FREE YOUR CHILD'S SPIRIT AND INTELLECT!

DYSLEXIA

PROVE TEACHERS AND EXPERTS WRONG!

JOSEPH KENNEDY

Dyslexia: Prove teachers and experts WRONG!

by

Joseph Kennedy

Free your child's spirit and Intellect. Dramatically improve reading and spelling through systematic imprinting and automatic letter selection. Over 50 years of successful Implementation.

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Chapter 2. A single brain region and a heap of letters

The true cause of dyslexia - and the only effective solution

"I simply don't believe it! The average mark of our pupils in unpractised dictation is somewhere between 4.5 and 5! Look, here it is in black and white, I've evaluated the marks for this school year." I pushed the documents into the middle of the table.

Four of us were sitting together in the *Kennedy Tutorial School* in Tuttlingen, Southern Germany, evaluating the children's progress in German. It was a frosty November morning in 1991. My three colleagues, Sabine Maler, Anita Pankler and Thomas Detmold, leaned over to examine my written assessment. Trouble appeared to be brewing in the room, and the meeting was nowhere near over.

Frau Maler leaned back slowly and stared at the edge of the table. "I've worked for thirty-five years in primary schools but I've never seen anything like this!" With pursed lips, she looked at me with an expression of anticipation. "What now?"

Before I could answer, Herr Detmold interrupted with dismay. "I know with absolute certainty that Dennis Scherer got a 1 two weeks ago in his last German test! And now he has a 5! Something has to be wrong here! "

Frau Maler looked at him in surprise. "A 1.0! What kind of test was it?"

"A difficult grammar test, the class average was 3.4. Dennis was the best."

Frau Maler shoved the papers forcefully across the table where they landed directly under the critical gaze of Herr Detmold. "And why has he a straight 5 in dictation? After all, we've practised so much with him. It just doesn't add up!"

She sighed and drew a deep breath. "You're right, Herr Detmold," she said quietly. "From time to time, the children's performance can really astonish you, but the very next day you think they're worse than first-year pupils. The devil only knows what's going on here."

Herr Detmold did not reply, but studied the documents with a serious expression. At this moment, Frau Pankler, an experienced and caring German teacher originally from the former GDR, interjected.

"We can practise with the children as much as we want, but they're spelling simply refuses to improve!" Frustrated, she laid her notepad on the table.

Herr Detmold looked up from the documents, shaking his head. "I'm afraid you're right. If I understand this column correctly, Dennis has actually deteriorated in dictation from a 4 to 5. He's making an average of eight spelling mistakes more today than a year ago!"

Frau Pankler glanced over her shoulder at him. "You've read it correctly – unfortunately! To be honest, this is exactly what I've been worrying about." She then turned to me, speaking her mind freely.

"You know, Mr Kennedy, the children are still gripped with fear when it comes to class tests. I don't mean nervous jitters. I'm talking about existential fear. They feel as if they're running the gauntlet when it comes to dictation, time and time again."

"Yes, it's absolutely awful," interrupted Frau Maler. "Some of them wake up during the night before unpractised dictation and can't get back to sleep. I know that Julia Vogler has even begun to sleepwalk."

Herr Detmold nodded in agreement. "Recently, Frau Braun told me that Anton had to vomit again right after breakfast before the last dictation. To be honest, it's not the first time I've heard this."

"I'm continually telling the children that they've nothing to be afraid of," added Frau Maler. "But it doesn't really help. Tina Riess' mother doesn't know what she should do, because her little girl keeps saying she doesn't want to go on living."

However, Herr Detmold, a valiant soul, refused to throw in the towel yet. "Maybe we should send the children to a psychologist." The atmosphere was deteriorating even further and, apart from growing frustration, the discussion was leading nowhere.

"Okay people," I interrupted. "Time out! I'd like to adjourn our meeting, as we're not making any further progress. To sum up: We realised a year ago that practising dictation and spelling with our pupils in groups of five was not achieving the desired results. Therefore, we formed smaller groups with a maximum of three pupils who then came to German tuition twice a week for 90 minutes. Most importantly, we endeavoured to improve our didactic, methodical approach. Well, the results could be better. I'm just as disappointed as you!"

