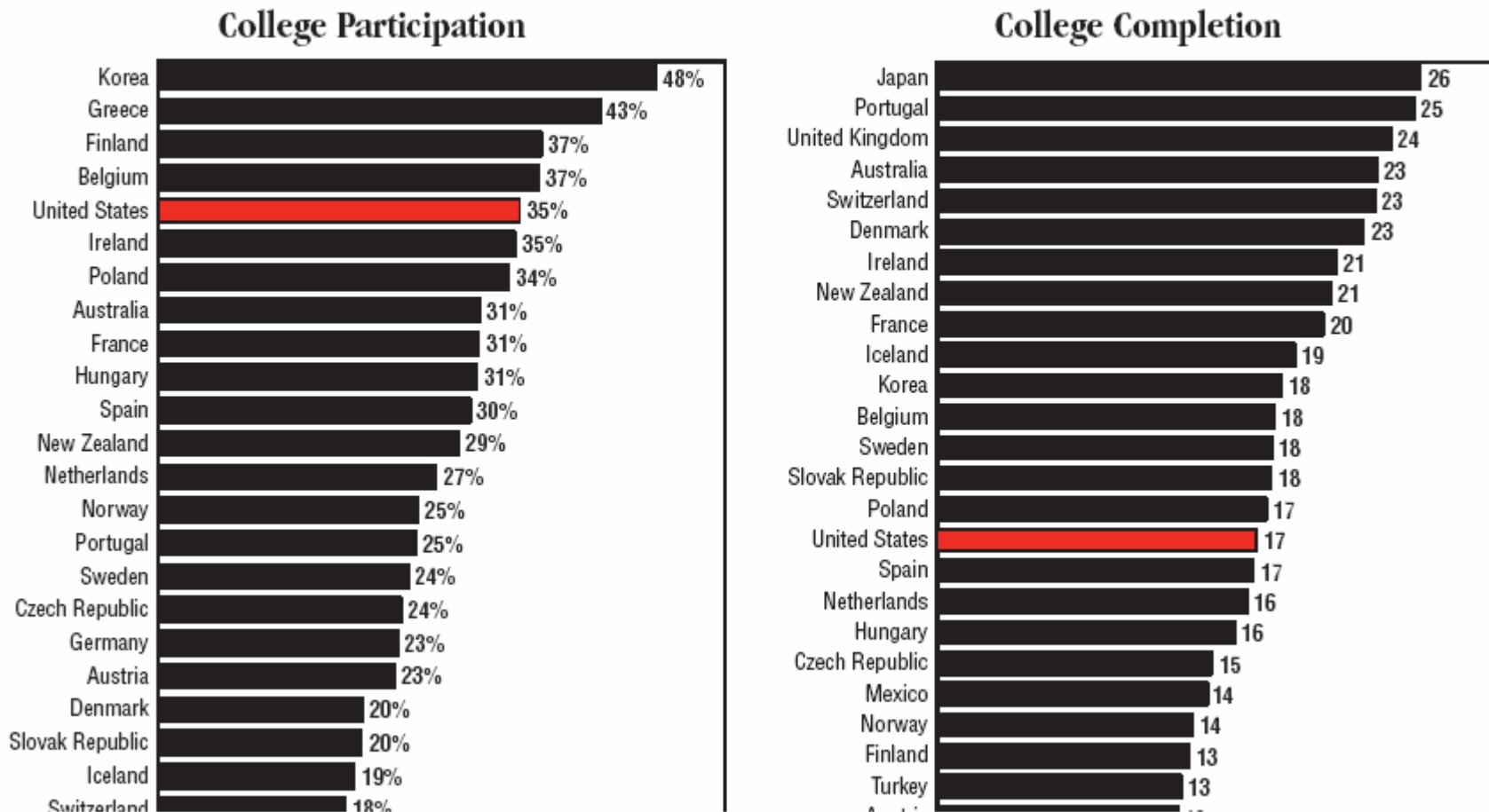


Figure 1: The United States is still among the top nations in the proportion of older adults holding a college

# Completion Rates Down

Figure 2: The U.S. remains among the leaders in college participation ... but it ranks in the bottom half in college completion.



