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AUTHOR Taylor, Robin
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ABSTRACT

More than 10,000 instructional software packages have been published for elementary and secondary schools--thousands in each discipline. Unfortunately, not all sources of courseware evaluations are equally reliable; therefore, it is important to determine that evaluations include: (1) critical appraisal of content accuracy; (2) in-depth consideration of the appropriateness and effectiveness of the instructional strategies employed; and (3) input from testing with students. Some comprehensive and accessible sources of courseware evaluations are MicroSIFT Courseware Evaluations, which probably contain the most thorough and consistently reliable evaluations, and EPIE Micro-Courseware PRO/FILES, whose evaluations are synthesized from the reviews of two or more evaluators who have usually tested the courseware with students. Periodicals which contain software evaluations include the bimonthly "Electronic Learning," and the monthly "Educational Technology." Two sources that identify only high quality courseware (although according to different criteria) are "Only the Best, the Discriminating Software Guide for Preschool-Grade 12" (L. L. Mattas) and "The Yellow Book: A Parent's Guide to Educationally Sound Courseware" (NEA Educational Computer Service). (JB)

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Syracuse University • School of Education
Syracuse, New York 13244-2340
(315) 423-3640

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ERIC DIGEST

MICROCOMPUTER COURSEWARE EVALUATION SOURCES

The Dilemma: Too Much Choice

More than 10,000 instructional software packages have been published for elementary and secondary schools—thousands in each major discipline. We know, from magazine and journal laments, that much of this courseware is of poor quality. Faced with such an overwhelming supply, how can you increase the probability of purchasing good courseware for your school system?

The Solution: Courseware Evaluation

Fortunately, others have addressed this problem and have implemented a solution: evaluating large numbers of courseware packages. Thus, your school system can begin its task by identifying potentially suitable courseware through the evaluations available from one or more evaluation projects. After verifying that the content of some of the courseware is appropriate to your needs, you can select these few programs for your own specialists to evaluate prior to purchase.

Some Cautions

Not all sources of courseware evaluations are equally reliable. Before depending on the conclusions reached by a particular evaluation service, learn what you can about the evaluation methods and criteria it employs. It is especially important that evaluations include:

- critical appraisal of content accuracy,
- in-depth consideration of the appropriateness and effectiveness of the instructional strategies employed, and
- input from testing with students.

Note, too, that some evaluation services also consider how closely a given courseware package matches a state or local curriculum. This selection phase may not yield conclusions that are valid for your school system.

Useful Sources of Courseware Evaluations

Identified in this Digest are just a few of the most comprehensive and readily accessible sources of courseware evaluations. Described below are reviews available from two major courseware evaluation projects and those published in two magazines. Also highlighted are two sources that identify only high quality courseware (according to different criteria). Courseware evaluations are also available through clearinghouses established by several states and provinces, including Alberta, British Columbia, California, Florida, Iowa, Maryland, Minnesota, New York, North Carolina, Texas, and Utah.

MicroSIFT Courseware Evaluations, Holznagel, D.C., & Weaver, D. W. (Eds.). (1982-1985). *Courseware evaluations, sets 1-16*. Portland OR: Northwest Regional Educational Laboratory. (ERIC Document Reproduction Service Nos. ED 226 765 (sets 1-5); ED 234 772 (sets 6-8); ED 239 606 (set 9); ED 245 666 (set 10); ED 249 918 (sets 11-12); ED 260 710 (sets 13-14); see the April 1986 issue of *Resources in Education* (RIE) for the ED number for sets 15 and 16.

Probably the most thorough and consistently reliable evaluations are published by the MicroSIFT project. Each courseware package is reviewed by at least three professionals and tested with students from the intended audience group.

The synthesized evaluations include descriptions of the courseware (objectives, prerequisites, content and structure, documentation, potential uses), appraisals of major strengths and weaknesses, and a check against more than 20 content, instructional, and technical criteria. The evaluation concludes with a summary of the content; instructional and technical ratings; and an overall recommendation statement (highly recommend, recommend use with little or no change, recommend use only if certain changes are made, or do not recommend). A modified format has been developed for science courseware that includes descriptions of science processes and concepts and three additional content and instructional criteria.