I nodded to my colleagues. "Thank you very much for your commitment and dedication, but we've covered enough ground for today, and we could all more than do with a break. Let's wrap it up for now."

Method Spaghetti

As my three colleagues slowly left the room, I began to ponder. Where do we go from here? What should we do now? For the first time in my career as an educationalist, I was completely at a loss.

The numerous scholastic measures we had implemented in the past year to improve the pupils' results in German began to flash before my eyes as if in a film. We had come to notice that the children who came to us for extra tuition in German simply seemed to forget how a word should be written and read correctly. Put another way, the information was failing to make the transition from the short-term to long-term memory. We therefore examined the recommendations of leading memory specialists and came across the highly successful system developed by Sebastian Leitner, a spaced repetition method employing *flashcards*.

Cards on which words are written are contained in boxes in different compartments. A word is written on a card and learnt, and this is then filed in the first compartment. The child should know on the next day how the word is written, and be able to read it properly. When they have achieved this, the card is moved to the next compartment towards the back of the box. However, it is replaced in the first compartment if the child makes a mistake. The box contains a total of five compartments, and the objective is to ultimately have all the cards in the fifth. Each word and its correct spelling will by then also have made the transition from the child's short-term to long-term memory.

This method appeared comprehensible and transparent to us, so we decided to employ it. Conscientiously. Month after month. Despite this, the hopes we invested in this system were only matched by the disappointing results – not one single child improved their spelling or reading in German. Dictation was still more than unsatisfactory.

Luckily enough, another promising approach also existed. Insights gained in *remedial education and occupational therapy* indicate that children achieve better results when they combine learning and motion. When it comes to spelling, this means "dictation in motion". We didn't waste any time. We soon had pupils flitting from one place to another. They read parts of their dictation in one corner of the room, while their desk was in the other corner where they wrote down the text they had just read. Parents then repeated the dictation with their children at home in the usual manner.

We had finally found a strategy that achieved success! Many children even improved their marks and got a 1. However, the completely frustrating aspect of this approach was our failure to repeat these successes in unpractised dictation. Marks achieved were, in the main, between 4 and 5 again, and a 6 was nothing unusual.

These efforts gradually led us to realise that we would not progress any further through memorising and intensive learning alone. But what should we do? We had already tried the entire spectrum of methods known to German specialists and educators. By degrees, we began to feel like the doctor who bombards his patients with tablets – and still fails to achieve any improvement. Was the diagnosis wrong?

And then the penny dropped! A single question began to occupy our thoughts. What if these children were dyslexic – and not just one or two, but all of them? This seemed highly improbable. We were a completely normal tutorial school trying to help perfectly normal pupils. But if all these children were dyslexic, it would be wrong for us to continue with the usual spelling exercises. Instead, we would need to employ special methods which were also used in institutes that work with pupils experiencing difficulties in reading, writing and arithmetic (dyslexia and dyscalculia). Our analysis of the situation indicated that we would have to go back even further, using the *synthetic method* to get right to the start of the reading and writing learning process.

This logical approach starts with basic training involving the letters of the alphabet, the maxim being *phonetic* pronunciation (that is, b and not "bee", t not "tee"). Straight away, and much to our surprise, the children showed positive results, even though the method is anything but playful...

The next steps, based on the findings of educational psychologist Heide Buschmann, saw them progress from letters to syllables, then from syllables to the complete word. This also works inversely, thanks to hyphenation. Words are broken up into smaller components: syl-la-ble, words, dic-ta-tion. We also incorporated motion into these exercises again, with the children clapping while they pronounced the syllables, or they emphasised these by swinging their arms. This was obviously a lot more fun than spelling, but we scored no successes with regard to spelling skills.

Although this technique is still regarded by leading specialists and institutes in the treatment of difficulties in reading, writing as *the* method for improving reading and writing skills, not one child in our school showed any signs of improvement. Dictation remained sheer agony for the children, parents and teachers. Good grades in dictation counted!

