Duden Institute **für Lerntherapie**





Learning with confidence.

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Dear parents,

When you are reading this guide, it is likely that you have some concerns about your child's difficulties with reading, writing and arithmetic or English as a foreign language. It's rare that a child breezes through school with no difficulties at all. However, if a child predominantly experiences failure at school and despite plenty of practice barely makes any learning process, it's time to act.

For children, it is very frustrating if they cannot learn reading, writing or arithmetic at all or only to an unsatisfactory level. In our PuLs study published of 2016 "Psychosocial stress and learning difficulties", we determined that more than two thirds of the children and young people who start educational therapy with us are experiencing significant psychological or social stress. They suffered with nausea or stomach pains, their behaviour had been listless or sad for a good while, or they were being bullied due to their learning difficulties.

Help can be given in such situations – or even better, it's possible to prevent this from happening in the first place, if children start to experience significant learning successes as part of integrative educational therapy.

We want this guide to help you to recognise serious learning difficulties in your child at an early stage and to support your child at home in the best possible way. We therefore address different manifestations and causes of learning problems and explain suitable ways to help.

We have around 30 years of experience of working with children and young people with dyscalculia or dyslexia. Our concept for integrative educational therapy was first created in 1992 based on the scientific work of Dr Andrea Schulz, the long-standing director of the Duden Institutes. Since then, we have continuously developed the concept, which has proven its worth in practice.

If our guide for parents does not contain the answer to all of your questions, our specialists will be happy to provide you with extensive advice.

Dr Lorenz Huck

Managing Director of the Duden Institute für Lerntherapie

Lorenz Chul

Dyscalculia at primary school age

Does your child have particular difficulties with arithmetic?

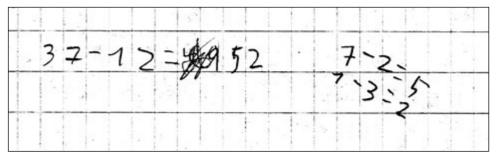
Ten year old Maria was just starting Class 4 of primary school. Her parents said that her afternoons were gruelling. Sometimes she found arithmetic absolutely fine, sometimes it was the opposite. When doing her homework and practice exercises, Marie always needed help to solve the problems, particularly when the type of task changed. Couldn't she remember the methods to work out the answers?

In mathematics, she was able to solve certain tasks correctly. However, there were tasks she couldn't solve and so her marks were bad. In other situations, she wasn't bothered if she gave answers that seemed questionable to

us – for example, when she got the answer 52 for the calculation 37 minus 12. There were other indications, too. Marie showed no curiosity whatsoever about learning to tell the time. Sometimes she mixed up numbers and letters. As far as her parents could tell, Marie didn't use her fingers for calculations any more. Nonetheless, her problems with mathematics continued to worsen. Marie's parents realised that something went wrong.

Problems with directions

We got to know Marie in a diagnostic interview. She was open-minded and motivated. Her memory was good, as was her ability to concentrate. However, it became clear that Marie found it difficult to pay attention to directions. When comparing images, she barely noticed differences in their position.



Many children with dyscalculia develop their own individual solution paths.

Her parents described her as right-handed. However, we observed that she often used her left hand too. In the field of mathematics, so-called "transposed digits" became apparent – Marie often mixed up the place values when reading and writing numbers. She also confused preceding and succeeding numbers. When counting, she had difficulties with transitions (138, 139, 200).

For Marie, the numbers 6, 16, 26, 36, 136... were "places" in a sequence. She hadn't grasped what they had in common. To her, it seemed as though she was faced with a giant mountain of incomprehensible numbers.

Marie had not yet developed adequate number sense. She didn't have a useable "inner picture" of numbers. She avoided counting on her fingers but, depending on the arithmetic operation, she would count forwards or backwards in her head, which meant no progress at all. She was not able to learn effective arithmetic strategies. If, however, arithmetic involves counting and if, as in Marie's case, a child finds directions problematic, addition and subtraction can easily get mixed up.

Marie had disassociated the actions behind arithmetic operations that were familiar to her from everyday life (adding and taking something away) from learning mathematics.

The riddle of "multiplication"

As Marie lacked number sense, she could only give half and double values for simple numbers. Marie did not have any sense of the meaning of multiplication. This meant that

an important prerequisite for automatic multiplication was missing. Divisions were also a struggle for her.

Problems with number sense also became apparent when dealing with cube structures. Marie was not able to correctly determine the number of cubes in the images provided. Her spatial awareness had also not developed in line with her age. She was also uncertain when telling the time and had difficulty understanding that 10:15 means quarter past ten. She could not indicate the lengths 1 m, 1 cm and 1 mm with her hands, as she lacked the number sense to do so.

Conclusion: Marie did not have an adequate grasp of some of the basic prerequisites. This meant that keeping up in a maths lesson took a great deal of effort.



Telling the time often causes uncertainty.

Which abilities does a child need for arithmetic?

Orientation is something that most people take for granted. This includes differentiating between right, left, up and down – orientation is after all related to locating oneself in a system of coordinates. What is challenging about orientation is the dependence on the respective point of reference. A developmental process is at the root of self-orientation. During diagnosis, we often see children whose orientation skills have not developed according to their age. This can make successful learning significantly more difficult.

Observing directions

In mathematics, it is essential to observe directions, whether it involves identifying predecessors and successors to numbers or in arithmetic calculations. The first thing to grasp is the working direction, which we know from reading and writing as being "from left to right". However, if we think about written addition and subtraction, it becomes clear that there are different working directions. For some children, this is very confusing. One example: We look at the hands of the clock and say it's "half eleven". But let's say that the hands of the clock are moving in the opposite direction to the accepted one, then it would be plausible for it to be "half ten" instead.

In addition to orientation, number sense is one of the mental abilities that develop long before a child starts school. All healthy pre-school children can imagine something underneath a ball. As children enter school, they must be able to develop a sense for mathematical content – which is often not perceptible, but represents abstractions. This presupposes a certain developmental level in imaginative skills.

The presence of good number sense is indispensable for learning arithmetic. But what does "good" mean?



Now we will measure: Is the estimated stride length correct?

Developing number sense

Let's take the number 23. When we imagine the order of the numbers, we place it near to 20. That is its "place" in the number sequence, which does not help us a great deal in a calculation. On the other hand, nobody can imagine 23 things at the same time. With the decimal system, we use effective structuring. Children who are required to calculate sums such as 10 + 7 have not yet recognised the significance of the number 10 in our number system. In addition, we also need to be in a position to work with imagined objects (number sense).

