

## **Understanding the human brain** (Source: Vera F. Birkenbihl)

The brain is there to recognize again and to remember, e.g. “friend or foe” or “pleasant or dangerous” situations.

A living being with a brain can survive more easily. The brain has not developed to be used for memorizing or rote learning, e. g: facts, numbers of years.

That means that we do not learn because of the way our brain is built up.

What we learn at school about learning contradicts in many ways the purpose of the brain.

There we try to learn despite the way our brain is structured. School expects absolute knowledge. School rarely is the place for experiments or discoveries.

Learning in a brain-friendly way means to learn according to the functioning of the brain, and not against it.

Vera F. Birkenbihl refers to researchers such as: Ellen Langer, Frank Smith „Insult to Intelligence“, (all books are strongly recommended, but only available in English) or Daniel L. Schacter „We are memory“.

In this book he describes how memory works.

He says that memories always have to be reconstructed in a new way. In order to remember we need a certain stimulus. From this stimulus a picture of part of the event develops. Then one thought leads to another which is called association.

Memory is never absolute, but always associative. When we tap our memory for a topic, we only associate superficially. The more we do it, the deeper we get access to our knowledge.

e.g. the activity: town, country, river

We constantly create works of phantasy and call them reality. Our brain is not meant to separate fact from fiction.

In the past scientists believed that intelligence is innate. Today we know that there are three aspects to intelligence.

1. Neuronal speed is innate and works with new things.

2. Acquired knowledge – the knowledge network or archive will be developed more deeply by neuronally slow people.

3. Strategy / method or approach helps in up to 98% to learn faster and more effectively.

Research by Ellen Langer on learning success when studying scientific texts showed that students who were given the original texts only acquired 60% less knowledge than other students. In the other group students were given the same texts concerning facts and information. However, the use of softeners in the texts such as „probably“, „it can be expected“, „it is assumed“ proved that our brain retains information better if there is room for individual thoughts and ideas.

From the various studies we have learnt that LEARNING as nature made provision for means: additional – by chance/accident – incidental.

This kind of learning is essential for survival and has happened for ages in a playful way or in respective situations.

**SPIEL** stands for - Learning happens simply and always when it makes sense or is fun. (LASSIE stands for – Learning is always simple when it makes sense, is incidental and entertaining.)

|                                 |                         |
|---------------------------------|-------------------------|
| <b>S</b> - Spaß oder Sinn macht | <b>L - learning</b>     |
| <b>p</b> - passiert             | <b>A - always</b>       |
| <b>i</b> - immer wenn es        | <b>S - simple</b>       |
| <b>e</b> - einfach und          | <b>S – sense</b>        |
| <b>I</b> - Lernen.              | <b>I – incidental</b>   |
|                                 | <b>E - entertaining</b> |

For learning it is essential to let go = to open up  
Concentration means = to close/ to shup up ;-)

Spelling activity – text with jumbled words

### **Rael czary, it ralely wrkos**

Acocdrnig to an elgnsih unviesitry sutdy the oredr of letetrs in a wrod dosen't mtttaer, the olny thng thta's iopmranntt is that the frsit and lsat lttter of eevry word is in the crcreat ptoision. The rset can be jmbueld and one is stlil able to raed the txet wiohtut dclftfuiiy. That si beacuse ew do ton raed eveyr sinegl eltter, but teh wrod as a howle.

### **Important so that learning motivation is maintained:**

Activity,

Associative thinking,

Questions and comparisons

### Corrections of the word „Diktat“ (dictation)

DICKTAT / Focus is centred on the „C“, and thus it will probably be misspelled again the next time.

DICKTAT / detective game for students: find the mistake yourself – everything is allowed: ask the teacher, look up the word, etc.

DiKtat / correction in bold print - focus is led to what is correct

DIKAT / Focus is centred on the “KA“, and thus it will probably be misspelled again the next time.

DIKAT / detective game for students: find the mistake yourself – everything is allowed: ask the teacher, look up the word, etc.

■ If letters are missing, blacken the incorrectly spelled word and write the coorrect version above it.

DIKTAT / correction in bold print - focus is led to what is correct

### Further help is provided by the ABC list:

- ABC List with words which have been difficult
- If the word wrong again – highlight it
- If the word wrong again – write „M“ for memorize and provide a mnemonic device – e.g. „When the dictation was invented we didn't have a “C” yet. → This sentence is worth remembering for the brain.