The consequence for us was a greater appreciation of the need to structure our work in an even more individual manner. The majority of learning specialists believe each child should develop its own strategy to master its problems regarding reading and spelling. And, in point of fact, not all of them shared the same difficulties. For example, Mike scored a particularly high number of errors when it came to upper- and lower-case letters, word extensions and duplications. Then again, Janine had difficulties in placing letters in the right sequence, mixed up letters and frequently started a sentence with a lower-case letter. We therefore identified the weak points for each child and developed an individual educational plan for each pupil and, where the teachers focused together with the children on the tricky areas, things actually improved in most cases! Unfortunately, the pupils continued to make a lot of mistakes in other respects. It was enough to drive you mad with exasperation!

While we were involved in these efforts, we also introduced individual motivation training based on the *Leger method* much praised by specialists. Put simply, each child is encouraged to read more. The fundamental assumption of this method is that pupils who do not want to read refrain from doing so because they don't want to, not because they have difficulty. They fail to perceive the added value in this exercise because they do not realise that it could help them more than playing computer games or watching films. We explained to the children in their uncertainty that they would run less of a risk of getting poor marks and being rejected by their peers and teachers, if they read more. We told the more daring among them that they would be more successful and gain greater recognition through regular reading.

It was not only the children who embraced this method. Their parents were also won over rapidly to this approach, which was not really surprising as this was why they had come to seek our help in the *Kennedy Tutorial School*! We also encouraged the children to pick up a book instead of watching television through a reading competition with lots of attractive prizes. The intention was to run the project for a year, a generous time frame, but hardly any child showed any *voluntary* interest in picking up a book at the end of this period. Even worse, the children started to simply give up. "What's the point of all this! ", they seemed to think and, instead of reading a book, they at best only looked at comics or continued watching television.

It appeared that all our best efforts had been in vain. We hadn't scored any breakthroughs. We hadn't even been able to prevent some of the children becoming ill as a direct result of their attendance at the school.

I was on the verge of despair, wondering how on earth we were supposed to continue. Was the solution to be found somewhere else entirely? The fact was that nearly all our pupils were lacking in focus and had difficulties concentrating. They were easily distracted, unsettled and/or "dreamy". I came to the conclusion that a child that is unable to concentrate can hardly be expected to perform well in reading and writing, so I decided to try a neurological approach.

Neuropsychologist and child psychiatrist Dr Fritz Held had been involved in researching the area of poor concentration for many years. He demonstrated that targeted stimulation of the brain can improve the release of the neurotransmitters dopamine and serotonin which, in turn, leads to enhanced concentration. As a consequence of these findings, we commenced a trial aimed at improving the attentiveness of children with the aid of concentration training and relaxation

exercises at the beginning and end of German tuition. We even used special accompanying music in part during these endeavours.

The newly introduced exercises soon achieved positive results, as the children were without a doubt quieter and more even-tempered than previously. However, this did not last long when they were handed back their unpractised dictation, as their efforts were covered in corrections penned in red. The average mark was 5 or 6 and, in most cases, their dictation bore the simple advice of the teacher: "You've got to practise more!"

In other words, the poor performance of our pupils in spelling was not solely due to a lack of concentration. Clear evidence of this was reflected in the fact that some of these pupils frequently achieved good results in other subjects.

We then focused on training grammar, as we suspected that the children had possibly failed to grasp the rules of grammar correctly. And, lo and behold, as it seemed in our meeting, Herr Detmold had hit the nail on the head. Many of the children achieved better marks in grammar exercises!

However, none of them seemed to read a book with any frequency, and they all continued to perform poorly in spelling.

Finally, I consulted with my teaching staff to see if the problem could be traced back to the teaching material used. We improved German tuition by introducing superior material: syllable memory and tile-based word games, tutor systems (LÜK), crossword puzzles, board games and a multitude of individual and colourful exercise sheets. We also continued our regular contact with parents to ensure that our methods were applied at home in a purposeful manner. We did everything we possibly could and would have moved mountains, just to keep the children on board and help them further. Despite this, at the end of a year of trials and testing, the results of our efforts were as clear as night and day – not a single pupil had improved his or her spelling skills or had become a voluntary, competent reader through our German tuition. On the contrary, some of them were even worse than before!

