



1984, VOL. 7, NO. 3

ISSN 0162 2641

Address Changes. POSTMASTER and subscribers: Send address changes to AECT, Circulation Dept., 1126 Sixteenth St NW, Washington, DC 20036.

Subscriptions. Annual Subscriptions: \$24 domestic; \$27 foreign surface mail; \$37 foreign airmail; \$20 special rate for AECT members.

Single copies \$6 each. Discount available on bulk orders of single issues. Order from Learning Systems Institute at address below.

Publication data. The Journal of Instructional Development is published quarterly for the Association for Educational Communications and Technology, Inc., by the Learning Systems Institute, Florida State University, Tallahassee, FL 32306.

Copyright © 1984 by the Association for Educational Communications and Technology.

Editorial Production services by Multimedia Laboratories, Florida State University.

Permission to quote. Nonprofit organizations and individuals may quote from or reproduce single copies of materials in JID for noncommercial purposes, provided that full credit acknowledgements are given and permission of the author(s) is obtained. For permission to quote from or reproduce copyrighted material from JID for commercial purposes, write to: Permissions, AECT.

All copies, whether reproduced under "fair use" provisions of the copyright law, or with permission as granted here or by letter from AECT, must carry the following notice:

"Copyright © 1984 by the Association for Educational Communications and Technology, 1126 16th Street NW, Washington, DC 20036. Reprinted by permission from the Journal of Instructional Development."

During the past 20 years, and particularly during the last decade, interest in the computer as an instructional technology has increased dramatically. Virtually all phases of education and training have been affected by the growth of interest in the computer, as evidenced by the proliferation of computer-based instruction products that have come on the market and the popularity of computer-based training

Association for Educational Communications and Technology

Contents

ARTICLES

Research on Student Through Process During Computer-Based Instruction, Richard E. Clark 2

Guidelines for Using Locus of Instructional Control in the Design of Computer-Assisted Instruction, Michael J. Hannafin 6

Instructional Design and Authoring Software, Greg Kearsley 11

Artificial Intelligence Methods in Computer-Based Instructional Design: The Minnesota Adaptive Instructional System, Robert D. Tennyson 17

Alternative Designs for Evaluating Computer-Based Instruction, F J King and M. D. Roblyer 23

DEPARTMENTS

ERIC Reports on ID, edited by Barbara B. Minor 30

in business and government. The computer appears to be a technology of long-term consequence to the instructional development profession.

In planning this issue, the goal was to present a series of papers pertaining to important issues in the design of computer-assisted instruction (CAI). To accomplish this goal, authors from academic and applied settings were asked to develop their ideas concerning CAI within the design focus of JID and the goals of this issue. The result of their efforts is this special issue, which includes comprehensive summaries of CAI research and the characteristics of an empirically derived CAI system (Tennyson), an evaluation of factors to be considered in making instructional design decisions (Hannafin), an analysis of the underlying assumptions and capabilities of various authoring options

(Kearsley), an examination of the implications of learning and cognition research for design of CAI (Clark), and the presentation of several practical models for the evaluation of CAI (King and Roblyer).

The topics addressed in this issue should enlighten, broaden, and stimulate thinking about issues in the design of CAI. The papers do more than present information. They challenge the instructional design profession to examine carefully the fruits, fallacies, and risks associated with CAI, and to be thoughtful in our instructional judgments and decisions.

I am extremely grateful to each of the authors for contributing their efforts to this issue.

—Michael Hannafin Guest Editor