# New York slipping too...

- New York **falling behind** other states in enrolling students in college by age 19.
- **Working-age adults** enrolling in higher education has also declined.
- Adults **w/o** high school diploma **above** national average.
- Higher education in New York **less affordable** than in most other states.

The National Center for Public Policy and Higher Education (2006)

# Online teaching

Is there a role for online education to address shrinking...?

- Numbers of US College Students (by international comparisons)
- Younger US Degree Holders
- Working Students in College
- College Completion Rates
- Adults with High School Diplomas

# Enrollment Growth Distance Education and Online

- **3 million** students in distance education course (US DOE, 2003)
- **3.2 million** students in at least one online courses in US (Allen & Seaman, 2006)
- Online enrollments expected to **increase 20-30%** per year (Allen & Seaman, 2005; Pethokoukis, 2002) but...
- Online Ed. grew 35% in 2005 (Allen & Seaman,
- Online **growth now 15 times** that projected by the NCES for classroom enrollments.

# Online predicted to continue to grow

*“By early 2008, **one out of 10** college students will be enrolled in an online degree **program**, Boston-based market research firm Eduventures estimated last year.”*

(Golden, 2006)

# Eduventure Study 11.1.06

- 50% of prospective US college students prefer a mode of delivery either dominated by online or at least balanced between online and on-campus instruction.
- But only 7% of US students are currently enrolled in a complete online program

# Concerns

Less than 30% of US Chief Academic Officers believe that their faculty fully accept the value and legitimacy of online education.

(Allen and Seaman, 2006).

# Acceptance of Online Ed.

## ***FACULTY AT MY SCHOOL ACCEPT THE VALUE AND LEGITIMACY OF ONLINE EDUCATION***

	Public			Private nonprofit			Private for-profit		
	2003	2005	2006	2003	2005	2006	2003	2005	2006
<b>Agree</b>	34.2%	36.4%	32.3%	20.2%	20.6%	20.3%	28.8%	42.1%	31.5%
<b>Neutral</b>	63.2%	58.6%	58.9%	67.6%	62.1%	60.5%	63.3%	52.9%	50.9%
<b>Disagree</b>	2.7%	4.9%	8.8%	12.2%	17.3%	19.2%	7.8%	5.1%	17.6%

# Faculty and Online Teaching

- Online education can increase access - but we need to ensure quality.
- Faculty acceptance is critical to future development, improvement, and quality.
- Question: what enables and constrains faculty acceptance of online teaching?

# Previous research

(Dziuban, Shea & Arbaugh, 2005)



## Benefits - Faculty report:

- **More and higher quality interaction with students** (Hartman, Dziuban, Moskal, 2000; Kashy, Thoennessen, Albertelli, & Tsai, 2000; NEA, 2001; Shea, et. al 2000, Smith, 2001)
- **Convenience and flexibility for their teaching and student learning** (Arbaugh, 2000; Hartman & Trumann-davis, 2001, NEA, 2001)
- **Increased access to higher education for students previously unserved** (NEA, 2001)
- **Better understanding of educational technology** (Alvai & Gallupe, 2003; Rockwell, Schauer, Fritz, & Marx, 1999; Thompson, 2001).
- **Enhanced opportunities for professional recognition and research** (Hartman & Truman Davis, 2001; Hislop and Atwood, 2000; Smith, 2001)
- **High levels of student learning** (Hartman, Dziuban & Moskal, 2000; NEA, 2000; Shea et. al, 2000; Thompson, 2001)

# Previous research

(Dziuban, Shea & Arbaugh, 2005; Tallent-Runnels et. al., 2006)



## Drawbacks - Faculty report:

- **Need for training** (Feist, 2003; Rockwell, Schauer, Fritz, & Marx, 1999)
- **Need for technical support, reliable infrastructure** (Frith and Kee, 2003; Jennings & Bayless, 2003; Lan, Tallent-Runnels, Thomas, Fryer, & Cooper, 2003)
- **Need for course development assistance** (Gibson & Herrera, 1999, Zhang, 1998; Rockwell, Schauer, Fritz, & Marx, 1999 )
- **Online teaching is more time consuming** (Hartman, Dziuban, Mokal, 2000; Shea et al. 2001; Dahl, 2003).