The methods which we had employed were used everywhere, if not in all tutorial schools, then with absolute certainty in dyslexia institutes. They were the latest – and best – methods education had to offer to improve reading and spelling ability. We were using *state-of-the-art* techniques, but despite all our efforts, we had failed to progress one single step in dictation.

I asked a pupil who had practised for an entire year with us a simple question: "Thomas, is the word "table" written with a *capital* T or a *small* t?" (Nouns in German are written with a capital letter).

"With a capital T," he replied without hesitation.

"Why's that, Thomas?"

"Because it's a noun!"

"Then why do you nearly always write it with a small t?"

"I don't know," said Thomas, with a look of uncertainty on his little face.

And, I thought, neither do I! What could be the problem? Why had all our best efforts borne no fruit? Either the methods were bad, or these reading and writing difficulties were simply insurmountable. Either we hadn't the right means to tackle the problem, or these children were incurably uneducable.

I simply felt there must be a solution to this problem. But never in my wildest dreams could I have expected that solution to be so obvious, so simple and so effective...

30 mistakes with an IQ of 120

Frau Schmidt and I were waiting patiently in the practice of Dr Fritz Held, child psychiatrist and specialist for dyslexia. Furnished in an old-fashioned but welcoming style and decorated with children's pictures, the waiting room was empty. Nobody had come in in the last 30 minutes. That's just fine, I thought. He'd have all the time in the world to conduct all the necessary tests with Sandra, Frau Schmidt's daughter. Both Frau Schmidt and I were completely baffled at this stage, as Sandra never read books and was making more than 30 errors regularly in her dictation, even though she was practising on a daily basis. While we were racking our brains and wondering if taking this step would finally change anything, the door suddenly opened.

"Please come in, Frau Schmidt. And you too, Herr Kennedy." We followed his assistant as she ushered us into Dr Held's consulting room. "Please take a seat," said Dr Held.

An impressive man, I thought. Tall and slim, Dr Held spoke to us quietly in a measured tone. "The results of the *Hamburg Wechsler* **Intelligence Test** and *Nonverbal Intelligence Test for Children* from Snijders-Oomen indicate an intelligence quotient (IQ) of 122."

"Is that good or bad?" interrupted Frau Schmidt.

"That's not just good ... it's very good indeed!" said Held, calming her fears. "Your daughter should be attending *Gymnasium* (advanced secondary school) and not the *Hauptschule* (lower secondary school)."

"I knew it!" exclaimed Frau Schmidt. "Sandra was always a lovely child, so it's no surprise that she's a bright spark too! She deserves better, and shouldn't end up doing temporary jobs like I do."

I'd known Frau Schmidt for some time, but this was the first occasion I'd seen an expression of such relief on her pale, weary and, quite frankly, exhausted face. And it came as no surprise, because the threat of having to repeat a year was hanging over Sandra. This was the first result in a long time that led us to believe that she wasn't a completely hopeless case.

"What does the Nonverbal Intelligence Test involve? "I asked Dr Held.

"It doesn't include reading and writing. Sandra has her problems in these areas, but the ability to read and write is not contingent on her intelligence."

"Do you mean I'm not stupid?" interrupted Sandra.

"No Sandra, I can safely say that you are in no way stupid," replied Dr Held, smiling pleasantly at her. He then turned to me, saying, "Herr Kennedy, you have to understand that these children are both blind and deaf when it comes to *letters*."

"You mean they all suffer from impaired sight and hearing?" I asked, ironically.

"No, that's not what I mean. Visual and hearing capabilities do, of course, need to be tested as well. But the reason for dyslexia lies at another brain level, the reading and writing centre. This is where letters are stored and called up as raw material during reading and writing. The findings are obvious. This procedure can only be successful if this region has *matured*! And this state of maturity has not been achieved in Sandra's case and that of all other dyslexics."

"You mean Sandra's case involves dyslexia and a retardation of maturity?" I inquired in astonishment.

"Yes, it's one and the same thing. Or, to be more precise, it's a case of a specific learning disability in the reading and writing function. The ability to read and write should be understood as a stage of child development. It's a biological phenomenon."

