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0521404479 - Beyond Technology's Promise: An Examination of Children's Educational Computing at Home

Joseph B. Giacquinta, Jo Anne Bauer and Jane E. Levin

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Beyond Technology's Promise takes a hard look at the home computing scene. How are children using computers at home? Is home computer use related to academic achievement? The research reported in the book focuses on whether families are using computers to help children learn academic skills and, if so, how well they are doing it. Using the acronym SITE (for Studies of Interactive Technology in Education), the three-year, qualitative investigation provided contextual information crucial to our understanding of how computers are really being used. The authors propose directions that must be taken in order to facilitate the educational use of home computers or any other promising educational technology. In so doing, they examine such topics as parental leadership, the home-school computer connection, and the role of gender in home computing use.

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JOSEPH B. GIACQUINTA

JO ANNE BAUER

JANE E. LEVIN



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To

Benjamin Giacquinta, Tom Veltre, and Florence and Bernard Levin,
each of whom in his or her own way made the writing
of this book important.

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Preface

Personal computers have become so widespread in the United States that they are now indispensable to our business world, prominent in virtually all educational settings, and present in many millions of homes. If one looks at the current literature written by the proponents of computing, the educational world looks exciting. Computers will act as catalysts, stimulating teachers to rethink the educational process. Computer integration into the curriculum will mean that children will learn *with* computers, as well as *about* them. Moreover, many educators have progressed from considering computer use as a means of helping children acquire basic skills to connecting the use of computers with exciting and invigorating ideas about how people learn and about school reform. The use of computers is also tied in with many current ideas in education – the importance of intrinsic motivation, learning by doing, cooperative learning, apprenticeship, children as designers, and parental involvement.

Just as there has been great promise for computers in school, so has there been for computers at home. Computers at home, advocates maintain, enable parents to help their children to learn in ways that never before were possible. While a great deal of research has gone into what has happened to computers at school, next to nothing has been devoted to computers at home. Our book attempts to contribute to this vital yet unstudied area. It reports the results of an analysis of qualitative information gathered on seventy families during a three-year period from early 1984 through 1986. It deals with

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the problem of getting beyond the promise of a technology to a social reality that satisfies the dream.

As we finish the writing of this book in the early 1990s, new computer-related technologies are being promoted as vital adjuncts to the education of children. We believe that these, too, will be subjected to the principles and forces uncovered in our work. The lessons learned from our study are therefore particularly important if other promising technologies, as well as computers, are to have positive effects on children's learning at home and at school.

This book is intended for a wide range of professionals whose interests and efforts are related in one way or another to the use of computers for education: advocates of educational computing, creators and distributors of educational software and hardware, researchers in educational computing, and scholars of educational and technological change at home and at school. While the book was written specifically for such people, we believe many school administrators, teachers, and parents will also find it valuable. Because we wrote it for such a diverse audience, some rather extensive endnotes and several appendixes are included for readers who may not be familiar with one or another topic or who may want more information. For example, for the technologically minded readers who are unfamiliar with organizational change, we present an extended endnote in Chapter 10 about the fundamental questions posed over the years by researchers in the field of planned change. For those unfamiliar with the current concern over home-school relations, the lengthy endnote in Chapter 11 might be useful. For researchers who may have wanted more specifics about our research procedures as discussed in Chapter 2, we present additional materials in several appendixes. When we thought that ideas were important but would interrupt the flow of the chapter, we put them into endnotes.

It would have been impossible to complete the fieldwork, analysis, and writing of this book had it not been for an enormous number of people. First, we wish to acknowledge our indebtedness to the seventy families – the parents and children

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– who gave so unselfishly of their time and energy so that we might better understand what was happening in homes with computers and why. It should be noted that all of the families and family members named in the book have been given pseudonyms in order to protect their anonymity. We also want to thank the seventy fieldworkers who spent so much time and effort in homes observing families around their computers as well as asking them questions about their activities and feelings. Indeed, the data gathered were so rich that the task of analysis was made truly formidable.

As with any large-scale research, many people other than the researched and the researchers made this project possible. We want to thank Dick Robinson at Scholastic, Inc., whose interest in what was happening in homes with computers led him to give the School of Education at NYU a grant to pursue this question. Had it not been for his generosity and the support of the then dean Dr. Robert Burnham, his assistant Dr. James Finkelstein, and Associate Dean Dr. Gabriel Carras, this project could never have gotten off the ground.

It is also important to thank Professors Margot Ely and Trika Smith-Burke who in the early years along with the senior author were instrumental in getting the project under way. Marsha Lichtman, the project's first graduate assistant, helped structure what at the beginning was often unfocused. During the middle years of the project, Peggy Ann Lane, as an Assistant Research Associate, gave much of herself in running the everyday operations of the project as well as in reading and editing project reports. Her efforts were pivotal in the project's successful completion. In the later years the three authors were joined by Peggy, Mike Caruso, Ellen Katz, and Inez Wolins in formally analyzing the log materials and written materials generated up to that point. We want to express our deep-felt gratitude to them for their outstanding contribution.

We are grateful to the anonymous reviewers for their reading of our book proposal and its first full draft. Their comments strengthened considerably the book's form, logic, and substance. We also thank Barbara Uhl who, as a teacher, gave

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us a very careful reading of our first draft. Her many thoughtful comments encouraged us both intellectually and emotionally.

Finally, we wish to thank Julia Hough, our editor at Cambridge University Press. It was she who saw the value of our work and who gave us the leeway and the time to do the book our way. We will always remember her patience and support.

With regard to authorship, it should be noted that the names of Bauer and Levin are listed alphabetically.

J.B.G.

J.A.B.

J.E.L.