As well as number sense, a sense for arithmetic calculations, geometry and the values of time, money, length and mass are foundations that must be laid in the first years of school. A sense for these aspects is essential for your child to work insightfully with mathematics. Without them, the only option is to use mechanical manipulation, which takes a lot of effort and is barely ever successful in the long term. Your child will only be able to solve tasks with a great deal of time and effort. The child appears to be unable to concentrate and to retain solution paths.

Recognising structures

After all, a child can only develop an understanding of number space if they recognise structures. In order to perceive them, the child must be able to abstract them. Even recognising analogies, e.g. B. $5 \cdot 3$, $5 \cdot 30$ and $50 \cdot 300$ requires an ability for abstraction.

Successful mathematics learning requires the mental abilities of orientation, imagination, and abstraction



Appropriate visual material helps to develop understanding of the number space.

What is dyscalculia?

The term dyscalculia refers to significant and long-lasting difficulties when learning the fundamentals of mathematics. There can be many different causes for this. Dyscalculia is not an illness from a developmental-psychological-didactic point of view. Extreme learning difficulties in mathematics are often caused by delays in the development of orientation, imagination and abstraction. The requirements at school do not match the child's prerequisites. Serious learning problems are often noticed in the 3rd or 4th school year, by which time children are expected to be able to handle the basics with confidence, and compensation is becoming increasingly difficult.

Problems with grasping subject fundamentals also often become drastically apparent in later

school years. Many children with a good memory and good concentration initially succeed in fulfilling what is required of them in lessons with diligence and hard work. They conceal their difficulties by learning rules and arithmetic methods, without building up an understanding of the content. Things become more and more difficult for these pupils as requirements increase and they are expected to be able to apply mathematical knowledge. If fundamentals taught in the first school years have not been grasped, this will often become apparent when calculating fractions.



Developing spatial concepts with cube structures

How does your child react?

If your child has learning difficulties in mathematics, you will generally notice unusual behaviour in your child when they are playing, doing their homework, at school and in daily life. Observe your child attentively. If you notice any of the following patterns over an extended period, this may indicate dyscalculia:

- Your child avoids games where they need to count. Your child does not enjoy playing with building blocks, especially not following a template. Your child does not like puzzles.
- Your child has problems with fine or gross motor skills. Your child does not climb at the playground for example, and does not dare to hang upside down on the climbing frame. Your child has great difficulty tying a bow or shoelaces. Your child cannot yet ride a bicycle and can only do so with great difficulty. Coordination of the hands, arms and legs is not adequately developed.
- Your child often mixes numbers up (e. g. 43 instead of 34) Your child will often start their work in the middle of the page in their exercise book, instead of at the top left. They will quickly lose their overview. They will have difficulties with time-related terms, such as "the day before yesterday" and the "day after tomorrow" and/or spatial terms such as "before", "after" and "between".
- When calculating, your child does not manage to finish the work required in the given time.
- They procrastinate instead of getting up with their homework, always coming up with another reason to delay. Your child wants you to sit next to them. Your child always seeks confirmation after every step. Homework tasks take a long time. Your child does not want to explain their

calculation method. Your child counts on their fingers.

- You and your child do a lot of practicing. Your child can solve similar tasks. But then the next day, they can't do it again.
- Your child is dissatisfied and doesn't feel happy. Their self confidence is suffering as they keep failing. They have resigned themselves to it and believe that they are "stupid".



Children with dyscalculia often also suffer with psychosocial stress.

When these failures go on for a long time, psychosomatic symptoms such as headaches or stomach aches, bed wetting, nightmares, insomnia, frequent crying or aggression towards people and objects may occur. Unfortunately, such symptoms are very common in children with learning difficulties. In the PuLs study that we published in 2016, we determined that 69.7 percent of the children who came forward for

diagnosis were showing signs of psychosocial stress. Parents reported depressive moods, physical complaints with no medical explanation (such as headaches or stomach aches) or experience of bullying.

How should you handle this situation?

Believe in your child and try to understand their situation. Your child is neither stupid nor lazy; they just want to learn and achieve success. Work on the assumption that your child has not yet understood the fundamental building blocks of number systems. Your child cannot grasp the content which builds on these fundamentals, despite expending more energy and knowledge on them than other children

Reinforcing your child's feeling of self worth

Reinforce your child's feeling of self worth. Your child absolutely needs comfort and encouragement from you. In particular, your child needs to feel that you have an unshakeable belief that they will overcome the difficulties they are facing.

Do not try to take on the role of teacher

Avoid trying to slip into the role of teacher, as then you will not be available to your child in your role of mother or father. Your child needs your support in exactly this kind of difficult situation. Be patient. When working on practice exercises, try to stay focused on the content only. Keep your emotions in check and control the situation

Motivate your child

In this situation, it is a question of constructively overcoming your child's learning difficulties. Blame isn't helpful. Your child is not to blame for the situation. Your child cannot control their development, with certain delays in some areas of ability. You as parents are not to blame for the situation. You have supported your child according to the best of your knowledge. Your child's teacher is not to blame. He or she has 20 to 30 children to teach at the same time. That leaves very little time to work on the problems faced by an individual child.

Practice the right things

Often, your child's learning difficulties have nothing to do with a lack of practice, but with a lack of understanding of the basics of numerical structures. So it's not about practising numerous arithmetic problems. In fact, this could easily cement incorrect strategies in your child's mind. It's not about quantity. Instead it's a question of practising the right

things to gain a better understanding. Don't spend more than 15 to 20 minutes per day working on exercises with your child.

Don't just tell your child how something is calculated and then practice the rule that you have explained. Offer support so that your child can understand content through their own experiences.

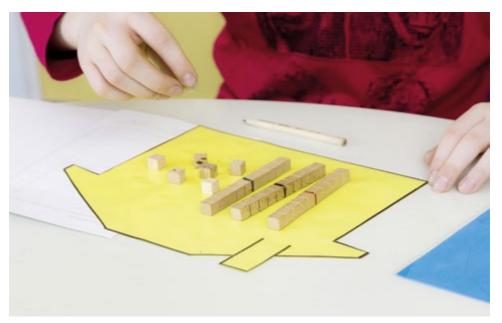
Reaching the goal in your own way

Don't try to explain something to your child at every opportunity. It is more effective if you allow your child to explain its own path to the goal. Listen patiently and ask questions. This will mean that misunderstandings and incorrect perceptions will become visible, so that you can work on them. Keep in mind that your child's solution path may be different from yours or the one intended in the textbook. However, it shouldn't be incorrect or of a lesser value. Gently introduce your child to contradictions so that they can arrive at the correct solution on their own.

