1-1-1986

**Training, Computers, and Educators**

Richard A. Diem  
*University of Texas*

Follow this and additional works at: [https://newprairiepress.org/edconsiderations](https://newprairiepress.org/edconsiderations)  
Part of the Higher Education Commons  
[Creative Commons Attribution-Noncommercial-Share Alike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/)

**Recommended Citation**  
https://doi.org/10.4148/0146-9282.1675

This Article is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Educational Considerations by an authorized administrator of New Prairie Press. For more information, please contact [cads@k-state.edu](mailto:cads@k-state.edu).
Internalization ... must take place if
the innovation is to become part of
daily schoolwork.

Training,
Computers,
and Educators

by Richard A. Diem

In the past three to five years schools in all parts of this
country have invested millions of dollars in a technology
that holds untold promise in its ability to deliver information
in a palatable, easily manipulable, and nonthreatening
manner. So great has the persuasive and enticing manner
of this technology been that school administrators, without
much experience in the technology or the ramifications
of its purchase, have convinced both school boards and
the public at large that the use of computers will dramatically
change literacy rates and, at the same time, offer students
a utilitarian tool they can use when they leave school.

The final results of these dreams are not yet in and
probably won't be until this generation reaches maturity.
What we do know is that the computer as an interactive
instructonal tool for school use may not even reach its
potential. Despite the number of states that now mandate com-
puter literacy as a high school graduation requirement, and
those that include courses in computer training as a part
of teacher pre-professional training, there are signs that noth-
ing has changed in the majority of American classrooms. In
a recent article in the Phi Delta Kappan (December 1984),
Alfred Bork pointed out that "Most learning is still taking
place through passive learning modes that have been domi-
nant for hundreds of years: books, lectures." Bork rests
most of the fault on poorly designed computer software
and the lack of interactive training in computer usage. While
these issues need immediate and long-range solutions, a
third problem, that of classroom application, bears both
scrutiny and study if the full potential of current and future
 technological advances finds its way into elementary and
secondary schools.

Application, by its nature, requires one to use learned
materials in new and concrete situations (Blooom, 1956). In
terms of computer technology, this means that the class-
room teacher must learn how to apply the hardware, soft-
ware, and computer languages to specific classroom situa-
tions. A knowledge of the technology, itself, will not suffice
for very long. The practical, everyday, instructional applica-
tions of computer technology will have a greater effect than
surface usage of the computer for one or two hours per
week.

Richard A. Diem is an associate professor of educa-
tion at the University of Texas at San Antonio.

Colleges and universities in an effort to provide catch-
up training in computer technology have offered to teachers
coursework, in various formats, at both the pre and insen-
tice levels. Most of the classes have concentrated on hard-
ware familiarization, introduction to BASIC, and evaluation
of software. While these efforts to serve a useful purpose in
orienting the novice user to computers, they do not provide
the type of application study that, in the long run, will show
teachers how they might actually use computers as part of
their repertoire of classroom pedagogy.

Instruction in curriculum design, development and
evaluation must accompany technological training. Work-
ing together, the practitioner can take the content of com-
puter coursework and interweave it within subject matter.
Construction of long-range developmental patterns of in-
struction with technology as an adjunct pedagogical mode
could then ensue, instead of the types of current computer
classroom efforts that are based on software availability
and willingness to bend curriculum to meet hardware-time
requirements.

The training of teacher-designers would begin to allevi-
ate some of the problems of poorly constructed software.
By providing practitioners the ability to design applications
to their own, classroom specific instructional problems, not
only would the users of computer technology improve, but
the teacher's entire methodological repertoire would gain
immediacy. In terms of feedback and evaluation concerning
software, would ensue at a faster rate, perhaps more produc-
itive rate. Classroom-specific software, long thought of as
impractical, could begin to be developed under this type
training scenario. Not only would coursework of this type
provide teachers with direct access to the developmental
aspects of instruction, but, if done correctly, also improve
quality of instruction.

This type of training would include development-of-
needs assessment tools to determine class and individual
instructional needs both in content and technological
areas. It would also emphasize an understanding of subject
matter so that proper instructional decisions, in terms of
when to use the computer, could begin to take place. Evalu-
ation, an afterthought in most classrooms, would also have
to be improved if any positive measures of instructional per-
formance were to be collected and analyzed.

The kind of academic efforts mentioned above are not
pie-in-the-sky dreams. They are based on long-standing suc-
cesses and failures replete in the history of American edu-
cation. Internalization, in terms of a practitioner's under-
standing and usage of technological innovation, must take
place if the innovation is to become part of daily school-
work. If this does not occur, in some manner, in the next two
years, the schools will turn away from computer technology
much as they did 20 years ago when television, the then cur-
rent video technology, was consigned as a baby-sitting de-
vice to be used on rainy days. A tool as powerful as the com-
puter should not be thought of as simply a tool for
mathematics, special education or word processing. In
stead, it must be looked at as a device that can aid in educa-
tion's basic goal-increasing understanding and knowledge.

References

Blooom, Benjamin, S., ed. Taxonomy of Educational Objec-


Educational Considerations, Vol. 13, No. 1, Winter 1986