



Teaching Practice

Brainfriendly = stressfree **An important factor in the learning process** by Claudia Zekl

Nearly 10 years ago I started teaching at the Handelsakademie and Handelsschule des *bfi Wien*. Since that time I have often heard the statement that learning must be fun. A statement that seems to be very provocative for some teachers who then argue that life itself is not fun all the time and that learning is sheer hard work – as we all know. Others, however, argue that this is not true and that having fun at school is a prerequisite for personal as well as educational success at school and in life. I must admit that I myself belong to the latter group of teachers. But let me explain why.

When I was at school – which was quite some time ago – I could distinguish every day between lessons and subjects I liked and those I feared and hated, between lessons and subjects that were easy and those I found difficult, between lessons and subjects I looked forward to and those I would have liked to remove from my weekly schedule. At that time I simply accepted the situation as a fact and never asked myself why this was so.

But then I went on to university and the experiences I had there were similar. Again there were lectures, and seminars I liked and enjoyed and those that I simply had to get through because of academic requirements if I wanted to finish my studies one day. But it was during my university studies that I began to inquire into that matter. What struck me most of all in this respect was the fact that all of a sudden I had to realise that even subjects I had liked at school, in this case languages, had sides to them that I, all of a sudden, found difficult, demanding and demotivating at times. But had I not chosen those subjects I had found easy at school and loved working on when enrolling at university?

I was therefore curious to find out what was the

matter here and ever since then learning how we learn has been fascinating for me and finding out more about it has become one of my personal hobbies. Ever since that time I have attended different seminars dealing with this question and read loads of books and articles on learning styles, learning and teaching methods, and brain research. Every one of these seminars and books/articles has brought home to me one crucial message: learning must be fun, engaging, interesting and motivating if it is to be successful.

All this has to do with how we human beings learn, i. e. what happens in our brain when we learn.

Our brain consists of 3 parts: the reptilian brain which secures our survival; the limbic system which controls our emotions, feelings like hunger, love, despair, hope, our immune system and phases of activity and relaxation; and finally the neo-cortex which is where the actual process of learning takes place.

We learn (consciously or unconsciously) every minute of our lives. And whenever we learn, our brain decides whether something is worth storing and remembering or can immediately be deleted and forgotten, links new knowledge with prior knowledge, and produces pathways and connections. All this can be done best when we are fully relaxed and not under stress, i. e. when we are in a state of what Alistair Smith calls “Relaxed Alertness” (compare: “Accelerated Learning in the Classroom”). Only if we are eager to find out what is to come and feel relaxed and in full command of the situation, do we have full access to everything our brain is able to do and learning is possible. If the contrary is true, if we are under stress, feel unwell and have the feeling that we cannot cope with the situation we are in, if we find a task over-demanding – then our brains become blocked and learning is not possible.

This has to do with the fact that the main task of our brain is not to learn, but to protect us from any harm. This is a function which dates back to times when

people still lived in caves and had to defend themselves. In those days the brain always had to judge any new situation a person could end up in and decide if it was dangerous, if it was necessary to defend oneself, to run away or hide somewhere. And this innate reaction still happens whenever we end up in a situation that is new or somewhat strange to us. Then all the blood in our brain flows towards the CIA, the Common Integration Area, in the reptilian brain.

This, however, means that the corpus callosum, which links the left and the right halves of the neo-cortex is not adequately provided with blood and thus the two halves of the brain cannot work together properly. But this is highly important if learning has to take place. Let's see why.

Each of the two halves of the neo-cortex has its own duties or area of thought that are processed in it. The left half is responsible for words, figures, terms, logic, lists, sequences, language, formulae, analysis, and so on. The right half is in charge of things such as colours, images, fantasy, ideas, visions, forms, patterns, spatial relationships, music, rhythm, etc.

When we want to write a short text in English, e. g. 80 words about the members in our family or our dream room, the two halves of the brain must cooperate well if we want to produce a well-structured, interesting, grammatically correct and coherent text. The right brain delivers the ideas, the information we could include in our text, but the left half constantly checks our sentences against grammatical rules, the right vocabulary, etc. And this happens in a constant to and fro between the two halves of the brain. In this process information flows between the two halves of the brain at an incredible speed of 400 km/h. But this can only happen when there is enough blood flow to the corpus callosum, which is definitely not the case in situations of stress.