Be careful when using visual aids. Unsuitable aids or constant using of new visual aids can quickly confuse your child.

Don't be disappointed if your child makes a mistake. Do not immediately confirm every correct answer that your child gives.

Try to guide your child so that they can learn to decide for themselves whether they have got the right answer or not. Praise and encourage your child repeatedly during work.



Learning to calculate with suitable visual aids

Practising on the computer

There are numerous mathematics programmes for PC or games consoles. One big advantage of these programmes is that most children enjoy using a computer and find it easier to engage with this way of practising.

Practice programmes are always useful if a child has already developed a fundamental understanding of the correct methods and it is a question of strengthen the strategies they have acquired. If a child who is lacking in understanding is left alone in front of the computer, the child will master the requirements of the programme using their own methods, which are often unhelpful: If

for example a child does "calculations" by counting, the computer will not offer useful feedback on this. The child knows how many tasks they have solved correctly but not what they need to do to reach solution with greater speed and confidence.

Dyscalculia in older school students

It is not only primary school children who have difficulties with arithmetic that need to be taken seriously. Luis, a pupil in Class 8 at a comprehensive school, was doing well in plenty of subjects. For years he was having difficulties with maths but was able to avoid receiving a grade E on his report through practice. But in Class 8, the problems got worse

It became clear that Luis was able to solve addition and subtraction tasks for natural numbers, but his sense and strategies for multiplication and division were not adequately developed.

Problems with fractions

He kept mixing the rules up when working with fractions and negative numbers. If Luis practiced a particular type of task, he would then have short-term success with this kind of work. But after just a few days or weeks, things would go wrong again. Similar problems to Luis' can be observed in pupils at secondary schools, special schools and amongst trainees too. Learning difficulties of this kind can arise when certain building blocks are missing.



In Class 8, Luis got an E grade in Maths for the first time

Strategy is key

For example, it may be possible that the children's sense for natural numbers has not yet developed sufficiently, that they have not yet grasped the place value system or that their arithmetic strategies are ineffective and error-prone. As the content of mathematics lesson in the senior classes builds on the understanding of content and number sense from the previous years, the child will encounter great difficulties in senior year groups. However, sometimes learning difficulties in maths only come to light for the first time in the upper school years. Some pupils learn formulae

to calculate percentages but don't know how to apply them when the line of questioning changes. Their understanding of the concept of percentages is often inadequate. The same applies to handling equations and functions.

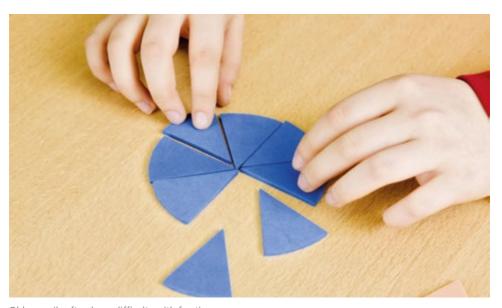
Problems are also common in other subjects

As mathematics is used in other subjects, in particular in the natural sciences, affected pupils often have difficulties in these subjects too. They become discouraged and their self-confidence plummets. They lose their motivation and decide that they just don't like mathematics.

What they need is an individual solution

Help is urgently required in such situations. This help also needs to be individually tailored based on the specific developmental level.

The key factor for success is a careful assessment of the current status in an in-depth diagnostic interview and then, based on it, individually-tailored guidance for the learner by an educational therapist.



Older pupils often have difficulty with fractions.

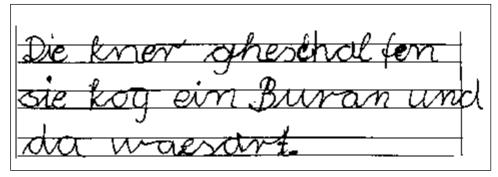
Dyslexia at primary school age

Does your child have particular difficulties with reading and writing?

Emilia, an open-minded and sociable girl, was introduced to us around the end of Class 2 Her parents were anxious as their daughter was not making much progress with reading and spelling. Take a look below at one of Emilia's writing tests from a text that she wrote about a picture during her diagnosis. At this point, Emilia was not yet able to recognise individual words within a sentence. She writes "go" and "sleep" as "gseelp" and she read "it was night-time" as all one word. Emilia also leaves letters out. She mixes up the sequence of letters ("seelp"). She transcribes the guttural phoneme "ach" of the German language as the letter "r". When we spoke to her about it, it became clear that she couldn't

discriminate the sounds "ch" and "r". Overall, these errors told us that Emilia had not fully learned the first, basic spelling strategy of German – phonetic transcription according to the motto "write it as you speak it". If this is the case at the end of Class 2, there is a developmental delay that needs to be taken seriously.

It was similar with reading. Emilia could not manage to read suitable texts for her age group independently. Often, she could not associate sounds with the corresponding or related letters. Another obstacle for her was contracting sounds into one word. Reading was extremely hard work for her. It was therefore understandable that Emilia was looking for ways to avoid reading. She "saved" herself by making clever guesses and learning texts by heart.



Who waren auf Maioka auf der innsel im Miselmeer. Es war dort ser schön. Und wier schtigen sogar auf einem Berk. En Ja ir hapt richsisch gehört. Einen Motoroller haben wir uns ausgelin.

We were in Majorca on the Mediterranean island. It was very beautiful there. And we even climbed a mountain. Yes, you heard me correctly. We hired a motorised scooter.

Jan, another pupil in Class 5, also had great difficulties in German lessons. Spelling, in particular, was a closed book for him. Above you will find an extract from the text written by Jan during the diagnostic process. You can see from Jan's text that he writes words just as he speaks them, as a rule. In this respect, unlike Emilia, he has mastered phonetic writing. However, for a pupil in Class 5, this is significantly below expectations. At this level, he should be able to follow key orthographical rules. It is clear from Jan's text that he had heard something about spelling rules at some point. (e. g. 'iland'). But he had heard about them without really understanding them.

In summary, we can state the following: Both children are showing considerable developmental delays with regard to literacy acquisition. What causes such a delay?

It can't be a lack of practice – both sets of parents emphasised this. It's also nothing to do with the child's intelligence or lack of willingness to learn! The reason why they have difficulties with reading and writing is that they have not yet developed the skills required for this.



Many children with dyslexia do not enjoy writing.

Which skills does a child need for reading and writing?

In order to read and write correctly, children must grasp the function and structure of our written language and discover it for themselves. This takes place as a long development process. We can differentiate some characteristic levels. In the specialist literature on the subject, these are called strategies.

