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ABSTRACT

This paper provides generalizations and ideas on what to look for when previewing software products designed for teaching or improving the keyboarding skills of elementary school students, a list of nine products that the MicroSIFT (Microcomputer Software and Information for Teachers) staff recommends for preview, and a table of features comparing the 25 products submitted to MicroSIFT for review. The appendix contains producer contact information and a table of descriptive information for 64 elementary keyboarding products available as of June 1986 that were identified by MicroSIFT staff. Products recommended for preview are listed in alphabetical order: Reyboard Cadet; Reyboard Now!; Rids on Keys; Mastertype; Microtype, the Wonderful World of Paws; Stickybear Typing; Success with Typing; Type to Learn; and Typing Well. (DJR)

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THE Northwest Regional Educational Laboratory

TECHNOLOGY



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A COMPARISON OF KEYBOARDING SOFTWARE FOR THE ELEMENTARY GRADES

A Quarterly Report September 1906

> Kathleen Nelf Dave Weaver

> > "PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY Jerry D. Kirkpatrick

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INTRODUCTION

Elementary teachers looking for keyboarding software have a large selection from which to choose. After searching through software directories, on-line databases, producer catalogs and magazine advertising, the MicroSiFT staff has identified 64 software products for teaching or improving keyboarding skills of elementary school students. Previewing all these products is difficult, if not impossible, so it is easy to understand why teachers may have a hard time selecting the product which best suits their classroom situation and teaching style. This paper gives ideas on what to look for when previewing an elementary keyboarding program, a list of those products which the MicroSiFT staff recommends for preview and a table of features comparing the products submitted to MicroSiFT for review. The Appendix contains producer contact information and a table of descriptive information for all the elementary keyboarding products identified.

In the process of developing this paper, information was collected from product catalogs, published reviews, and our internal evaluation for each product identified. There is simply too much material to include in this brief summary report. A second paper, titled ELEMENTARY REYBOARDING SOFTWARE PRODUCT REPORTS, contains this collection of information and is available from the Document Reproduction Service, Northwest Regional Educational Laboratory, 300 5W 6th Avenue, Portland, OR 97204. It will also be available from ERIC in the first quarter of 1967, and individual software reports will be in the RICE database on BRS, Inc. at about the same time.

GENERALIZATIONS ABOUT KEYBOARDING SOFTWARE

Of the 64 keyboarding programs identified, MicroSIFT was able to obtain 25 from the producers. The quality of programs received was impressive and a teacher could be successful with most of them. After looking at these 25 programs, some generalizations could be made.

- This area of instructional software is fairly well served by products; there is a wide range of products available and covers most hardware currently used in schools.
- A good keyboarding program costs approximately \$50. Packages in which
 keyboarding is just one component are more expensive, costing up to \$180. Teachers
 using computer labs will want to note those producers who offer lab packs (Several
 disks and one manual for a reduced price) or licensing agreements.
- Most keyboarding software has a tutorial/drill/game structure. Software designed for younger students is filled with animation, color and music. Practicing on a keyboard does not excite the typical 10-year-old. It is also hard work. A computer program can motivate students differently than a traditional typing class. For example, drills on the computer are sometimes like the popular arcade games. Many of the programs included some sort of teacher management, an important feature when students are working independently.



- One shortcoming of most programs is that they do not teach correct finger positions; teachers will have to teach this some other way. In some cases, a keyboard with hand positions is shown at the beginning of the program, in other cases using a function key is required. A few packages are more specific, but cumhersome: "Using your left ring finger..." How many young students will return to the keyboard acreen for help when they can manage with hunt and peck? In some cases, the program's documentation points out what the teacher needs to remember; a teacher should teach correct finger positions.
- Pinally, many programs use sound or graphics as feedback for an individual response or at the completion of a drill (words per minute, accuracy rate). Most seem valuable, fairly positive and immediate. In some programs, the sound responses are optional, but some programs may be sound dependent. Some programs use sound as a cue, for example, alerting the student if a letter is typed incorrectly. In previewing programs, teachers should beware of sounds which may interrupt classro. In activities. Teachers should also be sware of how negative feedback is handled. "Wrong, try again," is certainly straightforward, but how effective is it for a young student, virtually learning by trial and error, to see it repeatedly? Also, programs vary in how many times students may respond. Some programs do not allow for the student to continue until the correct key is pressed, others give the student three chances to press the correct key, while still others will accept any key.

