



Schreibmotorik  
INSTITUT

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**Interview with Dr. Christian Marquardt**

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## “Understanding how writing works”

**How do children preferably learn how to write with their hand? This question is a key issue for the recently founded Schreibmotorik Institut in Heroldsberg. Dr. Christian Marquardt is one of the scientific advisory committees of the institution. He has been researching for more than 25 years on this topic. His realisation: We could do a lot better.**



*Motor skill researcher Dr. Christian Marquardt,  
Photo: Schreibmotorik Institut*

What is good handwriting?

**Marquardt:** You have to distinguish between the result – what is written on the paper – and the motor skill actions which are necessary for that. The curricula for primary

schools define a fluent and very legible handwriting as the goal of writing lessons at primary schools. If every pupil reached this point, we wouldn't have a problem.

But many don't reach it ...

**Marquardt:**

At school, everybody says there are problems with writing and have been for a long time. Teachers lament that children don't have the motor skills and that there's a lack of attention for this matter. Parents are helpless and pupils are frustrated. All too frequently the result is a handwriting which is hardly legible, contains many errors and on top of that hurts if one writes for a longer period.

What can we do to prevent this? By introducing an easier lettering like the Grundschulverband (German Association of Primary Schools) demands for example?

**Marquardt:** We have been holding the discussion on the best script for decades now. Sütterlin script was replaced by the "Lateinische Ausgangsschrift - Latin standard lettering" and this one in turn by "Vereinfachte Ausgangsschrift - simplified basic lettering". In the East German federal states additionally there is "Schulaustrgangsschrift - basic lettering at schools". Now there is a new discussion on the so called literary archetype. But reforms haven't solved problems. Why do we only talk about the script and never about writing? Or asked differently: Do we generally understand how writing works?

To better understand writing itself you have conducted a long-term study in a primary school.

**Marquardt:** Over four years we have been continually studying the children's script and its development in a primary school. Again and again we have measured it with a special tool, a graphic tablet which records the writing movements, to understand its systematics. The point of origin was that grown ups don't write at all like they have learned it at school as kids. The script of adults looks completely different; it is individualized, optimized. Children at school don't learn how to write. They learn a basic construct which shows how script could look like. They still have to develop their own script. And that takes a long time. A tedious path.

On which many kids become lost.

**Marquardt:** Right, because there is only one premise at school: The neater a child draws the letters in its first school years, the better it will write later on. But that is wrong. There is hardly any transfer from slow drawing to fast writing. Toddlers who learn how to walk also don't start with perfect steps in slow motion. In fact they give it a try, start to walk and do fall from time to time. In no time, they know how it works. Brain research has also proven that trial is necessary for motor learning. A neat script should be the result and not the beginning while learning how to write. Therefore, it is plainly necessary to practice graphomotor skills more and not only the exact written form.

How is this to work practically?

**Marquardt:** A first-former who should write an "O" needs one to two seconds for it. But an "O" is nothing more than a circle and a first-former could write it a lot quicker if we gave him the freedom to approach this form in his own way. Without these strict precepts and with more support of motor skills, children can develop a good handwriting easier and better. We conducted pilot studies, where children should practice writing strategies and didn't have to pay attention to exactly copy forms. Instead of copying the letter "H" for example, they should think of something like a ladder while writing. Within a short time, those children have increased their writing speed clearly and have made great progress.

**Info:** The Schreibmotorik Institut was founded last year to reduce deficits in handwriting and learning to write, with scientific research. The institute is supported by the writing instrument manufacturer STABILO, but it operates independently and charitably.

For many years, Dr. Christian Marquardt has been researching the basic motor skills of writing. He did his doctorate at the Faculty for Medical Psychology at LMU Munich, focussing on kinematic movement analysis. He has been a member of the clinical neuropsychology development team at Munich-Bogenhausen hospital since 1990.

Together with his team, Dr Marquardt has developed a computer program that analyses motor skills when writing (WritingCoach).

Marquardt conducted a pilot project at primary schools in Vienna together with the Pädagogische Hochschule Vienna. The participating teachers integrated motor skill exercises into their writing classes at least once a week. Compared with the control classes, children demonstrated quicker and more flowing writing skills and exercised less pressure when writing.

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