# Current Research Components: Interviews and Surveys

- Conducted surveys of faculty in SUNY and NJIT (759 respondents) (61%)
- Collected structured (numeric) and unstructured (narrative) data
- Also conducted focus groups at both institutions (42 interviewees)

Respondents: Broad and Diverse

# Diverse Faculty

## Institution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Community College	381	50.2	58.2	58.2
	University Center	35	4.6	5.3	63.5
	University College	183	24.1	27.9	91.5
	College of Technology	19	2.5	2.9	94.4
	Specialized College	26	3.4	4.0	98.3
	Other	11	1.4	1.7	100.0
	Total	655	86.3	100.0	
Missing	I choose not to answer this question	21	2.8		
	System	83	10.9		
	Total	104	13.7		
Total		759	100.0		

# Broad Age Range

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20 - 24	3	.4	.4	.4
	25 - 29	21	2.8	3.0	3.5
	30 - 34	44	5.8	6.3	9.8
	35 - 39	70	9.2	10.1	19.9
	40 - 44	70	9.2	10.1	29.9
	45 - 49	94	12.4	13.5	43.5
	50 - 54	124	16.3	17.8	61.3
	55 - 59	127	16.7	18.3	79.6
	60 - 64	90	11.9	12.9	92.5
	65 or older	52	6.9	7.5	100.0
	Total	695	91.6	100.0	
Missing	I choose not to answer this question	47	6.2		
	System	17	2.2		
	Total	64	8.4		
Total		759	100.0		

# Gender

**Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	340	44.8	47.4	47.4
	Female	378	49.8	52.6	100.0
	Total	718	94.6	100.0	
Missing	I choose not to answer this question	24	3.2		
	System	17	2.2		
	Total	41	5.4		
Total		759	100.0		

# Online Teaching Experience: High

**Taught completely online courses**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	100	13.2	14.5	14.5
	One time	63	8.3	9.1	23.7
	Two times	69	9.1	10.0	33.7
	Three times	58	7.6	8.4	42.1
	Four times	65	8.6	9.4	51.5
	Five or more times	334	44.0	48.5	100.0
	Total	689	90.8	100.0	
Missing	0	1	.1		
	I choose not to answer this question	15	2.0		
	System	54	7.1		
	Total	70	9.2		
Total		759	100.0		

# Results

# Top Motivators

- Several “Tiers” of results from stronger to weaker
- Motivators include:
  - Flexibility (Stronger)
  - Faculty learning
  - Bridging gaps in access
  - Convenience
  - Increased interaction
  - Professional development (Weaker)

# Top Motivators

## 1) Flexibility

- “Teaching online can provide a more flexible work schedule”

88% of respondents agreed that this increased their desire to teach online

# Top Motivators

## 2) Learning

- Teaching online can provide an opportunity to
  - “stretch: and take on a new challenge”
  - “gain new knowledge, skills, insights about teaching
  - “learn new technology”
  - “experiment with new pedagogical approaches”
  - “reflect on and rethink classroom teaching”

80-86% of respondents agreed that these increased their desire to teach online

# Intermediate Motivators

3) Close “gaps” between higher education and students through access or convenience

## **Teaching online can provide an opportunity to**

- “reach students in different geographical regions”
- “reach students at different stages of their learning lives (e.g. more mature. experienced, older, younger etc)”
- “reach students with different cultural backgrounds”
- “students may want online courses”
- “accommodate other life needs (child care, transportation, other family needs etc) ( “reduce commuting time or hassle”)