"I see ...," I replied, somewhat confused. "But what exactly are you trying to tell us?"

"Well, the ability to read and write depends on the level of progress of a child's development. And I'm not just talking about its intellectual potential. I especially mean the *biological* development of these functions. A child first learns to walk upright, and it usually masters this in its first year of life. It starts to learn to speak at the age of about two. From the age of three onwards, it gradually loosens its bonds with the mother – a well-known phase of defiance. At the same time, it learns to play with others, and it gradually begins to follow the rules of games. The ability to read and write is nothing more than another stage in the child's development, in exactly the same way as walking, speaking, severing the bonds with the mother or getting on with others are."

As I endeavoured to digest this point of view, Dr Held turned to Frau Schmidt. "Frau Schmidt, you have to ensure that Sandra memorises the letters of the alphabet, absorbing them firmly and very, very deeply until she has overcome her difficulties in reading and writing. And it's quite simple to do this. Sandra needs to type text on a typewriter every day, 20 minutes a day. And she has to keep this up until the spelling errors disappear and she can read well."

"But she's not able to type with all 10 fingers," said Frau Schmidt with concern.

"That doesn't matter, she doesn't have to," replied Dr Held reassuringly. "Sandra, I want you to type with just one finger, the one you hold your pen with. Do you understand?" "Yes, we do," replied Sandra's mother cheerfully.

"Okay, we'll get to grips with this problem together!" Dr Held made a note, then turned to me again. "Herr Kennedy, what are your results in German like in your tutorial school?"

I drew a deep breath. "Do you want an honest answer?" He looked into my eyes, and I heard myself mutter a single word: "Poor."

"I'm not surprised," he answered dryly. "These children need *letters*, not words. They need to absorb letters through their senses, through seeing, hearing and touching, through a curative approach. They need to continue this until the region of the brain responsible for reading and writing has matured. Ah, but just listen to me! Sorry, I tend to go on a bit too much. If you like, I can let you have a few documents containing the findings of my thirty years of research."

"I'd be delighted, Dr Held," I answered in surprise, thinking to myself that it couldn't hurt to read these.

However, my doubts started to grow on the long journey home with the Schmidt family. 20 minutes of typing a day? That's supposed to solve Sandra's problems in German? Just this repetitive task on a typewriter? That's a pretty old-fashioned method! No wonder his practice is empty...

A hot lead

Memorising letters to help specific brain maturation? Well, I'd never heard of this method, but the mostly widely talked about techniques which were part of the conventional cannon had all failed to help our pupils. And apart from this, the hypothesis that reading and writing skills should be regarded as a stage of child development fascinated me. Not solely because, on further reflection from a scientific point of view, it was so obvious and I asked myself why nobody had come up with it much earlier, but also because it was a completely new approach to the problem; one that gave me hope.

I gave up all thoughts of enjoying a relaxing weekend following the visit to Dr Held, burying myself instead in his treatises. These included many special editions of the *Der Kinderarzt*, a professional journal addressing paediatrics, and I was struck after only a few pages by the superior, above-average quality of the contents. I also increasingly noted that Dr Held was in no way alone in his perception. His theory that the ability to read and write represented a further stage in the cultural evolution of mankind was supported by the findings of research conducted by three leading scientists who had studied the phylogenetic development of human thought processes intensively for many years.

Konrad Lorenz, Director of the Max Planck Institute for Behavioural Physiology and a Nobel Prize laureate in medicine (1973), had demonstrated the existence of sensitive phases of imprinting during the development of animals and humans. Lorenz had imprinted himself on young geese following hatching by imitating their mother. He was the first living being that the little goslings took notice of, and as they grew up, the geese followed him everywhere, even paddling after him in the lake! Nature had therefore ensured that after hatching the first living being in its immediate vicinity imprinted itself on the gosling, which it then regarded it as its "mother".