We looked for software which was well-structured, yet fun and motivating. Of the 25 software programs reviewed, nine which examplify the criteria described on page 3 were selected. They were chosen based on a combination of internal reviews, and published reviews in periodicals and software guides. These programs combine well-structured drills with an introduction to keyboard fingering, a motivating game format or outstanding immediate feedback. Because specific teaching styles and limited computer access are key factors in a program's success, we also suggest ways to use the software.

OUR PREVIEW RECOMMENDATIONS (in alphabetical order) - See the Appendix for a key to the hardware abbreviations.

- KEYBOARD CADET (Mindscape AP, IB, CO, AM \$39.95): This program is fun. The student, at the helm of a speceship, makes letters explode by typing them before they disappear. This program emphasizes keyboard accuracy and speed. There are 15 lessons in the structured curriculum which move from letter, to word, to sentence, and finally, to paragraph typing. It features correct finger positions always on screen, 3-D spaceship graphics and the option to use the Dvorak keyboard. This package is recommended for either the individual student or class needing a comprehensive tutorial in a game format.
- e REYBOARD NOW! (Daggett Computer Service AP, CO, IB \$75.00): This program has an incredible, comprehensive teaching manual, complete with detailed pre-activities, tips and proposed monologs to use with students. Even a teacher with no keyboarding experience would feel comfortable using this program. The teacher's guide suggests approximately one hour of teacher instruction time, with students drilling at the computer for a total of two to four hours. Pre-activities are a necessity as keyboard fingering is not demonstrated on acrosm. This program may be adapted to any grade level; it is also recommended for the physically disabled. REYBOARD NOW! is ideal for use in a computer lab attuation because it is automatically licensed to the purchasing school building. The student disk may be copied for each class or even for each student for use at home.



- KIDS ON KEYS (Spinnaker RS, AT, CO \$29.00): This program is good for third grade and younger students. There are three keyboard recognition and typing games. Finger positions are not shown on the screen. Letters, numbers, three-and four-letter words are typed as images and characters float by or disappear. It is exciting that young students may choose the level and game they wish to play. One reviewer commented that this program introduces the first principles of word processing (for example, mistakes are OR and easy to correct). Bonus rounds, bright colors and music add to student interest.
- MASTERTYPE (Mindscape AP, MC, IB, AT, CO, AM 849.96): This program will appeal to students who otherwise would not get interested in typing. There are 18 hayboard drills covering letters, symbols and up to nine-letter words disquised in an aroade game. The object is to type shooting letters or words quickly before a Space investon occurs. Students can easily operate this program independently. Highlights of this program include immediate feedback regarding speed and errors, on-acreen explanations, and that the sound may be turned off. The program is not designed to teach fingering positions, although on-acreen keyboards with hands are seen during each drill. R is an exciting game which encourages speed and accuracy. This would be useful for a computer lab or classroom in which students with finger position knowledge work independently at the computer.
- MICROTYPE, THE WONDERFUL WORLD OF PAWS (South-Western Publishing AP, CO, IB, RS \$39.06): Drill can be boring, but not with sound, visual rewards and the delightful cartoon figure, Pews. This is a comprehensive program for younger students. Each of the 18 lessons includes reviewing of previous lessons, working with new lays, building speed and playing a game. Although finger positions are shown at the beginning of each lesson, they are not reinforced throughout the lessons and will need to be monitored by a teacher. Unlike other programs, the student may exit at any time and later return to a specific part of a lesson. Students may print their writing by using the simple print option. MICROTYPE would be appropriate for a computer lab situation where students have teacher supervision or for individual students who know the finger positions and need some review and practice.
- STICKYBEAR TYPING (Weekly Reader Pamily Software AP \$39.95, CO \$29.95): This program makes excellent use of color, animation and sound. Each of three games is divided into 30 different levels, using words, sectances and paragraphs. The program includes two unique flatures: (1) it teaches proper specing between words, sentences and paragraphs; and (2) the susrcises use text from stories, riddles and jokes, and sectous thinking. The program does not monitor student programs, making teacher supervision and monitoring a necessity. Although a keyboard with home row finger positions may be seen by using a function key, finger positioning is addressed only in the first game.
- SUCCESS WITH TYPING (Scholastic AP, IB \$60.95): This program is easily used by the individual student with no keyboarding experience, which makes it ideal for the one-computer classroom. The 18 lessons are each divided into three parts: learning new keys, practice typing and testing for words per minute. Also included are exercises on letter formatting and test exercises for speed and accuracy. Peedback, including words per minute (WPM) and highlighted errors, occurs after each exercise. After learning the new keys, students type from realistic examples of typing activities such as easile business letters, memos and stories. An advice function tells the student if he or she should repeat a leason or go on to the test. There is free typing space which reports the students' words per minute for any text they type into the computer. Teachers may create tests using an authoring component. Strengths of the program include a comprehensive tracher's manual and the teacher's management sheet for recording student progress and individual lesson scores.



