# Book Reviews

Mary Kennedy, Editor

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***Formative Evaluation for Educational Technologies*** by Barbara N. Flagg, Hillsdale, New Jersey: Lawrence Erlbaum, 1990. ISBN O-8058-0127-8 (CDN $46.95)

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***Reviewed by Griff Richards***

As a designer and developer of interactive videodiscs, I approached ***Formative Evaluation for Educational Technologies*** with much professional interest, In one of my earliest interactive videodisc projects, it seemed that the interactive developers and the evaluation researchers approached evaluation from very different perspectives. Any formative evaluation was done informally by the developers, while summative evaluation, completed by the evaluators, culminated in the publication of a study, the results of which were not shared with the developers. It is hoped that Barbara Flagg's book will help to close the gap between developers and evaluation researchers, and between formative and summative evaluation.

Educational formative evaluation has a role to play in the production of quality programs. Making successful educational programs requires not only solid content and good design, but also ongoing review and revision during the development process. As a developer I am interested in finding more efficient methods of conducting formative evaluations -better, faster, and less costly ways of bringing a quality product together.

What I found in ***Formative Evaluation for Educational Technologies was*** a good overview of methods currently in practice, and a thorough examination of these methods from the perspective of what constitutes good formative evaluation. What I did not find was a recipe book of how to conduct formative evaluations, nor did I find guidelines regarding how much should be spent on program improvement. While Flagg's book did not provide answers to my more pragmatic questions, it did provide considerable insight into the com-

plexities and issues of current practices in program evaluation.

The book is written for newcomers to formative evaluation. A second audience would be producers of electronic technology software. The boo appears at a time when technologies such as interactive videodisc are maturing. Developers know the capabilities of hardware systems, and audiences are no longer dazzled by the glitz of the electronic displays.

*Formative Evaluation for Educational Technologies* is presented in three sections. Part I: The Concept presents a theoretical discussion of formative evaluation. Part II: The Practice presents a series of case studies contributed by producers of instructional electronic technology programs. Part III: The Methods presents a framework for planning formative evaluation, and examines the appropriateness of various methods and approaches in terms of gauging user friendliness, program reception, or learning outcomes.

Throughout Part I Flagg avoids being prescriptive, and instead is cautiously descriptive of the processes of formative evaluation and the variety of media, settings, and research variables which are encompassed within formative evaluation. By illustrating different methodological approaches through examples from real case studies and from the evaluation literature, the reader comes to view formative evaluation as a real issue in the world of educational technology production.

In Part II the case studies solidify the notion that formative evaluation is indeed an integral part of the systematic design of educational technology products. The examples present generous titbits of information about the nature of the development decisions in the electronic technologies of broadcast television, interactive videodisc, teletext, and computer software. But examined together they highlight the disparity and discontinuity of formative evaluation practices from project to project. What Flagg does is establish that formative evaluation efforts can be better planned to encompass the whole development process, from beginning to end.

Part III, in attempting to present a framework for the planning of formative evaluation, fails to tell the reader how to plan effectively for this highly iterative process. The chapter on planning appears disorganized, with too many concepts introduced and left hanging rather than being interwoven. The chapters on methods are particularly useful, however, and they include simple design guidelines for evaluators to check, as well as a plethora of evaluation techniques. Flagg cautions the reader to use a variety of techniques which cover both quantitative and qualitative aspects, to ensure that unintended program effects, as well as intended program effects, are revealed.

*Formative Evaluation for Educational Technologies* is a very interesting and useful book. It is timely in its appearance and it will prove to be a good reference for students, developers, and evaluators alike. I particularly appreciate the inclusion of the case studies – they provide contextual frameworks that enable the developer to choose a production similar to his/her own as the starting point for the development of a formative evaluation plan. After reading Flagg's book, I feel that my future projects can have a better rationalized approach to formative evaluation.

My disappointment with the book lies in its failure to address some of the more pragmatic issues. The book fails to discuss the relationship between formative evaluation and market research. A failing of some interactive videodisc programs is that they offer so much depth that they actually take longer for students to use: what formative measures should be taken to ensure efficient use of students' time? The cost-effectiveness of formative evaluation is not discussed. If fifty percent improvement in effectiveness of a computer program can be accomplished in the first series of one-on-one trials, how much of the project's budget should be allocated to other formative evaluation activities, and at which phases of the project?

But in all, the development of educational technology products will be the better for the release of this book. I look forward to the release of a second edition, where perhaps there will be room to address some of the more pragmatic issues.

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REVIEWER

Griff Richards is currently on leave from BCIT, where he is project leader for the IBM/BCIT Interactive Videodisc Development Project. He is pursuing doctoral studies in Educational Technology at Concordia University, Montreal, Quebec.

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***Human Learning*** (2nd Edition) by Thomas H. Leahey and Richard J. Harris, Scarborough, Ontario: Prentice-Hall of Canada, 1989. ISBN O-13-44-52-143 (CDN $61.33)

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***Reviewed by Reinildes Dias***

Human Learning provides a comprehensive and integrative discussion of that complex process which has enabled human beings to achieve scientific, technological, and social improvements throughout the centuries. Human learning is a large and complex field of inquiry, with many sub-fields that deserve attention on the part of those who set out to delineate it. The authors deal with the process of human learning well, describing different theoretical perspectives, illustrative experiments, and examples that provide empirical evidence for their assertions.

Leahey and Harris organize their text around four themes in the psychology of learning: 1) learning and behavior; 2) learning and cognition; 3) learning and biology; and 4) learning and development. The organizational structure aids in the establishment of the integrative character of the book.

The introductory chapter examines human learning from an historical perspective, and reviews concepts and ideas related to copy theory, realism,