These sensitive phases are an innate feature of all living creatures, serving the automatic adoption or, to put it more clearly, the memorising of important information mirrored from the immediate environment. Furthermore, we humans are imbued with inherent programs which are executed in a completely involuntary manner. For example, we do not need to actively think of the rules of circulation and body temperature. Lorenz described these as closed programs, postulating further that we possess other programs in areas of behaviour which ensure our survival. Programs such as aggression and flight are triggered automatically in the event of a threat. Only our mind and ability to think enables us to steer our behaviour in *another* direction.

Programs are therefore the primary controllers of our behaviour. But reading and writing are cultural achievements which have to be learnt. Where was the connection in this context?

According to Irenäus Eibl-Eibesfeldt, Professor for Zoology and Head of the Research Department for Human Ethology at the Max Planck Society in Seewiesen, Bavaria, these two things are completely compatible. He illustrated how *blind* children laugh through a series of photos. Ah! This

was unequivocal evidence that laughing is an innate behavioural pattern! He revealed further how human beings demonstrate certain behavioural patterns at a highly developed cultural level all over the world. "Among primitive peoples, powerful chieftains who visit another tribe and perform a war dance are accompanied by a child who waves a green frond as a symbol of peaceful intentions. In our cultural circles, the host impresses with military pomp, while the state visitor is also presented with a bouquet of flowers – usually presented by a young girl," noted Professor Eibl-Eibesfeldt. We have therefore learnt to modify our aggression and adapt it to suit the situation.

Lastly, and by no means least, Hoimar von Ditfurth, Professor for Psychiatry and Neurology, illustrated in his book on the evolution of human consciousness, "*Der Geist fiel nicht vom Himmel. Die Evolution unseres Bewusstseins*", that our ability to think and learn is a result of evolution. In a work as gripping as a whodunit, von Ditfurth related the history of our brain and its development over thousands of years, where an extremely extended period was followed by the development of our brainstem, the part of our brain responsible for controlling our vegetative behaviour (including breathing, the regulation of blood levels and simple automatic reactions). The diencephalon (midbrain) evolved subsequently after another long period, controlling the programs which govern aggression, flight and sexuality. This marked the birth of emotions.

Human beings were thus taking their first tentative steps on a journey of development, but would we survive? A further inconceivably long period saw the development of the telencephalon (cerebrum) which better ensured survival. According to von Ditfurth, it controls advanced cognitive abilities such as the planning of future activities and communication using language. It is also responsible for *learning* as we know it today: the acquisition of knowledge, ability and behaviour.

The works of these three authorities therefore proved that human beings have both innate and acquired behavioural patterns. Interestingly enough, human beings can only acquire new behavioural patterns if their biological development has progressed sufficiently. Dr Held's hypothesis therefore fitted seamlessly into the observations of these three scientists, as he ultimately regards the ability of human beings to read and write as nothing other than a further stage of cultural development.

According to Held, the ability to combine symbols and letters automatically is an innate skill. However, in common with speech, it is an *open* program. The brain of a child needs to be fed words if it is to acquire speech, and the child then constructs meaningful sentences intuitively through imitation. However, this entire process can only function if a vital prerequisite is fulfilled: the biological maturity of the brain's center of speech.

Dr Held assumed that the same phenomenon must be responsible for spelling. The center for reading and writing also needs to be fed letters if the child is to learn to read and write, obviously! This must continue until the child can automatically position the appropriate letters in the right sequence. Reading is the ability to identify a series of letters as a word - automatically. On the other hand, the prerequisite for this is the biological maturity of center of the brain which is responsible for reading and writing.

This all sounded very convincing to me, but it didn't take long for the first question to arise. If speaking, reading and writing are natural phenomena whose manifestation is merely related to biological maturity, how does immaturity in the brain occur? Why are children like Sandra affected, but others not?

I delved into Held's documents again and discovered a range of possible triggers which he had identified during his many years as a paediatrician:

- Factor number one: Heredity. Many parents of his young patients had told Dr Held that they themselves experienced problems with reading and writing during childhood. It occurred to me at this point that parents in the *Kennedy Tutorial School* had told me exactly the same thing! Gradually, a clearer picture began to develop ...
- Moreover, Dr Held had noticed that many children who experience an oxygen deficiency at birth suffer from dyslexia at a later stage. The same applied to premature births where the child's brain had not yet developed completely on leaving the womb. Cases like this were also evident among our acquaintances.
- Dr Held also noticed that a severe illness suffered as a baby or toddler can lead to slow maturity. This finding also fitted into the overall picture, because concerned parents had repeatedly told

me during registration interviews of severe illnesses suffered by their children and asked me if these could be the cause of problems at school. Even though I had waived this aside at the time, I now thought that there could be something in it.

