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COMPUTERS in Medical Education

like the idea of books

medium for the expression of canonical knowledge of the art in a form subject to organized criticisms and review.

In her masterful review of the cultural impact of printing, Eliz. Eisenstein puts more weight on the faithful reproduction of hence coherent social access to, a work than the economy of its dissemination.

2 Weighing in from my own experience, I am better qualified to talk about journals / books

medical research / education. but for about 25 years of my academic career in 2 settings where medical students were an important part of the environment.

It was just as undergraduate medical education has become more and more an ancillary part of the

~~David~~

3/7/85

3 actual preoccupations of
academic medical centers,
graduate medical education
would be the major historic
focus of this discussion

and I hope CME is not
left out...

4 COMPUTER LITERACY.

much bruted - and has
about same role as
book literacy.

In principle student must not
know about electronic circuits
or software compilers any
more than about printing
press

Nevertheless he should

- a) not to be overawed
- b) understand limitations
- c) above all to have models of
computer systems + fallibility
conceptually helpful in physics

5. mounted now

by universal penetration
of PC's in colleges & in
businesses.

May still be a long time
before the physician gets
over the secret stigma of
operating a key board.

Voice entry

Patterns recogn. to
handle illegible handwriting
may help overcome that
obstacle.

6. IF computers are better
what kinds...

even before books, we
do have computers as
embedded instruments
above all in imaging
devices like the CAT-
and PET-scanners

...

7 Hospital Info Systems

computer as charts

8 Mgt. Info Systems

lab data

Drug monitoring

Adverse effects

Interactions

PSRO

DRG.

) will be
partly auto-
mated.

was behind ...

9 learning process

Practice process

Research

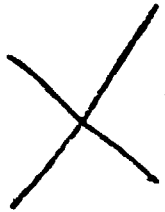
can't be too far apart!

10 Research:

generation of a
scientific "consensus"

- 1) aids in conduct of
research: data,
statistics, other calculations,
lab notebooks.
- 2) in context of interaction
of experts; consulting firms.
access to literature *
- 3) dissemination and record.

GENERAL.



Learning mostly books

Access to that consensus

Interactive with the models
multidimensional exposure
of expertise

DNA

hemodynamics

ENS structure

all
modelled

far more
effectively
than
any other
representation

CAI - self-interrogation

Practice of intellectual skills
→ knowledge!

Interaction with teaching experts

Library Access *

13 med students as peers
∴ Trust level suspension

14 will need new books
at higher level of
abstraction

15 Practice

not too different

CME - rapidly changing
cent. part of
med sci.

ME - must be the
means to provide
the base for CME
not the static content

Automated knowledge assist

e.g. diagnosis - knowledge

Dendrat. - logic trees
+ graph structure

16

library access &

$$\frac{d^n}{dt^n} > 0.$$

1980's - revolutionization!

DNA → medicine

Harvard Internet?

Paul S. J.

Konby - DNA

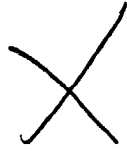
"life as chemistry"

17 Building Expert Systems

"Knowledge Acquisition" now the hard part

Ever satisfied?
What book is totally satisfactory to be followed slavishly

18 Macsyma can probably replace human insight
(most of these are expanded
in system
security thresholds a lot)



19 Needs

- ① self-learning
to facilitate
of abstracts
few experts
provided
= rule single function
- ② to read the
print literature
directly
- ③ Inter access of
diverse expert systems

20 Some background from
a mil. applications
report

2
add

ginites + cancer

Cl₂ as
mutagen

EPA