The Importance of Touch-Typing.

'Touch-typing (blind with ten fingers) comes in handy for texting nowadays.' A research conducted by the Radboud University in Nijmegen (the Netherlands) showed that children who learn to touch-type at an early age, adapt easier to high school. It makes writing papers, summaries and reports a lot easier.'

This quote was found in the Dutch weekly magazine Margriet in January 2006. The PhD research by Henny van der Meijden is cited. In that study, she determines that primary school children who type blind with ten fingers, explain more to each other and obtain better results than children who are not able to type with ten fingers. This shows the need for more attention to touch-typing in primary school. Astrid Scholten and Ben Hamerling of the Scripture Development Foundation also believe that touch- typing should be a basic skill in primary education. They conducted research on the instruction method for touch typing in primary schools.

Using Ten Fingers

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This article raised the question of the importance of being able to touch-type blind with ten fingers. That question will be examined from different perspectives, from efficiency to ergonomics. Attention will also be paid to the importance of touch-typing for personal development in the educational learning process, not only for the pupil but also for the teacher. Through this article we hope to give an impetus to a discussion on the introduction of keyboard skills in the curriculum of primary schools.

The Relevance of Learning to Touch-Type at School
The amount of typing tasks increase, in primary school, college, and in fact, in society as a whole. For that reason alone, children are better prepared for the immediate future when they follow typing classes.

EFFICIENCY AND ERGONOMICS OF KEYBOARD SKILLS

If you look around in primary school at children typing, you will notice that most children are handling the keyboard the wrong way. This occurs in two areas: the efficiency (speed) and ergonomics (posture and fingering). It is clear that anyone who learns blind typing, is better in

both areas. Touch-typing is much faster. Moreover, touch-typing prevents the child from having to search for the correct key while leaning over the keyboard. A blind typist does not need hand-eye coordination, like someone who writes, and can stay focused on one point, either the screen or the text. Another important point is that a child who cannot touch-type, must divide his or her attention between several things. Van der Meijden (2005) explained in her study that the improved results of the children who can type blind by using the Cognitive Load Theory. Children that can find the keys automatically, do not have to pay attention to typing. They do this automatically and can focus all their attention on the content of the assignment. Children who have to find the letters on the keyboard one by one are mainly focusing on that and less on the content. The load on the working memory is much bigger because they have to be concerned with two issues: the search for letters and thoughts about the assignment.

EXPERIENCE

If you ask children and students their opinion on the need for touch-typing, the responses differ. These depend on whether or not the person has the skill. People who can touch-type are generally very satisfied and don't know it any other way. Those who cannot, often consider themselves as 'fast' without having any idea of the average number of strokes per minute. Usually their own conception of 'fast' is used as an excuse not to learn touch-typing.

NOW WHAT IS FAST?

An average user of the keyboard not typing too often, can get 100 to 200 strokes per minute during a short time. However, the number of strokes per minute alone does not determine the speed. It is also important that this typing can be maintained for a longer period of time. This is where touch-typing appears remarkably more beneficiary. In fact, for someone who touch-types it doesn't matter how much time typing takes. Typing has become a kind of "talking with your fingers." As you are no longer aware of all the mouth muscles that are involved in the articulation when speaking, the person touch-typing really does not know which keys (s)he touches while making words. According to van Leyden (1993), that makes the big difference between people who touch-type and those who don't: the experienced touch-typist normally types entire words. The word is transferred via a buffer memory, as much as possible as a whole, to the fingers (Leyden, 1993). The touch-typist only types letter by letter for difficult words.

BARRIERS FROM THE SCHOOL

There are very few schools that have added touch-typing to their curriculum. First, it appears that the regularity and discipline to practice fifteen minutes daily in school creates a barrier. There is still the lack of hardware for sufficient instruction and practice opportunities. Many children need a lot of time to type a simple piece of text. That time is often lacking because the time a child can spend behind the computer is limited.

