
Neuromyth 3

There is a visual, auditive and a haptic type of learning

The type of learner theory states that learning occurs through different channels of perception. Under consideration of the right channel of perception, the individual learning efficacy can be improved. This theory dates back to Frederic Vester, who distinguished an auditive, a visual/optic, a haptic and an intellectual type of learner. According to Vester, the type of learner is biologically determined and can be characterized by the predominant use of one channel of perception: The auditive type of learner learns by using the ears, the optic type of learner by using the eyes, the haptic type of learner through usage of the skin (i.e. by touching), while the intellectual type of learner learns in a more abstract way: through understanding itself. Frederic Vester published his theory in 1975 in his book "Thinking, Learning, Forgetting". Since then, there have been many more editions of this book, in which the type of learning theory has remained unchanged, irrespective of the advances in brain and cognitive science. As well, since then, the type of learning theory made it into many schoolbooks and books of pedagogy and didactics. Meanwhile, teachers apply this theory in the classroom. They are e.g. paying close attention which student uses which channel of perception in order to provide the student with the best-fitted input. This shows good will. However, even though this theory is quite plausible for laymen, experts do not accept this theory and its application in the classroom. Prof. Maik Looß, a professor of didactics, showed that the type of learner theory lacks the logical consistency and soundness of scientific reasoning. She criticizes the classification of the type of learners. Vester characterizes three types of learners through channels of perception (hearing, seeing, feeling), while the fourth type of learner is not using a channel of perception but instead learns through understanding itself. Logically, this fourth type of learner does not fit into this categorization. Learners of this type merely learn with their intellect, i.e. without using other channels of perception. This raises the questions where the intellectual type of learner gets his learning material from. Does he not need to use his senses therefore? As well, this categorization implies that the other types of learners are not learning with their intellect, but only through their preferred channel of perception. The problem here is that Vester equates perceiving with learning. Here again, the theory fails logical consistency. Students just do not learn and understand things merely by seeing, hearing or touching them. To understand the logical inconsistency of the theory, let us examine if it works in practice. Imagine a classroom, where students are to learn a formula in physics.

Now let us scrutinize the learning process of the different types of learner. The visual type of learner sees the letters and the mathematical symbols of the formula written on the blackboard. The auditive type of learner hears the teacher saying the letters and symbols of formula and the haptic type of learner has the problem that a physical formula can hardly be grasped, though maybe through Braille. Now, do these types of learners understand the formula by seeing, hearing or touching it? No- the input of the senses has no meaning itself. For understanding and learning, a further step, a step beyond perception is necessary. The learner needs to interpret the input of his senses and give this input a meaning. Only by this second step, through endeavouring to find a meaning, understanding and learning of the formula is achieved. This second step is an intellectual achievement. Hence, the "intellectual type of learner" is a consequence to the other "types of learner". First, students need to perceive, then they process the perception and learn what the perception means. Considering this process, one can conclude that strategies to optimize learning must include an approach of "learning through understanding". Thereby, science has not yet found a good and easy way towards efficient understanding and learning.

More references:

Vester, Frederic (1998), *Denken, Lernen, Vergessen: Was geht in unserem Kopf vor, wie lernt das Gehirn, und wann lässt es uns im Stich?*, 25th ed., dtv, München

[Looss, M. \(2001\), "Lerntypen? Ein pädagogisches Konstrukt auf dem Prüfstand", *Die Deutsche Schule*, vol. 93, no. 2, pp. 186-198](#)

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