**72-83% of respondents agreed that these increased their desire to teach online**

# De-motivators:

- Compensation (Stronger)
- Time Constraints
- Technical Support
- Complexity (Weaker)

# Top De-motivators: Compensation Issues

Overall 45-47% of respondents felt that ***compensation issues*** (for course development, teaching, revision) ***decreased*** their motivation to teach online

# Other Top De-motivators: Lack of Time

- Inadequate time to develop a new online course (38.2%)
- Inadequate time to revise online courses (38%)
- Online teaching may take more time than classroom teaching (38.2%)

# Narrative analysis

- Hundreds of comments collected
- Difficulties of analyzing unstructured data...
- Solutions to “getting it right”...when interpreting comments...

than in the traditional format. 2. Lack of a secure testing environment within the online format. So far, the testing component of evaluation in my online course is not as meaningful as it was when I taught the course in a conventional format.

Takes too long. It's a lot more work than my on-campus courses. I miss the face-to-face time in labs.

Lotus notes does not support most symbols, and superscripts and subscripts do not transfer from ppt or word to notes easily. I spend an unbelievable amount of time editing my postings. My students can not just post with the proper symbols. Most info like exams, labs & essays come in to me as attachments. Conventional grading on SLN doesn't work well for my chem courses.

The higher attrition rate. I wish I could figure out how to keep a higher percentage of my students in class.

The lack of face-to-face interaction with the students (not really an issue, but if I HAVE to choose something, I guess this is it).

Not being skilled enough in advanced techniques to make it "more like the classroom". I am going to a workshop in a couple weeks that might help.

Lack of student preparedness for the online modality.

It can take so much more time. I have to discipline myself not to become tied to the computer.

lack of compensation when revising course, time commitment is tremendous

It is difficult to teach students who are technically unprepared to take course on-line. Better screening is needed before signing students up for on-line courses. Oftentimes they take an on-line course because it is the only section left or it is the only section that will fit into their schedule.

Wrong answer!

Nothing.

The biggest problem for me is difficulty revising courses.

All work must be done in a written form.

Nothing.

test

Too many students are not academically prepared to be successful which leads to a high number of on-line drop outs.

Sometimes it is difficult to grade discussions, sometimes it is difficult to get across what you really want students to understand...so, I have to be very careful about my wording..... sometimes teaching the same course on-line seems repetitive

working in a technical area (mathematics) presents some challenges (symbols, graphs, etc)

The difficulty students have in following the written environment. Instructions have to be repeated numerous times because students are not careful enough when they read through the course materials.

Students who cheat. Need better technology so we can give different students different version of test without them knowing it. For example if we could give multiple choice test where the questions or answers are automatically rearranged.

Unable to see the students face-to-face.

That it seems to be a "disposable" occupation. I'd like instructors who teach online to receive the same recognition as those who teach in a classroom. Our physical space differs, but the quality and content do not change in terms of the content being taught.

The payment for TA and the technological problems with the system for oral Practices.

File Edit View Insert Format Tools Data Window Help Adobe PDF

Type a question for help

Arial 10 B I U

Reply with Changes... End Review...

D18 Ultimately there still is no absolute way to be sure the student submitting the work is the one who actually did the work.

