IP&T 520:
Multimedia part 1

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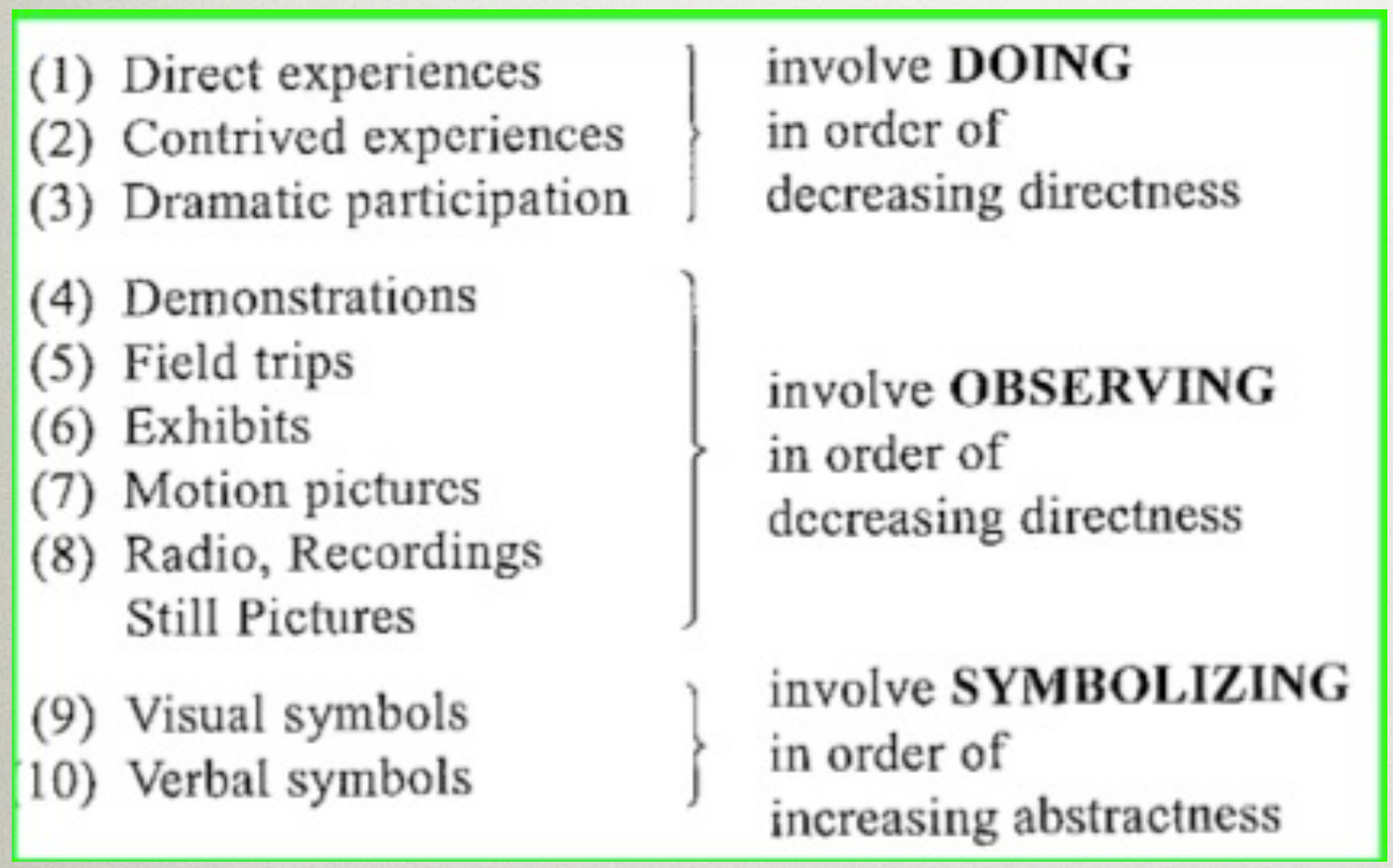
The Cone



- What was a significant learning event in your life?
- What made it significant?
- Where did it place on Dale's cone?

Do you agree?

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Do you agree?

- "Your sharpest, richest memories are evoked by direct experiences" (p. 170).
- [Direct experience] "is in reality the basis of all effective learning" (p. 170)
- "we ought to use all the ways of experiencing that we can" (p. 178)
- "education involves the ability to make experiences useful" (p. 179).

A good question ...

- p. 179: “If methods other than reading are effective, why are book-reading and book-recitation so commonly used in schools? Why has this procedure retained its hold, if it has weaknesses?”

Goodbye, teacher?

What do you agree with?

What do you disagree with?

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- Can computers teach, as Pressey claimed?