The first and fundamental strategies are phonetic writing and reading letter by letter. To achieve this, children need a range of linguistic skills. For phonetic writing, they must be able to divide sentences into words, distinguish the individual sounds in a word from one other and perceive them in the correct order. Finally, the recorded sequence of sounds must be converted into a corresponding sequence of letters. Reading by letter requires children to recognise the letters, to assign the correct sounds to them, to put the sounds together to form a word and finally to deduce the meaning of the word.

Recognition of word structures

Learning standard spelling requires an understanding of orthographic rules and the ability to follow them at the right point and in the right way. Children also need an ability to recognise word components and to be able to work with them in a flexible way. For advanced reading strategies, children need the ability to use syllables, word components, etc. as structuring aids to produce words.

Word comprehension at a glance

It is also important to comprehend several words at a glance and to build up reading expectations. This all sounds very complicated – and that's because it is. As this is the case, it is absolutely normal that difficulties sometimes occur now and again when learning these skills

It is also normal for children to develop at different speeds. Children don't all learn at the same pace! There is only reason for concern if the difficulties are not being overcome and development stagnates. If the right action is not taken at that point, the learning difficulties can evolve into dyslexia.



Letters must be recognised and the correct sounds assigned to them.

Dyslexia – what is it?

Dyslexia is a collective term for significant and long-lasting difficulties when learning to read and write. These difficulties arise when there is a chasm between the school's learning requirements and a child's individual learning requirements. Dyslexia is not a constant personal quality and isn't an illness either

The "learning by heart" strategy

Generally speaking, the difficulties start on the very first lesson. However, since many children are able to compensate by memorising words and reading texts at this point in time, they are often only identified in later years. By this point, the extent of the difficulties is then often so great by that the affected child is barely able to benefit from the lesson.

Reading - the key to education

Inadequate performance in reading and spelling does not only mean "failed" dictations and low marks in German language lessons (where this is their native language), but also leads to learning problems in other subjects. This is explained by the fact that the two cultural techniques of reading and writing are also learning methods for other aspects of learning. It is therefore clear that affected individuals might experience general learning problems. Possible consequences: Failure at school, failure in the transition to the desired secondary school or vocational train-



Many children find it difficult to recognise word components.

ing as well as a feeling of helplessness when dealing with the daily requirements of life.

How is dyslexia diagnosed?

Dyslexia can manifest in a wide variety of forms:

- By the end of Class 1, your child cannot read words and short texts independently or finds it difficult to assign letters and sounds and to write words phonetically. "Mowf" would be a completely phonetic spelling for "mouth" whereas "mto" would indicate problems. Your child possibly has a tendency to learn texts by heart and to formally memorise the spelling of words.
- Even in later school years, your child can only read one letter at a time. Such "letter collectors" have a slow reading speed,

and so can't keep up with increased requirements for reading. Your child then develops a "guesswork strategy" in order to read more quickly. Your child is unable to follow orthographic rules. Your child writes words in different versions

- Your child didn't make any extra progress despite practising at home and having extra lessons.
- Your child constantly feels overwhelmed by reading and writing requirements and quickly gets tired and exhausted.
- Your child shows signs of after-effects: Your child avoids reading and writing, is scared of dictations and reading texts out loud at school. "I can't" becomes "I don't want to". Your child's feeling of self worth plummets. The child becomes resigned to it.
- Psychological and physical complaints can occur. Our own PuLs study, carried out in 2016, showed that 69.7 percent of children with learning difficulties suffered from psychosocial stress, whilst 15.8 percent of them experienced three or more forms. Parents report that most affected children put themselves down ("I'm just too stupid..."), they can't sleep at night out of fear of the next piece of work, complain of nausea and stomach aches in the morning, are increasingly withdrawn at school or disturb lessons through hectic and impulsive behaviour. The study also made clear that the stress increased with the age of the children.

How should you handle this situation?

Don't stop believing in your child! Try to understand your child's worries and needs! Your child is not stupid or lazy. Your child wants to learn and be successful. Your child is the one that is suffering the most due to their failures. What they need in this difficult situation is your understanding, your affection and your encouragement.

Reinforcing your child's feeling of self worth

- Reinforce your child's feeling of self worth by highlighting their strengths and by making it clear that everyone has both strengths and weaknesses. You are not losing authority in the slightest by telling your child about your own weaknesses and talking about how you overcame them.
- Don't let your child's failures be a drama. They must not become the focal point of your family life. Try to handle the situation calmly.

Don't apportion blame

Blame isn't helpful. It is not your child's fault that they are finding learning to read and spell difficult. You as a parent are not to blame either, as you have supported your child according to the best of your knowledge. Nor is your child's teacher to blame. He or she has 20 to 30 children to teach at the same time. That does not leave much time to do intensive work with an individual child. The most effective way to help your child is by constructively seeking ways of overcoming learning difficulties.

Be patient! Difficulties with reading and spelling cannot be overcome just like that. Don't react with disappointment if yet another dictation goes wrong. Instead, acknowledge every single bit of learning progress that your child has made, however small. Think about whether extra practice at home could place a strain on your relationship with your child. Don't torture yourself and your child with practice materials available on a confusing market. Take advice from your child's teacher.

Set priorities when practising

- Set priorities when practising and spend more time on what you have prioritised!
 Trying to practice everything at once won't be effective
- Select the tasks in such a way that your child can successfully master them! Nothing is more motivating than success.



The goal of educational therapy is to reinforce children's self confidence.

Avoid dry practice sessions, e.g. learning "dictation words" or even whole dictation texts by heart. You may be able to achieve short-term success when doing so but it won't help to develop skills. Rather, encourage your child to find the right spellings on their own and to justify their choices

Use cooking recipes to for reading practice

- Think about the fact that your child's motivation to practice will be much greater if reading and writing are embedded in meaningful tasks. Read the instructions on games and craft materials, user manuals, signposts or cooking recipes with your child
- Encourage your child to write out invitations to their birthday party, to compose a shopping list, to annotate a photo album or to write a short travel diary. We particularly recommend games which are related to reading and writing such as "Scattergories" or "Scrabble".

Be relaxed about mistakes

Remain relaxed if your child makes mistakes in the texts they have written. Mistakes are necessary interim steps on the road to learning to write correctly. Don't make your child correct all of the errors in texts. That would put your child off writing completely. Set priorities. You

- should only correct the mistakes that your child is already able to identify. The other mistakes are still acceptable.
- Always involve your child when choosing reading texts and children's books. Also set up a little library at home as well as regularly visiting a suitable public children's library to give your child a desire to read
- Short daily practice sessions of 15 minutes are ideal. Have Sundays and public holidays off. Reading and spelling exercises require a great deal of concentration. Always make sure that your child has a quiet place to work without the TV on or other disturbances.