	A	D	E	F	G	H	I	J	K	L	M	N	O	P
43	71	inability to meet students in person	F2				F2				F2			
44	104	lack of face to face contact with students	F2				F2F				F2			
45	105	Lack of Face To Face Interaction	F2				F2F				F2			
46	106	Lack of face to face interaction, especially in terms of explaining difficult concepts.	F2				F2F				F2			
47	107	lack of face to face. I rarely "teach" mostly administrative	F2				F2F				F2			
48	108	Lack of face-to-face contact, lack of classroom dynamics	F2				F2F				F2			
49	109	lack of face-to-face interaction with the students	F2				F2F				F2			
50	110	Lack of interpersonal (face-to-face) spontaneity in communication.	F2				F2F				F2			
51	117	Lack of the face-to-face contact with students.	F2				F2F				F2			
52	131	My desire to connect face to face!	F2				F2F				F2			
53	136	no face to face contact with the students	F2				F2F				F2			
54	139	No face to face contact , seems less personal.	F2				F2F				F2			
55	140	no face to face contact with students; unprepared students; impersonal nature of the process	F2	SP	EM		F2F	SP	EM		F2	SP	EM	
56	141	No face to face interaction	F2				F2F				F2			
57	142	No face to face interaction.	F2				F2F				F2			
58	143	No face-face.	F2				F2F				F2			
59	144	no face-to-face w/students	F2				F2F				F2			
60	153	Not being in front of a class	F2				I				F2			
61	158	Not having face-to-face interaction with students.	F2				F2F				F2			
62	161	Not meeting students in person.	F2				F2F				F2			
63	162	not meeting the students face to face	F2				F2F				F2			
64	163	Not meeting the students in person.	F2				F2F				F2			
65	164	Not seeing a student. I like it when they include a photo in MEET YOUR CLASSMATES>..but not all take the time, or have the desire to share a photo...shy.	F2				F2F				F2			
66	165	not seeing faces	F2				F2F				F2			
67	166	Not seeing facial/nonverbal expressions and reactions.	F2				F2F				F2			
68	167	Not seeing student reactions to discussions. Not experiencing the emotions related to the discussions.	F2	EM			F2F	EM			F2	EM		
69	168	Not seeing students face-to-face.	F2				F2F				F2			
70	169	not seeing the faces	F2				F2F				F2			
71	170	Not seeing the students faces.	F2				F2F				F2			
72	258	The lack of "seeing the expressions" on their faces when they don't get something. No matter how much communication I encourage, or how many feedback and check point methods I put in the course, there are still those students who slip through my fingers. I can spot them instantly in an on site course. I find it much slower and less precise in the online courses. So far!	F2	SLC	EM		F2F	EM	SLC		F2	SLC	EM	
73	259	The lack of face to face contact	F2				F2F				F2			



Headword	N...
THE	248
TO	198
STUDENTS	139
I	129
OF	125
AND	95
NOT	92
A	87
IN	85
IS	75
IT	72
TIME	65
COURSE	63
THAT	58
WITH	57
FOR	47
ONLINE	46
MY	46
HAVE	40
BE	39
FACE	36
LACK	35
AS	35
MORE	33
DO	33
WORK	32
WHO	31
THEY	31
ARE	30
STUDENT	26
COURSES	26
OR	24
NO	24
CAN	24
ON	23
FACE-TO-FACE	23
SOME	22
DONT	21
THIS	20

Context...	Word	...Context	L...
	Students	who do not keep up with the work.	7
	students	to explain or I want a quick solution!	11
topics, weaker	students	tend to struggle more than in face to face to face courses	14
was too involved, but all the	students	had positive things to say about my level of interaction and	16
Overcoming	students	attitude that their course is 'easy' and they don't have to pay att...	18
It can be inconvenient - it takes more time -	students	have difficulties understanding how to	22
participate effectively - some	students	feel at a loss. Sometimes I feel that we are not connecting	23
	students	did that in their coursework.	31
Plagiarism is too common Too many	students	who put in little effort	35
my	students	and can remember them much better to write a letter of recomm...	54
Meeting with my	students	.	56
I do not think I am as good of a motivater to my	students	as well in my online classes. I believe it	65
motivate the online	students	is that I am not able to retain as many students as I usually do in...	67
motivate the online students is that I am not able to retain as many	students	as I usually do in my on	67
campus classes. Also my evaluations have been slightly lower, ...	students		68
	Students	have trouble with textbooks.	70
Depending on the	students	, I miss the face-to-face contact with my students.	73
Depending on the students, I miss the face-to-face contact with ...	students	.	73
opportunity to do sample exercises together with the class befo...	students	complete	80
	students	can not just post with the proper symbols. Most info like exams...	91
The higher attrition rate. I wish I could figure out how to keep a ...	students	in	93
The lack of face-to-face interaction with the	students	(not really an issue, but if I HAVE to choose	95
it is difficult to teach	students	who are technically unprepared to take course on-line. Better	102
screening is needed before signing	students	up for on-line courses. Oftentimes they take an	103
Too many	students	are not academically prepared to be successful which leads to ...	113
want	students	to understand....so, I have to be very careful about my wording....	116
The difficulty	students	have in following the written environment. Instructions have to ...	119
numerous times because	students	are not careful enough when they read through the course	120
	Students	who cheat. Need better technology so we can give different st...	122
Students who cheat. Need better technology so we can give dif...	students	different version of	122
Unable to see the	students	face-to-face.	126
classroom where I meet with	students	each week for oral practice in Spanish.	137
Tougher to communicate effectively with	students	.	139
the expecation	students	have for immediate feedback	147
	students	expect 24/7 interaction. Administration doesn't truly understand...	152
It is almost impossible to have synchronous live discussion, with	students	spread across the face of	154
different	students	.	158
My	students	do not do as well as they did when the course was not online. ...	159
Takes a lot of time	students	want results quickly	166