This raises the question of what causes stress. Well, stress is something that is a personal experience – things that do not mean stress for one person, can

cause stress for somebody else. But one thing is clear, everything that is completely new to us, that we are not used to doing or that we are inexperienced in causes stress and blocks our brain. And this is not only the case in testing situations, there are actually many such moments in every lesson at school.

And this is crucial information for us teachers – as we as managers of knowledge very often present our students with new situations and new knowledge – because this is simply our job: we want to teach our students various things that they do not know, that they have not heard of yet. So the question here is: What can we do so that our students' brains do not block but help us in our work, make them follow our train of thought.

From my experience it is four things that we have to bear in mind in this respect:

- creation of a positive learning environment
- use of prior knowledge
- the right attitude towards mistakes
- opportunities to repeat things again and again

As we have already seen we have to feel well if we want to learn kind of effortlessly. And there are situations like these in our lives, again and again. A learning situation like this is given when we are really interested in the learning matter out of a personal interest, when we believe that we can do it.

Let's take an example. You like taking photographs. So far you have not got a camera of your own. If you now buy yourself a camera or get one as a present, you are happy about having your own camera and you want to use it. So what do you do? You try out several things, you try to find out or read up on what the camera can do, you search for situations where you can make use of the various functions and you have a lot of fun along the way. If a photo looks great you are satisfied, if not you try to find out where you have made a mistake and you try again. Do you ever consider the fact that you are in the middle of a learning process? Do you ever stop



to think that learning how to use your brand-new camera may be difficult? Usually not.

Now years later you decide to buy yourself a new camera. You enter a shop, have a look at various models and buy one that has more functions than your old camera. What do you do now if you want to become a competent user of this camera? You have a look at it, find the similarities to your old camera and try to find out or read up on the extra functions that are now available as well. You refer to prior knowledge and add new information. And as you already know a lot about taking photos and about cameras this is easy. And again there is still no thought about the fact that there may be something that could be difficult to learn.

What this example shows us is that in situations like these we do not concentrate on the fact that learning itself may be difficult, we do not divert our brain from the actual task that we want to accomplish. And this is the state of mind that we have to be in whenever we want to learn something. And this is also true for our students.

So what does that mean for the design of our lessons?

In class we have to provide situations where our students can learn in a similar way. We have to put them into situations where they simply have fun and do not realize that they are learning something new at the same time. We can use stories, riddles, games, jokes, etc. to reach our final aim, which is to present them with new learning material. And we must always give them the feeling that they can do it, concentrate on their strengths and not on their weaknesses.

We should try to find out if our students already know something about the material we plan to teach. This is very important with regards to the fact that whenever we learn something our brain wants to link the new information with prior knowledge; it builds connections known as engrams. So this means that we should start with something that our students already know and only bit by bit make them

explore the new areas/fields of knowledge. And we must provide them with the necessary information as they go along, paying attention to whether or not they have already processed a certain step before moving on to the next one.

Moreover, we should allow them to make their own mistakes in this process, to give them the opportunity to come to terms with the new material at their own speed, in their personal learning style, using their own strengths as best they can. And to show them that making mistakes is a necessary step on their way of learning – making use of a principle of NLP – all errors are just feedback – nothing more and nothing less – feedback that this is not the way that leads to success, that you have overlooked something, that you have misunderstood something, that you have to try out another way or method. Or, as one of the best teachers I have ever had once told me: If you do not make mistakes, you do not learn anything. All learning is a sequence of trial and error until you know how it works due to personal experience.

And finally, we should not forget to offer many opportunities where students can repeat things they have learned, be it in exercises that are done at school, in “Open Learning Phases” or in self-study phases at home. This is an important thing if we want them to permanently store the new information in their brains. As we are constantly confronted with loads of information of different kinds, our brain has to filter out what is relevant for the situation we are in; the red light at a cross-roads is something we have to react to, but we do not have to store this fact in our brains for ever; and the information that we might need later on. And information is only then recognised as important and valuable by our brains if we have a personal relationship to it, if certain emotions are linked with it or if the information appears again and again. Only in these situations does our brain recognize that something is worth storing and remembering.

Obedying these four things when creating our lessons and when working with our students makes learn-



ing a thrilling experience, a voyage of discovery to various areas of knowledge as it puts our students in situations similar to those they were in when they were small children eager to explore the world. And moreover, your students will grow to love and not to fear learning which is a guarantee for success.

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