- TYPE TO LEARN (Sunburst AP \$69.00): This package is recommended for several reasons. First, the typing drills and games are intended to provide instruction on a variety of language arts skills such as spelling, capitalization, punctuation, abbreviations and many more. The program may be adjusted to either primary faccond grade reading) or advanced (lifth grade reading) language arts skills. Second, it constantly reinforces correct finger positioning. Prior to each enserties, the student is given a quick home row enserties. During the enserties, images of hands which highlight the correct finger to be used for each letter given are shown on the screen. As the enserties progresses, the fingers are only highlighted when the student shows some heatation. Finally, this product has excellent support materials including an optional textbook for \$7.95.
- TYPING WELL (Learning Well AP 849.95): Although this package includes an optional tutorial for home keys, it is recommended for its "game" features. There are six arcade-style drills plus a "No-Frill Drill" which allow the student to practice typing. The vertety of the games which practice speed and accuracy would be well suited as a keyboard "applement. TYPING WELL will be popular with students. The games are exciting enough that students will want to "play" on their free time, or as a reward. For the teacher with one computer in the room this package is an excellent suplement.

COMPARING EXTROARDING PRODUCTS: WHAT TO LOOK FOR — Below is an explanation of the criteria we used in the Table to compare the keyboarding software submitted by the producers.

Keyboarding Instruction

Finger Pecitioning-is there instruction on the proper finger position on the acreen (O) or in the supplementary materials (P)?

Posture-is there instruction on the proper posture on the screen (O) or in the supplementary materials (P)?

Format of Drill

Letter Groups—is there practice in typing individual letters or sets of letters which do not spell words?

Single Words—is there practice in typing words?

Blocks of Text-is there practice in typing sentences or paragraphs?

ndependent Use

Independent Use-Can this package be used independently by a student without teacher intervention or monitoring?



Additional Componenta

Come- to the package a game (1) or does it contain a gerrir component (C)?

Word Processor--is there a word processor or text editor so that students can generate their own text?

Authoring Can teachers create exercises?

User Control

Speed Selection--Can speed be adjusted by the teacher (1) or the student (5)?

Level Selection—is it possible to set the level of the sucretse by the teacher (T) or by the student (S)?

Sound Control .- If sound to used, can it be turned of?

Dverak-is there a Dverak keyboard option?

Record Keeping

Speed--Done the program monitor typing speed and report the results on the screen (O) or onto a disk file for later access (7)?

Accuracy-Does the program monitor typing accuracy and report the results on the acreen (O) or onto a disk file for later access (F)?

