

Technical Brief ■

Educational Software Evaluation Process

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Abstract The Active Digital Library at the Vanderbilt University Medical Center has created and implemented an educational software evaluation process to facilitate the timely recommendation for product acquisition. Using this process, breadth and depth of subject coverage, clarity of presentation, quality of construction, and ease of use are being assessed by content and technical experts. The process uses a team approach, employing a bi-level evaluation instrument based on existing software evaluation forms and system bug reports.

■ JAMIA. 1995;2:295-296.

Background

Although advances in computing have facilitated the use of educational software in biomedical education, the current state of information technology has created difficulties in software evaluation and selection because of 1) the abundance of available software packages, 2) the rapid and continuous technologic evolution, 3) the lack of technical expertise among the target audience, 4) the inadequacy of evaluation paradigms, and 5) the variety of technologic tools and platforms used to produce software packages.¹ Further exacerbating the difficulties in product evaluation and selection is the fact that many individuals involved in the decision-making process lack informatics or computer backgrounds.² Decisions are often based on instinct rather than on a formal evaluation that allows software to be analyzed in a consistent, structured, replicable manner.

Evaluation Process

A bi-level evaluation process for evaluating educational software was developed for use in the Active Digital Library (ADL). Software typically is made

available by vendors for a 30-day trial period. This limited amount of time does not allow for the design of a complex controlled trial that would be needed to assess overall educational impact. Therefore, the process designed for use in the ADL is intended to serve as an evaluation with which to make informed decisions about acquiring educational software for use as a library resource, not for measuring the potential educational outcome.

To accommodate the bi-level evaluation process, two evaluation forms were created, supporting each level of the assessment. Elements from existing evaluation forms and system bug reports were adapted to reflect criteria necessary to assess the merit of educational software for inclusion in the ADL collection. The first form is used to establish a baseline of evaluation information. In addition to capturing demographic data concerning the evaluator, this form gauges the evaluator's familiarity with technology. The main section of the form seeks to determine the evaluator's overall reaction to the software using a combination of scaled rankings and open-ended comments. This portion of the evaluation is concerned primarily with software content and ease of use (Fig. 1). Medical and nursing school faculty whose areas of specialization reflect the subject matter of a particular product are asked to evaluate software using this form, as are students.

A second evaluation form, which builds on the content of the first, attempts to capture more detailed information. This form was designed for use by informaticians, librarians, and systems analysts. The form consists of a series of open-ended comment sections concerning intended users, content, system

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Active Digital Library - Software Evaluation Form

Please circle a number on the 1-7scale to indicate your response.

Rate the Software in each of the following categories.

		<u>Low</u>						<u>High</u>
Topic Coverage	Breadth	1	2	3	4	5	6	7
	Depth	1	2	3	4	5	6	7
Appropriateness for intended audience		1	2	3	4	5	6	7

Rate Your Experience with the software in terms of:

How Easy to Use	1	2	3	4	5	6	7
How Easy to Learn	1	2	3	4	5	6	7
Quality of On-line Help	1	2	3	4	5	6	7
Quality of Paper Documentation	1	2	3	4	5	6	7
Program Response time i.e., to actions or commands	1	2	3	4	5	6	7
Time to complete a typical task	1	2	3	4	5	6	7
How much can this software help you with your work?	1	2	3	4	5	6	7

What other features would you like to see in this product? _____

Do you know of other similar products? What are they: _____

How do they compare to this one? _____

Additional Comments on these sections: _____

requirements, support, usability, performance, customizability, and documentation. Although comments are subjective, categories of requested information are standardized and structured enough to lend objectivity to the evaluation. Both evaluation forms are available electronically via the World Wide Web.³

Using a bi-level, dual-form approach, educational software is evaluated by a team of reviewers who have varied educational and professional backgrounds. The completed evaluation forms are analyzed, and the results compiled. This information is

used to make a favorable or an unfavorable recommendation concerning software acquisition.

References ■

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3. Active Digital Library. The Informatics Center. Vanderbilt University Medical Center (1995). Software Evaluation Forms. <<http://vumclib.mc.vanderbilt.edu/adl/>>

Figure 1 The first form used in the bi-level evaluation process. This form is used to establish a baseline of evaluation information. This portion of the evaluation is concerned primarily with software content and ease of use.