Finally, you will only achieve positive results by practising at home if your child actually wants your help. If this is not the case, or there is no improvement although your child is willing to practise more, you should seek professional help.



Educational therapy involves looking into the individual difficulties and skills of the child.

Dyslexia in older school pupils

Learning difficulties also occur in children and young people who have already finished primary school. Frequent problems with reading and/or writing can be observed not only in the junior classes of secondary school, but also in pupils in the senior classes of academic high schools or in young trainees.

One possible reason for difficulties with reading and spelling in older pupils is that the basics did not develop fully in the process of language acquisition. Often these difficulties only become apparent if a pupil switches to a more senior



Educational therapy with a sophisticated design can also help young people.

school, which is then a different learning environment with different learning requirements

A particular problem for affected pupils arises from the fact that inadequate foundations for written language acquisition are rarely addressed in lessons in the junior and senior classes of secondary schools. Teachers then work on the assumption that basic written language skills are present. Naturally, it will be assumed that sound reading skills are present. And a pupil who still has difficulties with assigning sounds and letters or who doesn't know when or why a consonant should be duplicated will not be taught this in the lesson. The pitfalls of German orthography are particularly evident in more senior classes. Many pupils have issues when they are asked to understand the intricacies of punctuation or the principles of hyphenation and compound spelling.

When problems continue to worsen

Affected pupils usually have a history of learning meaning that they are very used to experiencing failure in reading or writing. As part of their scholastic development, it becomes increasingly clear that their problems are not restricted to German language lessons (where this is their native language). As reading and writing are

cultural techniques, these difficulties will extend to almost all important subjects.

Systematically closing gaps

As with younger children, help for affected young people must be based on their individual profile. A diagnosis must be carried out to assess the level of development in order to work meaningfully and close gaps systematically. More so than with younger pupils, help will only be a success if it is approached as "helping the pupil to help themselves".

Many older individuals affected by learning difficulties often like to avoid dealing with written language.

Support for older individuals does however offer particular opportunities: it is often quite easy for them to approach written language systematically. In particular, they understand that strong writing skills are important for their own present lives.



Help must be given to young people based on their individual profile.

Dyslexia in English as a foreign language

For Julia, an open-minded pupil in Class 5, starting to learn English as a new subject was fun at first. She was always on the ball during lessons, and her teacher really appreciated this. Although the unusual pronunciation was somewhat difficult for her and she often forgot new words quickly, Julia's mother thought that this was actually "normal to start with". However, she did worry about writing. She brought a sample of her writing with her to the counselling session. If you read what she has written out loud as if it were German, vou will notice Julia's strategy: "Write as you speak." Julia was very good at remembering how words sounded, but she couldn't spell them properly. For that reason she wrote down what she heard (or thought she heard). However, she was not aware that in English, sounds are not at all written down in the same way as they are in German.

For example, she had almost certainly seen the word "school" written down frequently. Nevertheless, she did not succeed in combining the word sound and the word image.

Words are broken down sound by sound

Julia used the laborious method of writing down the word she had heard sound by sound and then transposing what she had heard into German sound-letter relationships: "skul". The conversation made it clear that other aspects of the foreign language did not come naturally to her: Her "weri gut" bore no relation to the "very good" that she saw in the textbook, the same applied to "mei" and "mv".

Gradually, Julia lost her enthusiasm for English. No matter how much effort and practice she put in, she was simply unable to remember how the words were written

Mei Skul is weri gut and mei Dag ist weri Hangi. Ei Lif in Borlin.

Leon is another example. "He always just went with the flow with English," said his father. He could speak the language very well, and he put in a lot of effort practising at home to help with his writing, as this Class 7 pupil had always been good at learning things by heart". But in Class 7, children are asked to write their own texts much more frequently, to answer questions or to deliver free-form speeches.

Practice didn't make perfect

Leon noticed that he had large gaps: he was missing vocabulary, he couldn't remember the irregular verbs, the word order in negation and question sentences was not clear to him. Practice didn't make perfect. Leon began to doubt himself. The diagnostic interview demonstrated that Leon was very behind with basic knowledge of rules. He compensated for this by learning things by heart and was often lucky that the lessons and tasks were designed in a way that worked for him.

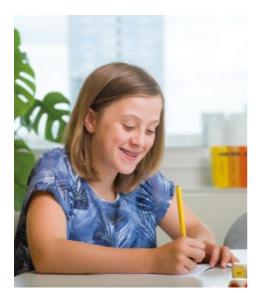


Most children with dyslexia in English as a foreign language also experienced difficulties in learning to write German.

No "feeling for language"

Since the beginning of his school career, Leon had been experiencing a lack of confidence in learning to read and write, but was able develop his own strategies to manage this in such a way that this weakness was never really noticeable. He never developed a true insight into the structure of a language or a "feeling for language". He translated texts on a word-for-word basis from English into German. Leon did not have the confidence to infer the meaning of words from the context.

Both Julia and Leon were significantly behind in learning English as a foreign language. Their parents were justifiably concerned.



As with dyslexia in German, when English learned is as a foreign language, particular difficulties also arise with written language.

Which skills are important to learn English successfully?

Learning a foreign language is a process which is actually quite complex and thus presents many hurdles for pupils to overcome. It is only comparable to learning one's mother tongue to a certain extent. English as a foreign language lessons require the child to learn the meaning of a word, its unfamiliar sound and the spelling more or less simultaneously, and then to put the words together into sentences with rules that are different from German.

When learning written German as a native speaker at least the meanings of words are already known, the sound of the language is already familiar and even complex sentence patterns are well-known.

Learning English as a foreign language requires age-appropriate development of certain skills. The following is important:

- the child must have strong acoustic and visual differentiation skills, which means that they must be able to hear differences between similar sounds (e.g. bad – bat, sing – thing), and see subtle differences in the spellings too:
 - z. B. two to too, see sea.
- The children must be able to retain what they see and what they hear for long enough and be able to make connections.

- The system and the structure of the language must be recognised and distinguished from the patterns of the mother tongue.
- The children must recognise the fact that familiar letter-sound relationships are represented differently in German and English.

Dyslexia in English as a foreign language – what is it?

This term is used when significant and lasting difficulties are experienced when learning English, which cannot be influenced just through "practice" alone, or cannot be sufficiently influenced. These difficulties are partly due to delays in the development of certain skills. As it is usually a question of difficulties with the (written) language, dyslexia may also become evident in the process of learning a foreign language such as English.

Children who already had problems learning written German are often affected, as these problems recur in a similar form. For children, learning English as a foreign language is one more thing for them to deal with that they find difficult and which triggers a fear of failure.

