Who Should Teach Keyboarding and When Should It Be Taught?

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Typewriting, once the domain of business education teachers, was taught in high school. The vocational business curriculum dictated a year of Typewriting I at the freshmen level, a year of Typewriting II at the sophomore level, a year of Office Practice and Shorthand I at the junior level and a year of Secretarial Practice and Shorthand II at the senior level.

This curriculum was adhered to by the majority of schools as the objective of business education was vocational in nature. The introduction of the personal computer changed the business education curriculum and the method in which typewriting instruction was delivered.

Computers allowed students to become more efficient as they keyed letters, memos, reports, and tables within the business education classroom. Soon, other disciplines began to take advantage of the efficiency and effectiveness of computers.

English teachers required typed papers in English composition class, and mathematics teachers used BASIC programming to expand on paper and pencil problems. A new class, Computer Literary, appeared in school curricula and eventually achieved the status of being a "required" course. Business teachers believed they possessed the knowledge and expertise to teach Computer Literacy, but were soon faced with science and math teachers who also felt they possessed the knowledge and expertise to teach this course.

During the 1980s, personal computers began to appear at the elementary level. Young students used computers for drill and practice and the popular software program LOGO (Harvey, 1985). As elementary students reached high school, business teachers began facing two challenges: sections of keyboarding classes were declining, and keyboarding students had developed the unfortunate habit if keying with the "hunt and peck" method.

Today, educators at all levels are challenged to integrate the capabilities of the Internet into the learning environment. In fact, President Clinton foresees a computer in every classroom connected to the Internet and the computer literacy of all students.

If all students are to be computer literate, educators must address the following dilemma. Should students possess keying skills? If so, when should these skills be taught, and what part do keyboarding software packages play?

Keyboarding Skills

Keyboarding is the manipulation of the computer keyboard by touch. Performance expectations described in the *National Standards for Business Education* include students' ability to:

- Develop touch keyboarding techniques
- Enter and manipulate numeric data using the touch method on a 10-key keypad; and
- Develop touch keyboarding skills at acceptable speed and accuracy levels

Keyboarding is a psychomotor skill and resembles playing a musical instrument such as the piano; the fine motor muscles must respond to the brain's instructions. Eye-hand coordination is necessary for the fine motor muscles to locate and strike a key or ivory.

Sound pedagogical procedures are inherent in learning and becoming proficient at touch keyboarding (Erthal, 1996). Various groups have suggested that keyboarding learning should be taught prior to using a computer, especially since students need for-mal instruction to acquire keyboarding skills using the touch system (Prigge and Braathen, 1993; Nieman, 1996).

Benefits of acquiring keyboarding skills include the enhanced use of time and effective use of computers (*Elementary /Middle School Keyboarding Strategies Guide, 1992*). Everyone who will use computers needs to develop "touch" keyboarding skills. This emphasis is on the skill of entering alphanumeric data for the primary purposes of obtaining, processing, or communicating information (Schmidt, 1985).

Research shows that children with keying skills are able to compose faster, are prouder of their work, produce documents with a neater appearance, have better motivation, and demonstrate improved language arts skills (Nieman, 1996).

When to Teach Keyboarding

Students below the third grade, typically, do not possess the dexterity and hand size to manipulate the keys effectively. The suggested age for effective keyboard instruction is 10 to 12 years of age (*Elementary/Middle School Keyboarding Strategies Guide, 1992)*.

Children in grades four to six gradually exhibit greater smoothness and command of small-muscle expression, which is reflected in better coordination in activities (Prigge and Braathen 1993).

Correct keying should be used and reinforced from the beginning. Students should use the right index finger to key "Y" for yes and "N" for no; the right little finger to enter; the right thumb for the spacebar; and the mouse to point and click.

Students need formal instruction to acquire keyboarding skills using the touch system before they use the computer for more than simple, single-key responses. Once students complete the initial keyboarding instruction, reinforcement activities are necessary. Keyboarding skills improve little or abate without consistent reinforcement (*Elementary/Middle School Keyboarding Strategies Guide, 1992*).

If correct techniques are taught with initial computer use and progressively added each year, the level of keyboarding ability is continually strengthened (Davidson and Kochmann, 1996).

A plan needs to be in place to assure the continuous development of keyboarding skills after the initial keyboarding instruction (Sormunen, 1991). Texas, Minnesota, New York, and Virginia have mandated keyboarding classes along with instruction time, speed, and accuracy standards. Keyboarding instruction begins from grade five and continues on to later grades. The goal is to prepare students for information retrieval and word processing (Nieman, 1996).

Who Should Teach Keyboarding?

A knowledgeable teacher is needed to help students develop appropriate techniques, as well as provide motivation and reinforcement (Nieman, 1996). However, business teachers must understand the methodology of teaching elementary students, and elementary teachers must understand psychomotor skill development (Prigge and Braathen, 1993; Davidson and Kochmann, 1996). When first learning to touch type, students need about 30 hours of keyboarding instruction to acquire the ability to use the correct fingers (McLean, 1994).

Oftentimes, elementary keyboarding instruction is limited to 10 or fewer hours and the result if poor or no keying skills (Sormunen, 1991). Instruction can be supplied by elementary teachers who have taken a keyboarding methods class, a business education teacher with elementary learning methods, or a combination of business education and elementary education teachers (McLean, 1994).

Keyboarding Software

The role that software plays can enhance keyboarding skills. However, software cannot take the place of a qualified teacher (McLean, 1994). Many popular keyboarding software packages violate psychomotor skill development (Davidson and Kochmann, 1996).

The complexity of teaching keyboarding requires an extensive and extremely well-written software program. No software program has been shown to be superior to capable, live keyboarding instruction.

Software programs serve well for drill, remediation, enrichment practice, as well as adding variety to keyboarding instruction. Software cannot be programmed to see, to hear, or to feel the keyboarding instructional needs of the student (Schmidt, 1985).

On the horizon is speaker and dictation software. While this software has been technologically feasible for some time, the cost is prohibitive and the accuracy is questionable.

Conclusion

Keyboarding skills are no longer vocational in nature, but necessary to communicate, extract, and disseminate information. Poor or no keyboarding skills will severely hamper people in their quest for knowledge.

Keyboarding should be taught at about the fifth grade, and instruction should be a partnership of the elementary education and business education teachers. Sufficient time should be devoted to initial keyboarding instruction (about 30 hours minimum), and the new skill should be reinforced throughout the school years.

Keyboarding software packages should be carefully scrutinized to ascertain if they follow sound pedagogical, psychomotor principles. You would not sit a child down at a piano and use a software package to teach piano playing. Similarly, children are taught to play sports with a coach and much guided practice. The coach provides motivation, reinforcement, and corrective action. Students and parents should expect no less from keyboarding instruction.

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