• Naturally enough, Dr Held postulated that *psychological* "brakes" to the maturing process could also be possible causes. For example, children who were neglected in their first three years and continually exposed to different attachment figures suffered more frequently from delayed maturity.

The subject of maturity just kept popping up! When an intelligent child is sent to school too soon, this can lead to reading and writing difficulties. The reading and writing center has simply not developed far enough *biologically* to absorb letters reliably. Sending these children to school earlier will not help improve this innate condition. They need to practise with letters all the more to stimulate maturation of the center for reading and writing.

However, the majority of schools have been employing "modern" methods for many years which, in the first class, dispense with the "mindless" learning of letters and opt instead for a holistic approach to reading and spelling where children very soon learn entire syllables and words (often before they have learnt the alphabet completely) and deduce the letters themselves from the context. Unfortunately, a method which sounds child-oriented is completely counterproductive for those children with a predisposition for dyslexia i.e. whose reading and writing center has not matured enough.

Conversely: If the "borderline" child *would not have* suffered from reading and writing difficulties by learning the alphabetic method exclusively, it was bound to suffer from dyslexia where *this* method was employed! In other words, the school can contribute to reading and writing difficulties. The "whole-word" and "syllable" methods poses no difficulty for a child with a mature reading and writing centre, as it can pick out individual letters from syllables and words and imprint these effectively. However, in the case of a child with an immature or *borderline immature* reading and writing centre, the method can even intensify this deficit.

(The best example of the futility of an alternative methodology that ignores the fundamentals of learning is the 'Reading through Writing Method' by Jürgen Reichen. The children were allowed to write as they wished without correction, thus imprinting themselves repeatedly incorrectly. After much controversy and with little success, this method has thankfully fallen into disuse).

It was suddenly clear to me why so many children who came to us had previously exhibited a continually deteriorating school performance as the demands on their reading and spelling abilities relentlessly increased. The names of numerous pupils who had endured this journey shot through my head. "Doctor Held, you've hit the nail on the head!" I thought aloud to myself as I placed his material to one side.

I grabbed a pen and paper and began to summarise these findings for our work. Furthermore, I also noted that reading and spelling difficulties can present themselves as a singular problem or in combination with one or more other developmental delays. Dr Held frequently observed reading and writing difficulties in combination with delayed speech development. Further combinations such as immaturity in fine and gross motor skills, numeracy and attentiveness were also encountered with the same frequency. That's it! It all fitted perfectly! Stefanie, Robert, Annemarie, Martin, Zina ..., and whatever the others' names were ... at least ninety per cent of our pupils fell into one of these categories, and sometimes even into several. If I was honest with myself, I could hardly think of one who didn't fit at least one of these criteria. How astonishing!

But hang on, if Held was right, it meant that practically everything we had tried up until now had been wrong. And the same applied to all other tutoring institutions and dyslexia centres! But was this really possible? Could every method currently employed to combat dyslexia be based on a fallacy, purely through the failure to appreciate this insight? Could it be that the entire professional community involved in the treatment of dyslexia had backed the wrong horse? After all, we weren't the only ones achieving poor results. *Every* school was in the same boat, regardless of whether they were special needs or secondary level schools, and this was reflected right across the country.

There was only one way to find out if Dr Held's hypothesis was correct: analyse it in detail and *put it to the test under practical conditions*. If the problem was really caused by immaturity in the regions of the brain responsible for reading and writing, and this could be overcome by regular alphabetic training in the manner put forward by Dr Held, then even pupils who had failed to respond to all

previous efforts would finally make progress using the new method. If they only *imprinted* letters through all the relevant senses, namely sight, hearing and touch, then the relevant part of the brain could not help but mature and, ultimately, function correctly. It was obvious that the spelling and reading problem would eventually vanish completely! I wanted to see the results for myself, and set about trying it out.