English is important in day-to-day life

English, like mathematics and German, is one of the key subjects for a child's school career and day-to-day life. Oral mastery of the

language seems to be the most important thing, but written ability also seems to be increasingly important.

There are therefore several reasons to help affected individuals: to prevent constant experience of failure in a school subject, to pave the way for access to continuing education, to improve career prospects and last but not least, to help with the practical requirements of day-to-day life.



Most young people want to learn English as a foreign language.

What observations can you make?

Fundamentally, all the mistakes made by "normal" learners will be found, but on a much larger scale and with greater consistency.

The following signs merit particular consideration:

 the learner finds the unfamiliar pronunciation very difficult and English sounds are replaced by similar German sounds.

- ▶ Learners mix up similar or similar-sounding words (there their), reproducing the same sounds with different letters is difficult (feet beat). Spellings are poorly remembered, words are often spelled based on their sounds in the way that would be correct in German (neis for nice).
- Differences between similar-sounding words are not heard; differences in written words are overlooked.

Mix-ups galore

- Learners struggle to remember sound and letter sequences and do not succeed in retaining words and sentences.
- They do not notice specific features of spelling or word order and they don't recognise differences with the German language.
- Phrases in a foreign language are poorly remembered and each individual phrase has to be relearnt.
- Vocabulary is only retained for a short time before being quickly forgotten.
- Learners have little ability to use the language independently and "creatively".
- Homework takes a very long time.
- Practising at home doesn't do any good.

- Your child feels overwhelmed and avoids English.
- ▶ English is "no fun" (any more).



Affected children often find it difficult to work with another language.

How should you handle this situation?

Our work with parents and children has made clear that helping at home is only effective if the following basic principles are followed:

- Accept that your child has a specific problem. Your child is not stupid or lazy – instead they need help, attention and backup. They want to learn and would much rather be successful than experience defeat
- Build your child up! This is the only way that your child will get the courage to work on difficult material.

Don't apportion blame

- Blame isn't helpful. It is not the child's fault, any more than it is the teacher's fault. During a lesson, the teacher has to look after a lot of children, so there is not much scope for providing individual support. You as a parent have nothing to reproach yourself with either, as you are supporting your child to the best of your ability.
- Additional practice at home puts a strain on family life if it becomes too much of a focus. If you do practice exercises, then do so at fixed times. Don't "descend upon" your child with phases of practice.

▶ Try to help with aspects that your child currently needs help with. As far as possible, get a precise idea of the requirements your child has to fulfil for school. Things are done very differently than they were in your own school days, especially in language lessons. For example, not much translation work is done. There are different ways to learn and manage vocabulary.

Practice the right things

- ▶ Check whether your expectations of your child might be too high, if you are going beyond the level of school material when practising. Pause when phrases like "You must have covered that", "Everyone knows that!" and similar are on the tip of your tongue.
- ▶ Create a comfortable environment for practice and take your child's requirements into account. Your own idea of an environment that promotes concentration might not match that of your child. Test out how, when and where work tends to go well. Plan the time into your personal daily routine too.
- Your child will only be able work in peace and with concentration if you yourself are not under time pressure or under strain from other things.



English can also be learned through play, e.g. using memory cards.

Before you use additional practice exercise books, make sure that you and your child are already comfortable with what the teaching material you are already familiar with can offer you in terms of possibilities and options. The explanations of grammar, the dictionary and the pronunciation notes are usually not sufficiently familiar to the children. Show your child how what you are offering can benefit them. If you use digital learning programmes, check whether they address the actual difficulties experienced by your child.

Don't lecture your child

- Don't "lecture" your child, instead, show your child how they can help themselves. Avoid learning by heart, as this can only offer short-term success. Children will only genuinely retain what they have understood
- Set priorities! Because your child is significantly behind, practice must be contentand time-limited. A quarter of an hour per day in addition to normal homework is enough.
- Include games! Learn vocabulary using memory cards (home made by your child), practice writing in a playful way, e. g. by including jokes and riddles.

Finally, you will only achieve positive results by practising at home if your child actually wants your help. If this isn't the case, you should seek help by professionals.

Learning difficulties and ADHD

"Dreamer", "fidgety child", sometimes even "troublemaker" – these are names given to boys and girls whose thoughts are not on the (specified) task at hand, who are easily distracted and who have difficulty sitting still or waiting their turn.

This behaviour becomes problematic if it leads to conflict within the family or if affected children are not able to achieve what is expected of them, and they may be distracting other children

What is ADHD?

Scientists from various disciplines have been looking into these problems for several decades. Terminology and concepts have changed several times. The current view in medicine is that attention-deficit disorders, hyperactivity and impulsiveness are symptoms of an illness called "attention-deficit/hyperactivity disorder" (ADHD).



Not all exercises need to be done at a desk. For children who really need to move about, this often helps a little

It is presumed that the cause of ADHD symptoms is a disorder involving signal transmission in the brain. Based on the effect that medication has on many sufferers, and on observations that can be made of the brain using imaging techniques, many scientists conclude that sufferers have too little dopamine, the important neurotransmitter.

It is difficult to clarify what the causes of the disorders being described are. They may involve genetic causes, poisoning (e. g. in the case of so-called foetal alcohol syndrome), but also unfavourable experiences that recur during the child's development.

What should be taken into account if ADHD is suspected?

Children with learning difficulties often appear to lack concentration in lessons or when doing homework, although in fact they don't. A child doing calculations is exerting themselves mentally, for example: as the child is not making effective progress and partial calculations are not yet automated, the child gets the wrong answers after putting in an enormous amount of concentration effort or gets the correct answers much too slowly. It is similar for a child who is still finding it difficult to use a pencil correctly and at the same time is trying to structure a word sound by sound in their head

In these circumstances, children with learning difficulties are often exhausted and frustrated after a short time. Sometimes they withdraw from the situation by leaving their desk. Or

they try to keep themselves active by fidgeting when they can no longer follow the adults and their attention slips. In some circumstances, the same children can play peacefully with dolls or figures whilst telling complicated stories.



Educational therapy often supports working with concentration.

It is therefore very important to clarify the reasons why a child is inattentive, fidgety or impulsive. If you notice that a child is behaving differently than you would expect out of necessity, it is easier to treat the child leniently.

They therefore learn different plans which serve to guide them during the reading and writing process. Effective calculation strategies help to keep track of addition and subtraction and save energy.

What role does ADHD play in the integrative educational therapy offered by the branches of the Duden Institute?