These evaluations (issued periodically in sets of 75 to 90) may be obtained from the ERIC Document Reproduction Service (call 1-800-227-3742, prices vary), or through the online Resources in Computer Education (RICE) database available through BRS (call MicroSIFT: 503-248-6800 Ext. 551). Some of the later sets contain evaluations of courseware that has been revised since an earlier MicroSIFT evaluation was published. Sets 15 and 16 will be the last sets of evaluations to be published by the MicroSIFT project in the current form, but the project will continue to collect evaluations and make them available through the RICE database.

EPIE Micro-Courseware PROFILES. (1982-1985). *Microcomputer courseware profiles & evaluations*. Water Mill, NY. EPIE Institute. Available by subscription.

A comprehensive evaluation service is provided by the Educational Product Information Exchange (EPIE) in cooperation with Consumers Union (CU). Each Courseware PRO/FILE is synthesized from the reviews of two or more evaluators, who have usually tested the courseware with students.

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Every 3- or 4-page Micro-Courseware PRO/FILE and Evaluation contains a lengthy description and evaluation of content, teacher and student use, and management, often including photos of sample screens. Instructional design and software design are also appraised under the general headings of goals and objectives, contents, methods and approach, and evaluation and management. A summary of the evaluation is provided on the first page, along with recommendations to the producer. These are accompanied by overall ratings of instructional design and software design (in earlier PRO/FILES) or a summary recommendation (in more recent PRO/FILES).

Also published by EPIE Institute and Teachers College Press, Columbia University, is *TESS: The Educational Software Selector* (1985 Edition, \$59.95). This guide includes review citations and an indication of whether a review is favorable.

Electronic Learning, Burroughs, R. (Ed.). New York: Scholastic. Published monthly September, October, and January through April; published bimonthly November/December and May/June.

Each issue of this magazine for teachers includes an entire section on the instructional applications of computers. In addition to discussing how computers can be used to help teach, for example, foreign languages or business education, contributors to that section provide comparative evaluations of several relevant courseware packages. The reviews, completed by a single evaluator, are not detailed, but do provide a concise overview of each program's strengths and weaknesses, along with seven ratings (instructional design, content, appropriateness, interest level, ease of use, support materials, and overall value). Also included are the publisher's comments on the evaluations, if available.

Educational Technology, Lipsitz, L. (Ed.). Englewood Cliffs, NJ: Educational Technology. Published monthly.

Every issue of this well-respected publication includes reviews of two or more courseware packages. Each evaluation is provided by a single professional, who judges the program against explicit criteria and who is required to test the courseware with one or more

students representative of the intended audience. The prose evaluation reports consist of a detailed description of the courseware package and a critical evaluation of its strengths, weaknesses, and potential use. Publishers are given an opportunity to respond to the reviews.

Mattas, L. L. (1985). *Only the best: The discriminating software guide for preschool-grade 12*. Sacramento, CA: Education News Service. ERIC Document Reproduction Service No. ED 256 294.

For those who do not have the time to read hundreds of individual evaluations, *Only the Best* is an excellent resource. In it, Mattas has identified 113 programs that received the most agreement on high quality among the 16 evaluation services whose courseware reviews she examines. A one-page report is provided for each program.

Also included in *Only the Best* are brief descriptions of 189 "nearly qualifying" programs and 13 more that Mattas considers "worth looking at." (For courseware in these last two groups, you would certainly want to read one or two more thorough reviews before making a decision to select any of the packages.)

NEA Educational Computer Service (1985). *The yellow book: A parent's guide to educationally sound courseware*. Washington, DC: National Education Association.

Teachers/reviewers of the NEA Educational Computer Service examined 1,500 courseware packages from which they identified as being of high quality, the 272 programs described in *The Yellow Book*. The descriptions provided for each package are brief, giving an overview of the content and a summary of the evaluator's comments and recommendations. Again, you would probably want to conduct your own evaluation of any of these packages you consider.

Also identified in this publication are subsets of the 272 programs that are available in versions for specific microcomputers, including many less popular models.

This digest was prepared by Robin Taylor, Coordinator of Computer Education, University of Maryland Baltimore County, Catonsville, MD 21228. December 1985.