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- Can computers teach, as Pressey claimed?
- Can CBI be more effective than traditional classroom instruction, as Skinner claimed?
- What is more important in education: continual feedback and personalized instruction or human guidance?

The need for speed

- Skinner: "There are more people in the world than ever before, and a far greater part of them want an education. The demand cannot be met simply by building more schools and training more teachers."
- Is this true? Will it be in the future?

Year	Public institutions				
	Associate's degrees	Bachelor's degrees	Master's degrees	First-professional degrees\1\	Doctor's degrees\2\
1	2	3	4	5	6
1969-70	170,966	519,550	134,545	14,542	19,183
1970-71	215,645	557,996	151,603	16,139	20,788
1971-72	255,218	599,615	167,075	18,521	21,776
1972-73	278,132	630,899	174,405	21,872	22,357
1973-74	303,188	651,544	184,632	23,208	21,810
1974-75	318,474	634,785	193,804	23,612	22,176
1975-76	345,006	635,161	206,298	25,766	21,751
1976-77	355,650	630,463	208,901	26,344	21,229
1977-78	358,874	627,903	202,099	27,097	20,456
1978-79	346,808	621,666	192,016	27,785	20,817
1979-80	344,536	624,084	187,499	27,942	20,608
1980-81	352,391	626,452	184,384	29,128	20,895
1981-82	\3\ 366,732	636,475	182,295	29,611	20,889
1982-83	377,817	646,317	176,246	29,757	21,186
1983-84	\3\ 379,249	646,013	170,693	29,586	21,141
1984-85	377,625	652,246	170,000	30,152	21,337
1985-86	369,052	658,586	169,903	29,568	21,433
1986-87	358,811	659,260	167,797	29,346	21,870
1987-88	354,180	658,491	173,778	29,153	22,488
1988-89	357,001	675,675	179,109	28,993	22,970
1989-90	375,635	700,015	186,104	28,810	24,641
1990-91	398,055	724,062	193,057	29,554	25,681
1991-92	420,265	759,475	203,398	29,366	26,820
1992-93	430,321	785,112	213,843	29,628	27,392
1993-94	444,373	789,148	221,428	29,842	28,524
1994-95	451,539	776,670	224,152	29,871	28,917
1995-96	454,291	774,070	227,179	29,882	29,516
1996-97	465,494	776,677	233,237	31,243	29,838
1997-98	455,084	784,296	235,922	31,233	29,715
1998-99\4\ .	448,334	790,287	238,501	31,693	28,134
1999-2000 ..	448,446	810,855	243,157	32,247	28,408
2000-01	456,487	812,438	246,054	32,633	28,187
2001-02	471,660	841,512	249,828	33,439	27,622
2002-03	497,132	875,420	265,695	33,549	28,069
2003-04	524,875	905,718	285,138	34,499	29,706

What about the next 30 years?

(data from http://nces.ed.gov/programs/digest/d05/tables/dt05_253.asp)