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Reply with Changes... End Review...

A57 EVALUATION

A	B	C	D	E	F	G	H	I
<b>T I M E</b>  <i>f</i> = 95 (24.5%)	<b>Inconvenience</b>  <i>f</i> = 2 (0.5%)	TIC	references of inconvenience	6E+17	Deadline dates for written assignments. <b>Not good</b> for student or instructor.			
				6E+17	<b>Time consuming</b>			
	<b>Commitment</b>  <i>f</i> = 56 (14.4%)	TC	references of taking too much time, amount of commitment involved etc.	6E+17	<b>Takes too long.</b> It's a lot more work than my on-campus courses. I miss the face-to-face time in labs.			
				6E+17	My own fault, but I end up teaching <b>every day of the week</b> and on semester breaks.			
	<b>Course-Prep</b>  <i>f</i> = 20 (5.2%)	TCP	references of course / modules prep time: creating, developing, revising, updating, etc.	6E+17	can be <b>time consuming to prepare and update modules.</b>			
				6E+17	Getting the <b>course on-line initially takes a lot of time.</b>			
	<b>Perceived Student Demand</b>  <i>f</i> = 6 (1.5%)	STD	references of student demand for instant reply	6E+17	Feeling like I'm <b>Never "off"</b> - <b>students expect 24/7</b> response (as if they get that in the classroom...)			
6E+17				<b>student expectations for immediate feedback</b> regardless if college is on break				
<b>Modality</b>  <i>f</i> = 4 (1.0%)	TEM	references <b>immediacy</b> of participation / discussion issues <b>due to</b> online mode of communication	6E+17	<b>immediate</b> student interaction				
			6E+17	It is almost impossible to have <b>synchronous live discussion</b> , with students spread across the face of the earth.				
<b>Tedious</b>  <i>f</i> = 7 (1.8%)	TED	references boring, repetitive	6E+17	Some students don't read the responses of their classmates, <b>so there is often duplication of responses</b>				
			6E+17	Sometimes it is difficult to grade discussions, Sometimes it is difficult to get across what you really want students to understand....so, I have to be very careful about my wording....., sometimes teaching the same course on-line				

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# Narrative Themes Around Online Faculty “Dislikes”

1. Time Consuming	24.5%
2. Interaction Issues	22.7%
3. Student Preparedness	19.6%
4. Technology Issues	12.6%
5. Institutional Recognition	6.4%
6. Evaluation	3.6%
7. Academy Integrity	3.4%

No Dislikes	5.2%
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# Initial Lessons Learned

- Flexibility appeals to faculty - highlight
- Appropriate compensation policies
- Time constraints require greater ease of use, policies recognizing time issues
- Interaction with students and evaluation need to be simplified
- More opportunities for professional development and learning for some...

# Thank you! – Questions?

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