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Microcomputers in the Classroom



Paul G. Geisert

Mynga K. Futrell

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Microcomputers in the Classroom

Paul G. Geisert

Instructional Systems

Mynga K. Futrell

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Preface

Whether you are currently preparing for teaching, are new to the profession, or are an experienced professional, you can expect to be asked by a parent, administrator, or prospective employer, "Are you using computers in your classroom?" It is common today for a teacher to be encouraged to make use of computers in teaching and to address the curricular issues presented by microcomputers. The arrival of this powerful technology has made classroom computer use a matter for all teachers to consider, regardless of level or subject matter.

"Do you use computers?" is a reasonable question to ask any teacher. After all, more and more of the world's information is being handled electronically. Information, the "currency" of teaching and learning, is changing its form, and it seems fair to expect educators to respond. The real challenge for the classroom teacher, however, is less one of simply using computers than of making them *useful* in the instructional endeavor.

Consider briefly the success story of one teacher, Carol Schafer, who availed herself of a good teaching opportunity. Stimulated by her observation of a cluster of girls playing jump rope and singing a jump-rope jingle, "Cinderella dressed in yellow," Carol was able to vividly illustrate to students commonality in humans across the globe by way of a computer project she conducted with students in the Teutopolis School District in Illinois. With the help of her students and her school's new electronic mail system, Carol set about gathering a variety of jingles. She posted messages via the classroom computer on electronic bulletin boards, asking for jump-rope jingles.

Carol received almost two hundred jingles, including those from more than a dozen countries, such as Botswana, Belgium, and Australia. Adaptations of "Down in the valley where the green grass grows" were submitted by sixty-five people. She and her students found at least twenty jump-rope rhymes, including "Cinderella," that have traveled the world intact, while others, like "Down in the valley," were variations on a theme. An example:

From Iowa:

*Down by the river, down by the
sea,*

*Johnny broke a bottle and blamed
it all on me.*

*I told Ma, Ma told Pa,
and Johnny got a spanking,*

So ha, ha, ha!

From England and Ireland:

*Johnny over the ocean, Johnny
over the sea,*

*Johnny broke a bottle and blamed
it on me.*

*I told Ma, Ma told Pa,
Johnny got a whipping,*

Ha, ha, ha!

The children of Teutopolis started corresponding, via Internet, with St. Attracta's Senior School in Dublin, and students were so taken with their findings that they planned to continue researching jingles. As Carol Schafer said at the conclusion of her project, after achieving results far exceeding her expectations, "What better way to show them how *alike* we all are?"

A teacher's success in making the most of electronic technology rests, in part, on his or her professional skill in microcomputer use. Just as importantly, it also depends on the making of wise instructional decisions about using a computer to enhance instruction. Computer use necessitates asking, time and again, in situation after situation, "Is there some aspect of my teaching that can be done better with a computer?" The answers will vary with time, circumstance, and curriculum. We agree with Carol Schafer's assessment of the student learning produced by her project: "Demonstrating to students their affinitive relationship with youngsters in other locations—even other countries—is an example of one teaching goal which can best be met using a computer."

We have written *Teachers, Computers, and Curriculum* to help you better accomplish your teaching goals and to promote learning in your students. This book is as much a text on teaching as one about computers. We maintain that the computer is simply a tool, albeit a powerful one, and that you can become proficient in the professional use of that tool. You can make sensible and valuable decisions concerning when and how the microcomputer is integrated into teaching activities and student learning experiences.

If you are to use a computer appropriately in the classroom—enhancing your teaching and your students' learning—then you must make sound instructional decisions concerning microcomputer use, and implement the results of these decisions within your classroom setting. Therefore, the content and organization of *Teachers, Computers, and Curriculum* reflect a greater emphasis on development of proficiencies in classroom implementation and curricular integration than is customary in books on computers for educators. In this text we make no attempt to comprehensively survey the broad spectrum of ways computers are useful in education. Our focus throughout is on the information you need, the factors you are advised to consider, and the decisions you need to make if you are to employ computers effectively in your teaching.

Organization of the Text

Although a textbook in format, this book is organized to guide your learning of content and to facilitate your access to hands-on experiences with computers.

The content of *Teachers, Computers, and Curriculum* is not specific to one type of computer. The text presents concepts generic to using computers in the classroom, rather than ideas related to specific brands of computers.

At the beginning of each chapter are objectives identifying what you should gain from your reading and study. You can use them to help you evaluate your learning. In chapter introductions, we provide broad questions to focus your study and to get you moving down the same cognitive pathways we are taking.

Each chapter has an activity section to provide hands-on computer or computer-related activities illustrative of the content of the chapter. We encourage you to do as many of the activities as you can, but we do not assume you will be able to carry out all of them independently. Many of the activities are to be used by an instructor in a learning lab to provide concrete experiences that complement the chapter's concepts.

In most chapters, we list selected computer programs you may wish to examine. These software suggestions were derived from various review processes and, in some cases, from the personal experiences of the authors. We also include readings and references for each chapter. A glossary of terms is presented at the end of the book.

A Few Words on the Future

We hope that you look forward to learning about microcomputers and their use in teaching. We want you to conclude your study of this book with a feeling of confidence in your abilities as a computer-using teacher and with a sense of enthusiasm. Microcomputers, when understood and used properly, can contribute in many ways to your students' learning. We have sought to provide a realistic and experimental perspective on classroom microcomputer use.

Microcomputers offer exciting approaches to teaching that were not even dreamed of twenty years ago, but the extent to which the educational potential of microcomputer technology will be realized remains to be seen. Some teachers will use microcomputers to revolutionize their classrooms. Perhaps you will be one of them.

We wish to thank Marianne Handler of National-Louis University and Michael Flemister of Ohio University for their reviews of early drafts of the manuscript.

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Chapter 1

Using Computers in Teaching

A Professional Goal

Objectives

- List some major areas of proficiency associated with being a computer-using teacher.
- State the value of acquiring computer-using skills.
- Identify a variety of uses for microcomputers in the school setting.
- Describe how much a teacher needs to know about computers.
- Distinguish between using computers for general teacher purposes and teaching about computers.
- Contrast the two computer-focused content domains, computer science and computer competence.
- Depict computer operation with a “user-friendly” program.
- Characterize (with an analogy) the level of the computer literacy understanding actually needed by computer-using teachers.
- Describe some benefits to be gained from using computer terminology and engaging in hands-on computer learning.

Introduction

Here you are beginning this book. Just how will you be different when you have completed it? What will you be able to do that you cannot do now?

Are you able presently to produce handouts or practice sheets using a microcomputer and its printer? Can you use criteria to decide where a computer should be located in a classroom to make it an effective tool? Can you determine which students should use it and when? If not, these proficiencies will be targets for you to work toward as you