It doesn't matter if a child has an ADHD diagnosis or not: the experienced professionals working in our facilities know the problems experienced by children with extreme concentration difficulties and take them into account when planning treatment. The elements of the concentration training used in our integrative educational therapy make a contribution to overcoming concentration problems. In addition, affected children become familiar with the working techniques in their problem subject.

Parents are kept up-to-date about the content and status of the treatment through regular discussions. They learn which exercises they can use to support their children in managing themselves. Educational therapy cannot solve all of the problems associated with ADHD. In certain cases, support from a psychotherapist or medical treatment may be necessary to enable educational therapy to be successful or to make it easier. If therapists, children, parents and teachers work well together, it is possible to minimise regular concentration problems in learning and performance situations



A conversation with the parents takes place at the end of each therapy session.

Integrative educational therapy

If your child has long-term, serious difficulties with reading, writing or arithmetic, this often does not solely manifest itself in an inability to fulfil the requirements of a teaching plan, in fact there is also a danger that the child's well-being will be affected as well as their personal development. Our 2016 PuLs study found that the psychological and social situation of many affected children is already subject to severe strain before educational therapy begins. If you think that your child is also showing signs of such strain in relation to learning problems, you should seek professional help.

Ask your child's school and the school psychology service for advice on which institutions provide integrative learning therapies in your area. If you have already chosen an institution, then you should ensure that they collaborate well with your child's school from the outset.

Occupational therapy elements are part of educational therapy for many children.

For reputable providers, such collaboration will form part of the treatment.

Integrative learning therapies usually take place during lessons with the aim of re-establishing the child's ability to join in with regular lessons and overcoming the stressful emotional and social side effects.

Holistic support

Integrative educational therapy offers holistic developmental support involving both your family and your child's school. Integrative means that practices from other treatments or training processes are used and the principles of psychotherapeutic processes are taken into account. Therapists select suitable exercises according to your child's requirements and current stage of development in the problem subject.

For children with orientation problems, elements of occupational therapy are very helpful, e.g. exercises to improve perception and body image, movement exercises or exercises designed to develop fine motor skills such as cutting, crafting, building, shaping, tearing and touching.

For children who find it hard to concentrate and cannot remember anything, exercises to improve their concentration and memory are necessary. During the therapy, they learn strategies and techniques to promote focused work, self-control and self-management. They experience and test out how easily they can memorise objects, images or terms.



Working with word cards makes it easier to memorise spellings.

Exercises with love and understanding

Children with learning difficulties find relaxation exercises very helpful. They contribute to helping them to approach tasks more calmly. Conversations with your child, with you and with the teachers contribute to a better understanding of the problems and to discussing help at school and in day-to-day life.

Games have an important function in an integrative educational therapy. They help to motivate your child to learn a subject and to start enjoying learning. When playing, your child can absorb key content more easily and then remember it.

Working on the basics

The focus of integrative educational therapy is on the subject content. Learning difficulties in a subject can, of course, only be overcome through intensive work on the fundamental content of this subject. Your child can learn the content basics of the subject with the help of a learning therapist after having acquired the prerequisites. Only then will your child be able to understand more in-depth content. Gradually, their ability to join in with regular classes can be restored.

Legal regulations

How extreme learning difficulties are handled is subject to different regulations in different federal states and municipalities. Often, parents bear the cost of the therapy themselves. In certain cases, the German Youth Welfare Office may assume the costs. § 35a of the German Social Code SGB VIII (Child and Youth Welfare Act) forms the legal basis for the assumption of the costs for integrative educational therapy.

Generally speaking, the Youth Welfare Office will require an assessment from a doctor or psychologist. If it is determined that a mental disability is imminent or present, you have a legal claim to the assumption of costs by the Youth Welfare Office.

What is our approach?

Advice

The starting point of our work is free individual advice for parents. We ask about the problems that the child is experiencing, explain typical causes for specific learning disorders and present possibilities for overcoming them.

Diagnosis

We conduct an in-depth diagnosis to uncover the causes of the learning disorder. We assess the necessary skills for successful learning and the learning conditions as well as the current performance in the problem subject.

Therapy

We plan the therapy on an individual basis, based on the results of the diagnosis. Pedagogical, psychotherapeutic and subject-specific teaching measures are combined in the educational therapies that we offer. The diagnosis and the therapy are both based on a scientific concept which has been proven in practice.

Depending on your requirements, the intensive therapy will be provided as individual therapy sessions or it will alternate between individual therapy sessions and small group instruction. New content is generally worked on in the individual sessions. The child is guided in such a way that they discover rules and systems



Following diagnosis, an individual therapy plan is created. It forms the basis for educational therapy.



Learning through discovery

themselves using materials. Revision and practice then takes place through play, in small groups. In addition, exercises are also used to develop and strengthen the general learning prerequisites. We generally work with each child for one hour per week.

Specialists

The Duden Institute für Lerntherapie branches employ experienced educators, psychologists and teachers with specialist knowledge. All therapists have an additional qualification in educational therapy. They address the specific psychological situation of children with learning difficulties, approaching them with sensitivity. Each child receives support tailored to their individual profile.

Working with the environment

From the very beginning, we involve the parents in the therapeutic work. Through personal counselling, they can find out the causes of their child's learning difficulties and learn about useful forms of support. We give them tips on supporting the therapy at home in a meaningful and effective way and communicate with them about the progress their children have made

At the parents' request and in consultation with them, we work together with the school, the school psychological service and the paediatrician.

Intensive therapy

One particular form of therapy is intensive therapy during the school holidays.

Intensive therapy takes 15 hours, which are generally split over five days within one week of the holiday. The benefit: the child and their therapist can build on the experiences of the previous day in their work for one whole week. This allows the therapist to get to know the child better and helps the child to find inner stability once again. The children particularly enjoy the peace and security that they experience when learning.

When is intensive therapy useful?

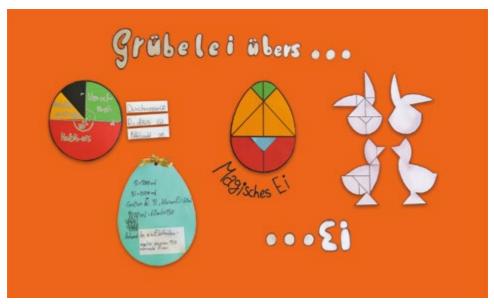
- at the beginning of the educational therapy, to inspire the child with the joy of learning and increase the child's feeling of self-worth when they first experience success
- in case of learning problems which are only limited to individual types of error
- to enable the child to make a developmental leap in a subject area
- in order to make faster progress with educational therapy
- at the end of educational therapy, to reinforce the skills that have been developed so far

What is the process for educational therapy?