Lesson Progress-Doss the progress monitor the student's progress through the lessons and report the results on the screen (O) or onto a disk for later access (F)?

Documentation (In the supplementary printed materials)-

Operating Instructions-Are there program operating instructions?

Lesson Plans-Do they contain sample lesson plans?

Curriculum Outlines-Do they contain curriculum outlines?

Record Sheets-Do they contain reproducible student record sheets?

Typing Exercises-Do they contain reproducible typing exercises and/or worksheets?



COMPARISON OF EXTROARDING SOFTWARE

KORY

Y Yes E Exercise
No C Component
N Not Applicable P Printed Materials
T Teacher O On Screen
Student F File Saved on Disk

		hot.	Dett	Comp	Upor Cont.	-	Dec.
7771-8	PRODUCER	Pager poultaining Parter	Letter Occupa Stagle Words Blocks of Tex	Endependent Use Come Word Precessor Authoring	Speed Selection Lord Selection Second Control Oversit	Spend Leases Progress Accorncy	Control No.
Dungson Doom Typing Ima Typer Rephosed Keyboard Cadet Keyboard Command Keyboard Master Keyboard & Practice Now Keyboarding Master Keyboarding Plus Keyboarding Primer Rich on Keyb Keyboarding Primer Richertype Masterlype MicroType MicroType Stickybear Typing Success With Typing Success With Typing Type To Learn Typing Keyb to Com. Ease Typing Strategy	Gazneo Advanced B5 Software Mindecape Trifitura Power Upi Degett MECC Merit A.V. MECC Spinnaler IC/T Behavioral Prank Harria Palantir Scerborough South-Western Weekly Reader Scholastic Sunburst Gazneo Acedeznic Behavioral		······································	**************************************	. YYYYNNNIY NN . YYYYY . Z	\$6. \$665+60500+.6+ \$605.656++.000500056500 \$605.656+6.00050066500	Y . Y Y Y Y . Y . Y Y Y Y

APPENDIE

ELEMENTARY KEYBOARDING PRODUCTS Available as of June 1986

AT AT Apple Alan B

RS Radio Shack AM CO MC Amija Commodore Mactedosti

TITLE	PRODUCER	BARDWARE	LEVIEL.	COST
Acculouch	Keyboard Prod.	AP IB	5-Cal	6100.00
Alphabetic Keyboarding	Bouch Whatern	AP ID RS	+12	89.50
Dungson Doom Typing Game	Commo	AP CO RE	6-12	39.95
Post Post-unior	Press A Software	AP ID RE	4-Cal	39.95
Priendly Committee	Educ. Activities	AP	MG	98.00
	MERCE	AP COM	P3	49.00
Abadha.	Digital Marketing	A D RS	3-12	20.95
time Typer Justic Typer	Advanced Learning		2-12	69.95
Yest April Date .	Agustus	AP NO.	1-6	48.00
Mar-Words	Right On Programs	AP CO E	5-12	80.00
Beheart	Manantha 26 Sulmar	₩	47	49.00
Reshound Codes	Madage	75	1-6	26.96
Markoard Command	70:00:00	AP AM CO IB	3-12	39.96
Restrand Master	Power Upl	8	312	29 95
Keyboard Now! & Practice Now!	Descrit Co		EST.4-12	49.95
Enhousing.	Bouc Activities	AP COR	1-12	78.00
Keyboarding for information	Control Date		6-12	149.00
Section Master	MECC	Ã	3-14	39,95
Redocating Phys	Morti Audio Visuale	AP IB RS CO	5-9	39.00
Rephasiding Primer	MEXIC VIOLEN	AP III AB CO	+12	49.95
Manager •	Teacher Support	AP AT RS	4-9 X-6	30.00
Rigin to Typing*	Betiertes Included	00	6-Cal	89.95
Robert Trans	Spiration	AP AT CO IB RS	16	39.95
Rader Reviserd *	23900	AP	16	39.00
NOTE:	IC/T	~	1-12	34.96 180.00
Keyboarding/Reading/Spelling	,		1.44	100.00
Letter Man	Debaytomi Eng.	AP IB CO	4-9	34.95
Lettering	Preside infection	APB	2-Oal	25.00
Mactiga	Pelantir Software	MC	312	49.95
Master Type	Mindecene	AP IB AT AM CO MC		48.95
Microbyse Tutor*	J. Weston Walch	AP	512	41.95
MicreType,			— 10	71,50
The Wonderful World of PAWS	South-Westurn	AP CO ES RS	36	30.96
Microlyping *	Shartden College	AP	ecar	100,00
 •		· · -	~ ~~	****

