That's why hand-writing still matters!

On our site we feature an article called Hand-writing must stay! In this article we present several reasons why we should keep on teaching handwriting. Next to that we added an extensive list for further reading.

Cause:
Due to the advancement of technology:
1. there's less focus on the education of handwriting
2. it is questioned if it is still necessary to educate handwriting
3. so called Steve Jobs-schools are announced
4. children who have problems with mastering handwriting are often steered towards using the computer.
5. the reason why we should learn how to write by hand is often lost due to unprofessional communication or the lack of information.

Explanation:
We welcome the use of technology when it's used, primarily, to improve and to support the personal and cognitive development of a child.

In the following topics we will expand on:
1. The mechanical aspect of handwriting
2. The neurological aspects
3. The improvement of spatial orientation
4. The psychological arguments
5. The impact on social interaction
6. Practical arguments
7. Esthetics
8. Historical arguments
9. Therapeutic arguments
10. The supportive role when learning how to read

In the appendix of this article you will find an extensive list of sources and scientific studies. The numbers between the brackets in that list refer to the topic number. The topics are more often related than separated topics that's why you will find overlap between them.

The mechanical aspect of handwriting
Handwriting is one of the most difficult abilities we teach to our children. It requires to a good coordination of your body. A precise coordination between eyes, brains and all your muscles from the neck to the fingers. A hand alone consists of 29 joints and 35 muscles; a fine piece of mechanics! This complex action depends on a lot of practice. The development of fine motor skills takes years. While writing your whole body is involved in the process. Handwriting positively affects the development of fine and gross motor skills.
The Neurological aspects
While writing several areas of the brain are connected: through contact with , the direction of and the pressure of the pen messages are sent to the brain. The repeating process of handwriting integrates motoric connections in the brain. The cooperation of the left and right part of the brain is stimulated and maintained by among other things offering paper-based bimanual exercises. Brain Development, -activity and function are improved. Think of spatial visualization ability and the ability of visual discrimination. Also higher cognitive levels (thinking, language, memory) can be activated by the effects of the process of learning to write by hand. “When a pupil is able to learn handwriting quickly and automatically, he or she is able to write down his or her thoughts before they are faded away. The maximum capacity of the brain is used in a proper and better way for creating sentences and ideas. If you have to reflect on how you're writing, cognitive sources are left unused”. Handwriting helps memorizing the forms of letters. The visual identification of graphical shapes is supported by the writing movement.

The improvement of spatial orientation
By learning how to write a pupil also learns how to arrange the available space in a proper way. He/she learns to estimate distances and spacing of letters, words and lines. Learning to write by hand supports the concept of direction : up, down, to the right, to the left, higher, lower, etc.. Understanding the difference between a long letter (k, j) and a short letter (a, n) is also learnt.

The psychological arguments
He or she who writes develops discipline is intrinsically. He/she learns that if you want to achieve anything you will have to work for it. Concentration is improved and along with it thinking and the level of intelligence. It brings order, peace and space in the minds of ‘overactive’ children. Being able to write stimulates self-confidence. Handwriting is a physical activity and therefore more in connection with our feelings. Being in motion yourself connects you with your emotions much faster than words.

The impact on social interaction
Writing is and always has been a means of communication. Messages can be transferred without the messenger being present. The push for being able to communicate with symbols was the first step towards the development of handwriting. Being able to communicate by letter makes it more easy to function in society. We learn to how to take into account other people. Is he or she able to read my writings? How do I present myself? A handwritten letter shows interest in the receiver. Proper handwriting education stimulates the upbringing of children to engaged citizens. “A lot of people will alienate themselves from the handwriting culture due to the extensive use of moving and/or animated media. Particularly due to this form of illiteracy they will find themselves at the dark side of our knowledge based society... Children will be considered a failure or handicapped when they're not able to write by hand.”
Not so long ago the social identity of the writer was defined by his handwriting and not the content of the text.

**Practical arguments**
Handwriting make mankind independent of electricity. Our autonomy is kept safe and we don't become a slave of technology. Handwriting is a practical basic skill, which serves every other skill in a supportive role. Good handwriting education improves school grades in a considerable way. 
Quickly writing down an address, a short note to be put in someones mailbox, compiling a shopping list, writing a short note: being able to write quickly and readable is very convenient at these moments. Properly developed fine motor skills lead to the right handling of different kinds of tools. Think of a dentist or a surgeon. 
The invention of the automobile didn't keep us from walking. A pen is more affordable than an iPad.

**Esthetics**
From scribble to calligraphy 
The refinement of control of the fine motor skills gives the opportunity to creative outbursts of culture. Writing by hand makes thoughts concrete and it can add beauty to it. The power of shaping thing in an artistic way is only seen in humans. A polished handwriting is a sight for sore eyes and creating a beautiful line brings much satisfaction. 
Like Ballet is an esthetic way of dancing, is calligraphy an esthetic way of writing. Not so long ago, every form of handwriting was considered as the esthetic embodiment of the collective nature of the social, occupational or gender group using it exclusively.

**Historical arguments**
Throughout human history mankind left markings behind, created tracks, put up warning signs and has drawn holy symbols. This development of writing we also see in children growing up: it draws tracks in the sand with sticks, leaves marks where it has been, creates tablets of clay and spontaneously all sorts of forms arise with all sorts of materials. If we do not teach the children handwriting we would deny them the last step in fine motor skills, brain and personal development.

**Therapeutic arguments**
Handwriting has it’s own unique motion. Emotions influence our way of moving. Graphologists en handwriting educators are able to perceive blockades in the stream of movements by observing handwriting. 
With handwriting movement therapy a.o. personal rhythm is recovered and self consciousness regained. In children’s handwriting problems can be noticed before children get stuck. Even together with and after a psychological examination the handwriting therapist can add a valuable contribution. 
Manual labor proves to be good for a human. It can activate the reward center in the brain.

**The supportive role when learning to read**
Writing by hand benefits learning to read because shapes of letter are recognized much earlier compared to when you type a letter on a keyboard. The motor memory supports the visual memory.

Statements in summary
One who does not learn how to write by hand will not evolve in an optimal way
One who does not learn how to write fails at many discipline
Due to lacking knowledge of teachers the education of handwriting starts too soon leading to cramps and deformation.
By writing by hand man learns how to use the available space and material efficiently.
If we denied children the education of handwriting, we would deny them the opportunity of writing ambition and performing at a higher level of thinking: this all what makes us human!
Handwriting is important for physical and mental health
The evolution of technology (e.g. a laptop) can be highly beneficial for children with learning and/or motor skill disabilities, but technology should never be or can be the substitute for the movement of writing.
A person skilled in handwriting has more possibilities to get a job and is way cheaper for society when it comes to welfare payments and medical costs.

We as humans are able to control our own motor skills and technique. We must have them both at our disposal independently!

Translated by Annelies Hulzinga

**Literature/research**
- Met ‘bundel’ wordt bedoeld een deel uit de serie: “Over kinderhandschrift, schrijfopvoeding en schrijfonderwijs gesproken” van D. Schermer.
- De cijfers tussen haakjes corresponderen met de nummering van bovenstaande aspecten / argumenten.

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