Each day, the child will work with another child for part of the time. This means that participants come into contact with one another and see that other children have similar difficulties. This recognition leads to relief, thanks to the situation in which they are working, as well as an increase in motivation. Children are able to help one another, discuss things and solve problems together.

New content is generally worked on in the individual sessions. In addition, children work on a project during the intensive therapy, meaning that knowledge and skills can be implemented immediately. Often, the children and young people produce a poster themselves. The children's own achievements are thus visible and often take pride of place in the institution, or the children take them home.

With intensive therapy, parents are informed of what has been done at the end of the day. This involves them in the work. The parents' role is to support their children with the therapy and to take the pressure off them.



Even an egg involves maths! Jasper, Lilli and Layal investigated this during an intensive therapy session and designed this poster about it.

"Musings about an egg" – a project from the intensive therapy

Jasper, Lilli and Layal looked at geometric constructions as part of their intensive course in the Easter holidays. They discovered just how much mathematics can be found in an egg, which was a suitable topic for Easter. They built a tangram puzzle in the form of an egg and created various different figures from it. They also compared the size and mass of eggs laid by various birds.

Just like in this example, the children worked on a wide range of topics in a diverse and creative way. If a topic is exciting, ties in with the child's interests and is enjoyable, the motivation to engage with it more closely also increases in children with learning difficulties. This makes it easier to learn something new and to have the confidence to work on difficult tasks. The intensive learning then happens almost as an added extra. As a result of this, children often experience a significant developmental leap during the intensive therapy.

Online educational therapy

The Duden Institute für Lerntherapie have been offering online educational therapy since 2020. In the beginning, the idea was to continue educational therapy during the Corona pandemic in a remote version, Based on our previous. Good experiences with online educational therapy we continued to develop and expand the remote offering.

For this reason, educational therapists at the Duden Institute für Lerntherapie are specially qualified in this field through further trainings. In online educational therapy, the focus always needs to be in the therapeutic dialogue. In a video conference, the therapist and the child speak face to face. Therapy materials can be held up to the webcams.

In addition, computer programmes are used, which make it possible to work on worksheets at the same time so that the child and the therapist can access it with mouse or keyboard. For exemple they take turns writing, cutting or drawing something while they stay connected via the video conference.

Our own online educational therapy study from 2022 shows that parents and children see online educational therapy as an effective and pleasant alternative to face-to-face therapy. Online educational therapy has many benefits.: For instance, when families have a very long distance to the next institute or more flexibility is needed. Often a combination of both formats is the best option.



Online learning therapy

An encouraging story

As a child, Katharina did not have any understanding of arithmetic operations. Today, she works with complex mathematics in her role as an architect



Katharina (in Class 3 at the time), proudly showed her mother what she had just learned.



As an architect, Katharina often supervises construction projects on site.

Katharina remembers:

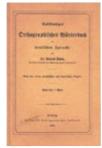
"Before the educational therapy, I had no understanding of number space. At school, I often despaired, as I just couldn't keep up. Practising at home with my parents didn't help either. My therapist was the first to show me the basics of mathematics and she managed to encourage me so that I could approach things with positive energy. I doubt that I would have come this far without her. And I would say this to all the other children too: even if it is not easy to start with and success does not come straight away, never give up. You need to continue to battle until you have overcome your dyscalculia."

Katharina today

Katharina has successfully completed her degree and now works as an architect. Now she deals with three-dimensional space on a daily basis and develops her own designs for buildings. Now and again, Katharina thinks about how things could have been if she hadn't got that help at the time: "I certainly would not have chosen a career involving such complex mathematics. That's why I'm happy that I completed the educational therapy. Not only because I now enjoy calculations again, but also because it has shown me that a long and difficult road can end in success and new possibilities."

Our namesake Konrad Duden





Left: Konrad Duden (1829 – 1911), founder of standardised German spelling Right: TheDuden dictionary was based on his "Orthographischen Wörterbuch der deutschen Sprache" (Orthographic Dictionary of the German Language) (1880).

We make very conscious reference to our namesake Konrad Duden with our Duden Institute für Lerntherapie branches. As a grammar school teacher, he was confronted with the learning problems experienced by his pupils on a daily basis – particularly when it came to spelling. In the mid-19th century, there were no overarching rules and no standardised spellings.

In order to reduce the impact of this problem, Konrad Duden initially produced a small rule book for in-house use at his grammar school. It had 163 pages and 6000 key words. Based on this booklet, he went on to develop the first "Vollständige orthographische Wörterbuch der

deutschen Sprache" (Complete Orthographic Dictionary of the German Language) in 1880, the so-called Original Duden. This dictionary quickly became a widely used tool. It became the standard reference for German spelling and therefore became an important learning aid in school lessons

Today too, reading, spelling and mastery of the German language play a very significant role as the basis of learning at school. If the basics of language acquisition, reading, writing, and also mathematics – i.e. the fundamental cultural techniques in a modern society – are not developed, serious difficulties arise in many subjects and everyday areas.

Duden is not only committed to the German language, spelling and grammar, but also to learning. For this reason, Duden has not only developed new dictionaries in recent decades, but also learning aids and reference works for pupils as well as school books. There is close collaboration between the employees of the Duden Institute für Lerntherapie branches, who contribute their experience gleaned from working with children to the development of new publications, and the Dudenverlag publishing house.

The Duden Institute für Lerntherapie branches have therefore become an essential element of the overall world of Duden.

Our locations

You will find us in more than 90 locations in Germany and Austria. Furthermore our Duden Institut für Lerntherapie "International-Online" provides educational therapy for children who go to school abroad. All contact details are on our website:

www.duden-institute.de/Standorte

Please contact the institute closest to you. If no location is near by, an online educational therapy may still be possible.

Visit our website for contact details:



Duden Institute für Lerntherapie

The Duden Institute für Lerntherapie support children and young people with:

- Dyscalculia
- Dyslexia
- Dyslexia in English as a foreign language

The support is based on the concept of integrative educational therapy. The relevant teaching methodology is combined with appropriate methods from other forms of therapy such as speech therapy, occupational therapy and family therapy.

The fundamental elements of the therapy are:

- free consultation for parents
- in-depth diagnosis
- personalised therapy plan
- individual therapy and small group session
- support from specially-trained therapists
- regular communication with parents and class teachers

The first institute was founded in 1992 – at that time it was still known as PAETEC Institut für Therapie. Since 2004, the institutes have been part of the world of Duden. Today, there are Duden Institute für Lerntherapie branches in more than 90 locations in Germany, Austria and International-Online.

LEGAL NOTICE

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