ELEMENTARY EXTROARDING PRODUCTS (Continued)

EXET: AP Apple AM Amign
AT Alari CO Commodore
IB IBM MC Macintosh

TITLS	PRODUCER	BARDWARE	LEVEL	CORT
Personalised Typing	Aquartus People	APRE	+12	837.50
grandle.	McOraw Hill/Orega	AP	5-12	39 96
Stickly District	Weekly Reactor	AP CO		0.95/29.95
Success With Typing	Bichelastic Croker	AP III	6 12	69.95
THE TYPES OF HEW TYPES	Creater	AP CO	312	54.95
Totals Typing	Care View Press	765	5-12	34.95
Touch Typing Made Easy *	Allennor	6	6-Cal	29.95
Dipo Mai	Marron	AFCO ED	412	39.95
Die Mile.	E.David & Assoc.	76	412	39.95
Type To Lease	Sumburst	AP	2-Adult	69.00
Type Tuter 64 *	American Per.	∞	412	19.95
300	Brederbund	APB CO	EST 4-12	44.95
Deeg.	Divebtrde	748	5-Cal	30.00
Type Red	Orelier	AP ID	1-12	39.95
Demine.	M.D. Pullmer	AP	412	30.00
The part of the pa	Como	AP COPE	EST 4-12	39 95
Typing instructor*	Individual		3-Cal	49.95
Typing is a Ball, Chartie Brown	Pandom House	AP	#-3	39.95
Typing Rays to Computer Base	Academic Ther.	AP	312	35.00
Typing Prohesor	Commodore	∞	412	19.95
Think and greek .	Dob Daher	76	412	19.65
The ball the	Dehavioral Eng.	AP CO EB	2-9	: 4.95
Typing Plancher	Instant Software	75	EST.4-12	17.95
Typing Tracher II	Compu-Tations	AP AS	3-12	14.95
Typing Tutor & Word invaders	Acedemy	75	3-12	19.96
Typing Dater*	Bastos & Beyond	76	5-12	29.95
Typing Tuler	EDM "	8	4-Oal	25.00
Typing Tutor III	Stmon and Schuster	AP COM	+12	49.95
Typic Well	Learning Well	AP	3-12	49.95
Waster Words	Micrograma	Č	3-12	16.95
W(Z)pe	Sterre On-Line	AP AT CO ID RIS	3-12	34.95

 See The Educational Software Selector (TESS) from EME institute And Tuechers College, P.O. Box 639, Water Mill, NY 11:376 (849.95) for the descriptions of these packages.

PRODUCER CONTACT INFORMATION

Academic Therapy Publications 30 Committed Blvd. Noveto, California 94947

Academy Software PO Box 6403 San Rafael, California 34912

Advanced Learning Systems 2146 Lincoln, PO Sax 5127 Bagons, Oragon 97405

Alleger Associates 2638 South Lynn Street Arlegion, Virginia 22202

American Pertpherale 141 Certland Street Lindonhurst, New York: 11757

Aquartus People Matertals PO Box 138 Indian Rock Beach, Florida 33535

85 Sedmere 1084 Betchridge Place Cohembus, Ohio 43228

Barron Enterprises 714 Willow Clan Road Santa Barbara, California 93105

Basto & Bayond Panesbridge Reed, Bax 10 Amswells, New York 10801

Batteries included 17875 Shy Park North, Suite P Sving, California 92714

Behavioral Engineering 230 Mt. Hermen Road, Suite 207 Scotts Valley, California 95066

