Book Reviews

Mary Kennedy, Editor

Computer-Based Instruction: Methods and Development (2nd Edition)
by Stephen M. Alessi and Stanley R. Trollip, Englewood Cliffs, NJ: Prentice
Hall, 1991. ISBN O-13-168592-9 (CDN $52.67)

Reviewed by Diane P. Janes

Since the first edition of this book was introduced to the community of
computer-based instructional (CBI) designers in 1985, we have as a profes-
sion, witnessed a revolution in the computer field. In the early 1980s comput-
ers were still out of the reach both financially and emotionally of most of the
educational population. If we did use a computer, a 5 MB hard drive was a
sight to behold, and the learners our early CBI was designed for were not
computer literate.

In six short years, the revolution has taken place, and it is still ongoing.
'Ibday, many of the students CBI is aimed at -both secondary, post-secondary,
and adults involved in industrial training and/or personal growth – have
home computers or use them daily at work. Today's interactive, instructional
computers are available at the local video store, the supermarket or library,
ready for the novice or expert to use.

These facts are acknowledged by Stephen Alessi and Stanley Trollip in
their 1991 update. Gone are the chapters on the history of computers,
hardware and software. This has become one introductory chapter. New
chapters, under the section Advanced Topics in Computer-Based Instruction,
have been added to investigate the advances in computer-managed instruc-
tion, interactive video and artificial intelligence.

This text is divided into three parts. Part One, entitled *Computer-Based
Instruction Methodologies,* is an introduction to the types of methods most
commonly used by computer-based instructional designers, namely tutorials,

drills, simulations, instructional games and tests. Each section is measured against the "expository model of instruction"put forward by the authors. They maintain that in order for the instruction to be effective it must include the following four phases: presenting information, guiding the student, practice by the student and assessment of student learning.

Part Two is entitled *Development of Computer-Based Instruction.* Its chapters describe preparation, design, flowcharting, storyboarding, programming and support materials, and evaluation. These chapters provide a model for novice designers which will take them through, as the authors note, many of the procedures similar to the Instructional Systems Design (ISD) approach. The procedures are simplified for the beginning designer, and are specifically intended to assist in thecomputer aspect of thedesign process. The model they promote has ten steps: determine needs and goals, collect resources, learn the content, generate ideas, design instruction, flowchart the lesson, storyboard displays on paper, program the lesson, produce supporting materials, evaluate and revise.

Finally Part Three, *Advanced Topics in Computer-Based Instruction* discusses in great depth the past, present and future of computer-managed instruction, interactive video, and artificial intelligence and instruction. Each of the three chapters in this section describes the history and the theory of the specific topics, and serve as good introductions to these relatively new areas of potential exploration.

Overall the text is well organized and easy to read. It takes the novice through the methodologies and design process in a through manner. Practised CBI designers will find this book a handy reference and refresher. One of the best aspects of the book is the end section of each chapter, Each chapter finishes with a complete bibliography on the topic of the chapter, and with what the authors call *Summary.* This is a block at the end where, step by step, the chapter topic is reviewed in point form, as a handy mnemonic device.

Another excellent feature of the book is the appendices. Appendix A provides a summary of the instructional factors for each of the methodologies presented in Part One. It is a handy reference tool. Appendix B is a quality review checklist. Laid out in a practical format, this checklist covers language and grammar, surface features, questions and menus, other issues of pedagogy, invisible functions, subject matter, and off-line materials. Appendix C covers the old standby of storyboard forms, available for the designer to photocopy for use. The advantage to these forms are their layout, specific to the type of hardware one may be using, such as a Macintosh, Apple or the IBM system as well as the screen size or programming language one may be working with.

This book is a valued addition to the literature and would not gather dust on any bookshelf belonging to an beginning or presently active designer of computer-based instruction.