It is also important that the teacher him/herself knows how to touch-type. Scholten and Hamerling determined at a number of primary schools that it is almost impossible to teach and maintain the skill of touch-typing to children, if the teacher him/herself cannot touch-type. Again, as with teaching good handwriting, the teacher should be able to be a

good example and give support. A child that is working hunched over should be corrected, as well as incorrect fingering and hand movements. When a child can touch type, leaning over to looking at the keyboard is in the past. They can sit straight up.

Touch-typing skills, in particular speed and accuracy, could only survive and further develop if enough applications were available. Without these applications the use of the achieved skill was reduced and was replaced by the old method of typing. The typing skill only remains at a good standard when practised. For a good balance between the rate at which children type and their accuracy, it is important that both skills are constantly practiced. Only then one can speak of 'effective typing.' Accuracy hinders the speed and in reverse, the speed can stand in the way of the accuracy. For everyone, this balance is different. Gradually both accuracy and speed will increase. In order to be able to maintain the skill, it is important that there are always useful applications. They should also learn to 'dare to try'. Some children are seriously hindered by their own idea of not being allowed to make a mistake.

APPLICATIONS AT SCHOOL

At school, typing is needed when writing papers: a good opportunity to maintain both accuracy and speed. An application which affects the speed in a positive way is chatting. The instant response that is asked for, automatically calls for a higher speed of typing. The chatters don't blame each other for the mistakes made while chatting, and therefore speed will improve. The child thus learns to 'dare to try'.

Furthermore e-mailing and participating in a forum are good interactive applications. Thus the typing experience is encouraged and maintained. If touch-typing is of such importance, why is so little done about developing typing skills at primary school? It seems that many schools do not consider typing skills as part of the curriculum of the primary school, but as a responsibility of parents or guardians. The systematic learning of typing skills is therefore, in most cases, left to the 'market'.

Of course, it is beneficial if a school wants to play a role in teaching touch-typing in upper primary school, but we actually plead the case for the inclusion of these skills in the curriculum. Its importance is usually seen when the teachers already have the skill, while both pupil and teacher could greatly benefit: the pupil throughout his/her school career and later life; the teacher in carrying out his/her activities in lesson preparation and management tasks. It is only logical that both aspects of typing, efficiency and ergonomics, are considered while teaching.

RECOMMENDATIONS

The sooner the entire staff is able to touch-type, the more likely the children are to learn it too. Increasing advantages can be achieved since the number of tasks, for which the teacher needs to use the computer, increases at primary school. Furthermore, keyboard skill lowers the threshold for making your own (adaptive) teaching resources, a need that teachers often have. Given the importance of typing skills for the school career of children, it would be recommended from an educational perspective to include this subject in the objectives for primary education. Also the Pabo, (Dutch Academy for teachers of Primary Education) will need to train their students accordingly.

CALL FOR RESEARCH

Unfortunately, there is hardly any research about the effects of touch-typing. It should focus on teaching results and time investment of children who touch-type in the educational process. The control group should consist of children who don't touch-type. Research on language quality differences between groups of pupils and / or students with and without automated keyboard skill (with and without limited motor skills and background noise) is recommended. Dr. Henny van der Meijden is an educational expert at the Radboud University Nijmegen and conducted research on Computer Supported Collaborative Learning. Astrid Scholten and Ben Hamerling work for the Scripture Development Foundation and conducted research at several primary schools. Ben Hamerling teaches manuscript keyboard skill education at the Hogeschool Marnix Academy in Utrecht.

For children, acquiring the skill of touch-typing means an increase in self-confidence. After a while they experience that it becomes automatic: "Teacher, my fingers moved by themselves!"

The teacher blindly types a questionnaire during a TV class that is then handed out to the pupils immediately after watching the TV programme.

LITERATURE - Leyden, J. van (1993); Experimental Psychology; Bohn Stafleu Van Loghum. - Van der Meijden, H. (2005) Knowledge construction through Computer Supported Collaborative Learning. Student elaborations in synchronous, asynchronous, and three-dimensional learning environments.
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