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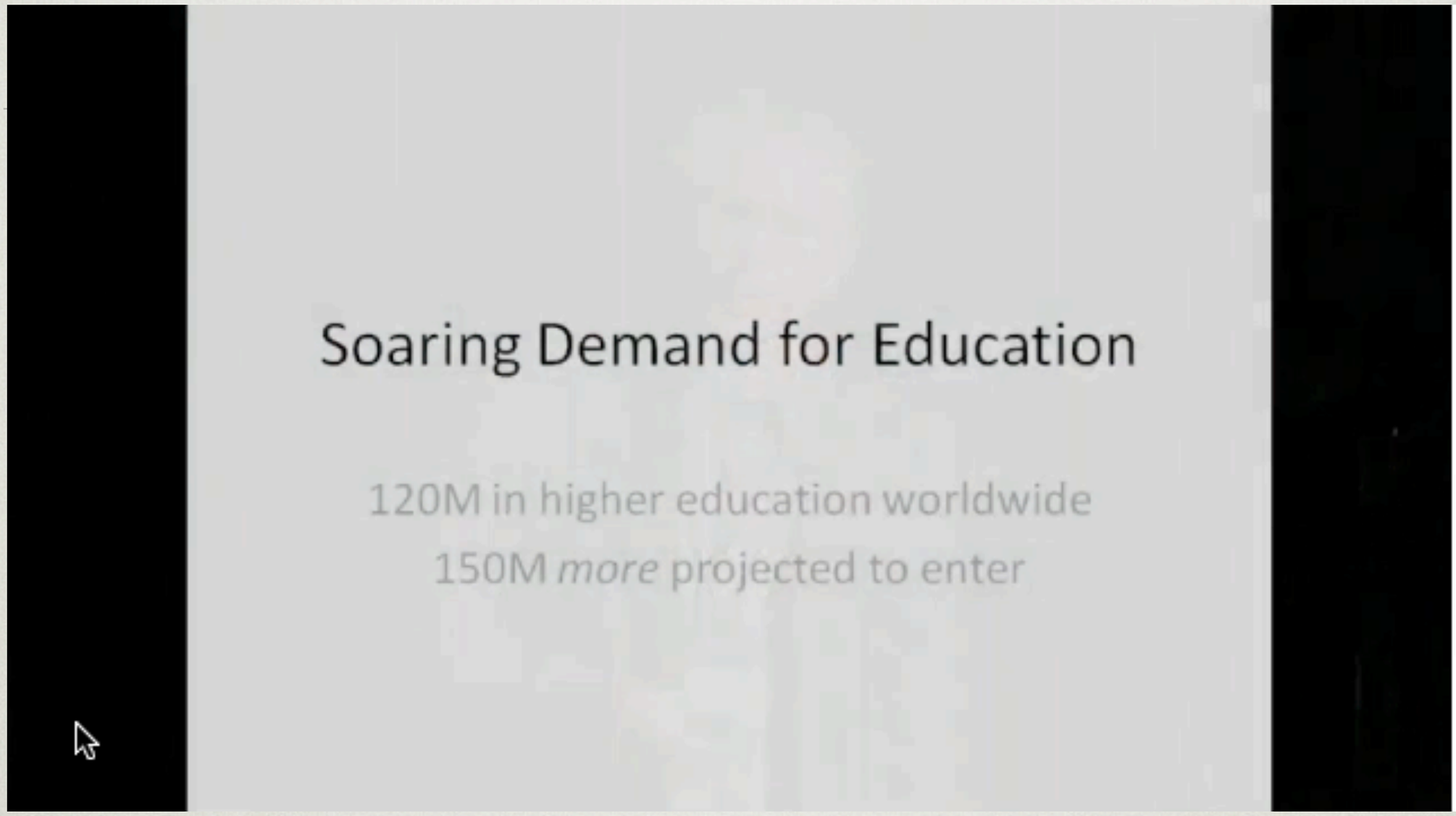


Dr. Wiley at TEDxNYED

Modern-day Teaching Machines

- Open Educational Resources (possibly?)
- EPSSs
- Online Diploma Mills
- Internet-based learning
- CD-roms
- Hooked on Phonics
- Others?

Skinner claims that teaching machines enable human teachers to do more. Is this true?

How would you respond?

August 17, 2010 comment on Freakonomics blog in context of discussion on the impact of schools vs. the impact of teachers on learning:

Why can't we identify the best teachers in the world for every grade/subject, place them on well-produced DVDs, add images, bullet points, music, etc., so that EVERY student gets the advantage of the best teachers?

The other teachers could serve to supplement the DVDs, administer tests, etc.

A child absent from school could access the course on-line (or at a later time in the library, perhaps) and stay up to date.

A brilliant child could perhaps complete the course in a shorter period of time, going on to future lessons.

The slower child could listen to the lesson again, until he/she understood it.

Lessons could be interactive.

As time goes on, it would be relatively easy to edit the DVDs so that updated material could be inserted, or problem areas could be addressed more vigorously.

Yes, I know that will replace many teachers in the classroom setting, but if we then used those teachers for security, discipline, etc., maybe our schools would do even better.

If nothing else, we could do this for just a core group of courses that are essential to further learning, etc.

ALSO, at the college level, why not create a SPECIFIC set of CORE courses–the required courses for every freshman/sophomore–and have them taught via DVD/online?

Why should a freshman at one college get only a "decent" history teacher, while a freshman at another college gets a brilliant one? License the lectures of the best teachers and allow all of our students to obtain superior educations–at least in these core courses.

- AaronS.

Khan Academy

Khan Academy

Khan Academy

No, not that Khan!

This one!

So, maybe technology can help us teach more, faster ...

But can it teach us better?

Debate

Debate

Now time to have the infamous debate!

Debate

Now time to have the infamous debate!

No, not that one ...

Team Clark

Team Clark

Team Kozma

Team Clark

Team Kozma

THAT one!

Take 10 minutes to review your notes with your teammates and to present your best evidence and argument.

Two peers will serve as judges

This debate ...

- Produced probably the most-cited special issue of *ETR&D* ever.
- It continues to be a boiling point today. Why?

For Next Time ...