"Come in please, Frau Beck" As with every visit, Anton's mother also took a seat at the table.

"Herr Kennedy, I'm sorry to disturb you, but I wanted to show you Anton's last dictation," she said in her usual friendly manner.

"No problem, I'd be delighted," I answered. To be honest, the prospect didn't exactly fill me with joy. Anton, who was in the eighth class in *Gymnasium (advanced secondary school)*, had come to our school 14 months ago with an average of 21 errors. He'd managed a 6.0 again four weeks ago, this time with 23 errors. Frau Beck had come to see us in recent months after almost every spelling test, complaining that things simply could not go on like this. She wanted to see results. I mean, why else would she send her child to the *Kennedy Tutorial School*?

My explanations and assurances that Anton's reading and writing skills had not yet "matured" and that this process took time had calmed her worries in the beginning. However, as she noticed after a few months that no improvement whatsoever had been achieved and Anton was still making between 18 and 24 errors, she now informed me that Anton would only be able to come to tuition once a week from now on, due to the new schedule. Not the best basis for future cooperation.

And here she was again, sitting in the usual place. What revelations did she have in store for me today? That she was going to take Anton out of the *Kennedy Tutorial School*? That he should give up this endless practising? Frau Beck placed the large dictation exercise book in front of me and opened the latest page. Her voice was unusually calm and quiet as she spoke.

"Herr Kennedy, look at this, he got a 1.0, not one single mistake! And his reading is also gradually improving...."

The breakthrough

A year of alphabet games and regular training with supplementary typing had paid off! And Anton wasn't alone – other children had also shown progress. The results were there to see in black and white, and I still found it hard to believe, especially in the case of some of the children, an improvement had seemed practically inconceivable. Convincing parents that practising with letters paid off took a lot of effort, especially as the progress achieved over many weeks appeared to be very little. But it was precisely the long duration of the process that substantiated Dr Held's hypothesis.

Seeing and feeling letters coupled with their relevant phonetic sounds transmits impulses via the sensory centres to the regions of the brain involved in reading and writing. On arrival, these impulses cause the relevant synapses to "fire" thus stimulating cell growth, and the underdeveloped reading and writing center network grows and matures as genetically "intended". Cell growth continues, but the ability to read and write does not always improve in proportion to this. The brain needs to reach a particular level of development to be able to combine letters correctly and identify series of letters automatically. As soon as the brain has reached the required level of maturity, your child is capable of achieving extreme progress sometimes practically overnight, an improvement which in itself is astonishing!

Dr Held had already hinted at this phenomenon while he was examining Sandra. He had gazed seriously into her eyes and given her a single tip: "Don't give up, even if you can't see any change at first". I have no doubt that Dr Held knew at this moment beyond a doubt that the maturing of the brain takes at least *one* year.

Anton was by no means the first child to show such clear progress during the breakthrough. Sudden improvements in marks were nothing unusual during these turbulent months, as our results table indicated. After three months of games with letters, 67 per cent of the pupils had improved on average by 1.5 marks in unpractised dictation. The figure was 72 per cent after 6 months, with pupils registering an improvement of about two marks. 93 per cent were achieving an improvement of three marks after 12 months. Seven per cent of pupils had, as in Anton's case, demonstrated no improvement whatsoever until the day on which everything changed. Luckily for Sandra, things

moved even quicker, and she achieved an astonishing improvement of three marks within three months.

In the case of *reading*, perhaps the harder nut to crack, the results were also striking. After about 12 months, 87 per cent of parents at our school reported an improvement in their child's reading and willingness on their part to read books voluntarily.

After a year of stumbling around in the proverbial fog, followed by another year of games with letters and training through typing, there was no doubt any more on my part: The thesis relating to the maturing of reading and writing abilities was valid!

The true cause of dyslexia is neither to be found in the pupils' intelligence nor in their behaviour, but solely in the immaturity of the relevant brain region. And the system employed in our school and methods commonly applied to teach these children reading and spelling had only succeeded in making this immaturity worse.