Bhiebird's Computer Software PO Bax 330 Wyandotte, Michigan 48192

Bob Baker Software 3060 Halter Court Sacramento, California 95021 Drederbund Seltware, Inc. 17 Paul Drive San Rafael, Calderna 84803

Currenndore Bustness Machines, Inc 1200 Wilson Drive West Chester, Pensuphrante 19580

Compu: Tottone PO Bax 808 Tray, Michigan 48099

Central Deta Academic Siducetion HQSO2G PO Box O Minnespolts, Minnesota 55440

Cove Varu Prene PO Bus 810 Arceta, California 95521

Degett Computer Services PO Box 11394 Majone, Oragon 97440

E. David and Associates 22 Parenti Lane Storra, Connecticut 06368

Digital Marketing Corp. 2363 Boulevard Circle Walnut Creek, California 94895

EBSCO Curriculum Materials Bez 486 Breningham, Alabama 35202

Educational Activities, inc. PO Box 392 Presport, New York 11530

Presik Herrie PO Box 69487, Station K Vancouver, British Columbia VSK 4W6

M. D. Pullmer Associates 1132 Via Jose San Jose, California 95120

Cames Industries, Inc. Box 1911 But Springs, Texas 97920



PRODUCER CONTACT INFORMATION (Cont.)

Orober Electronic Publishing Sherman Turophic Danbury, Connecticus 05816

Humanities Saftware 19723 South Ratherine Court Cerritos, California 90701

23M PO Des 1329 Dece Rates, Florida 33432

Individual Software, Inc. 11631 Chess Drive Poster City, California 94404

Instant Software Route 202 North Peterborough, New Hampshure 03458

instructional/Communications Tech. 10 Stepar Place Huntingson Station, New York 11746

Reyboard Productivity, Inc. Parts Place 6005 Brestol Parleway Cubrer City, California 60836

Learning Well 200 South Service Road Roalyn Heighta, New York 11577

McGraw-Hill Book Company/ Orage Dortston 1221 Avenue of the American New York, New York 10020

MBCC 3480 Lorington Avenue North Laudordale, Minnesota 95112

Mode Matertals Inc. 2006 Remington Avenue Baltimore, Maryland 21211

Mortt Andto Visual PO Ber 368 New York, New York 10024

Microgramo PO Bas 2146 Loves Park, Winess 61230 Mindanape, tre: 3444 Dunder Food Morthbrook, Mineto 60062

Palantir Seftware 12777 James Read, Suite 100 Hauster, Tenna 77070

Power Upl 2020 Compus Drive San Mates, California 94403

Press A Baltimere PO Bas 364 Jerusse, Artenne 88331

Random House School Division 201 East SQLb Street New York, New York, 10022

Right On Programs 27 Bordon Road Orestawn, New York 11740

Scholastic Inc. 720 Breadway New York, New York 10003

Shertdan College 1400 Truckigar Read Colordie, Outarto LOH 2L1

Storm On-Line Storm On-Line Sudding Coarnegold, California \$3614

Stmon & Schwater Computer Software Division 1230 Avenue of the American New York, New York 10020

South-Western Publishing Co. 5101 Madison Read Cincinnati. Ohio 48227

Spinnaher Seltmare 215 Pirot Street Cambridge, Massachusetta (2142

Sunburst Communications 30 Washington Avenue, Room EA Pleasantville, New York 10870



PRODUCER CONTACT INFORMATION (Cont.)

Teacher Support Software 502 NW 75th Street, Suite 380 Gainesville, Florida 32601

Trillium Software
Box 921, Madison Square Station
New York, New York 10159

Weekly Reader Family Software (Xerox) 245 Long Hill Road Middleton, Connecticut 06457

J. Weston Walch 321 Valley Street, PO Box 658 Portland, Maine 04104