- Read

-Lockee et al., 2001
-Summary of Figlio et al., 2010 (http://chronicle.com/blogPost/Online-Learning-May-Slightly/24963). Notice the comments.
-Reiser & Dempsey, ch. 32

- Annotate!
- Bring 4 copies of the abstract from one journal article from your journal that talks about media

References

*Ely & Plomp, pp. 169-180: Dale, E. (1946). The “Cone of Experience”. In *Audio-visual methods in teaching,* 1st ed. 37-51. New York: Dryden Press.

* Ely & Plomp, pp. 211-227: Skinner, B.F. (1958). Teaching Machines. *Science*, 128, 969-977.

*Kozma, R. (1994). Will Media Influence Learning? Reframing the Debate. Educational Technology Research & Development, 42(2), 7-19.

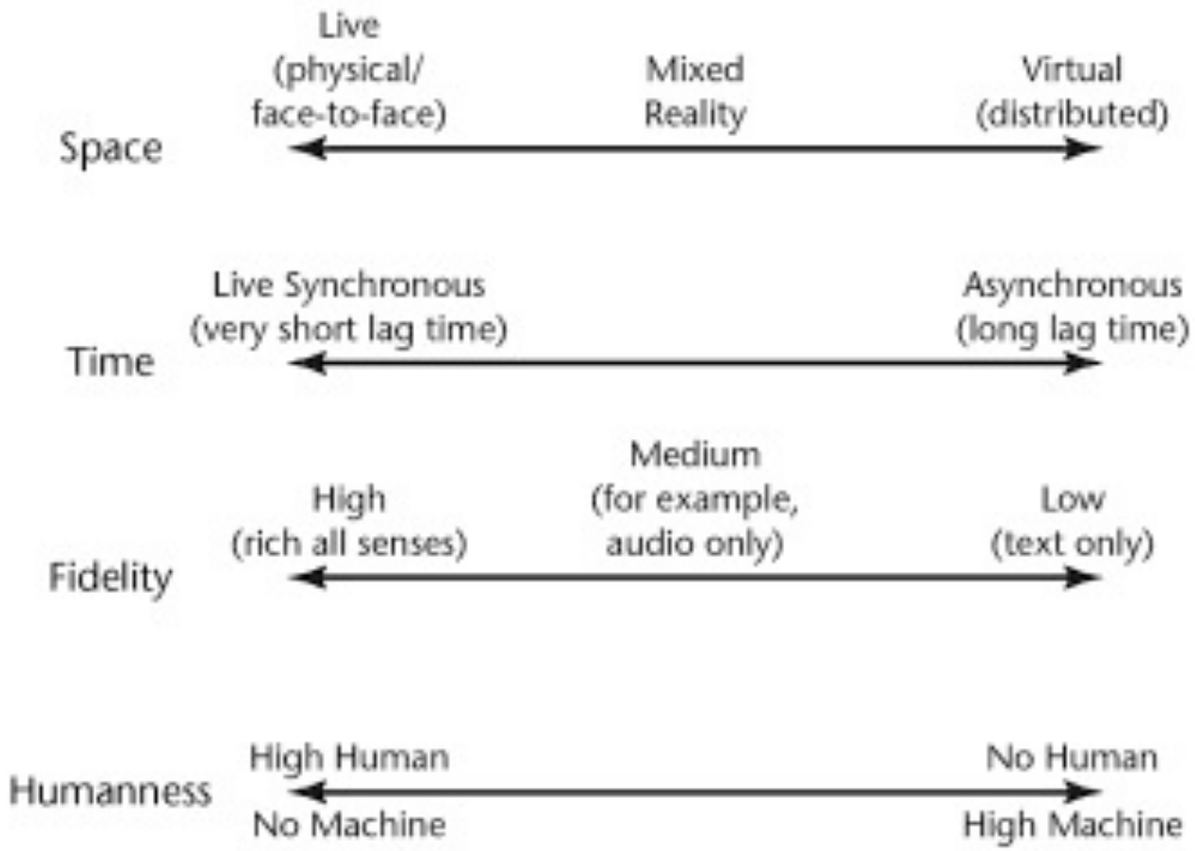
*Kozma, R. (1991). Learning with media. *Review of Educational Research*, 61(2), 179-211.

** Clark, R. E. (1994). Media will Never Influence Learning. Educational Technology Research & Development, 42(2), 21-29.

*Clark, R. E. (1983). Reconsidering Research on Learning from Media. *Review of Educational Research, 53*(4), 445-459.

Blended Learning Interactions

FIGURE 1.3. FOUR DIMENSIONS OF INTERACTION IN FACE-TO-FACE AND DISTRIBUTED LEARNING ENVIRONMENTS.



Graham, C. R. (2005). in The Handbook of Blended Learning: Global Perspectives, Local Designs. Pfeiffer.