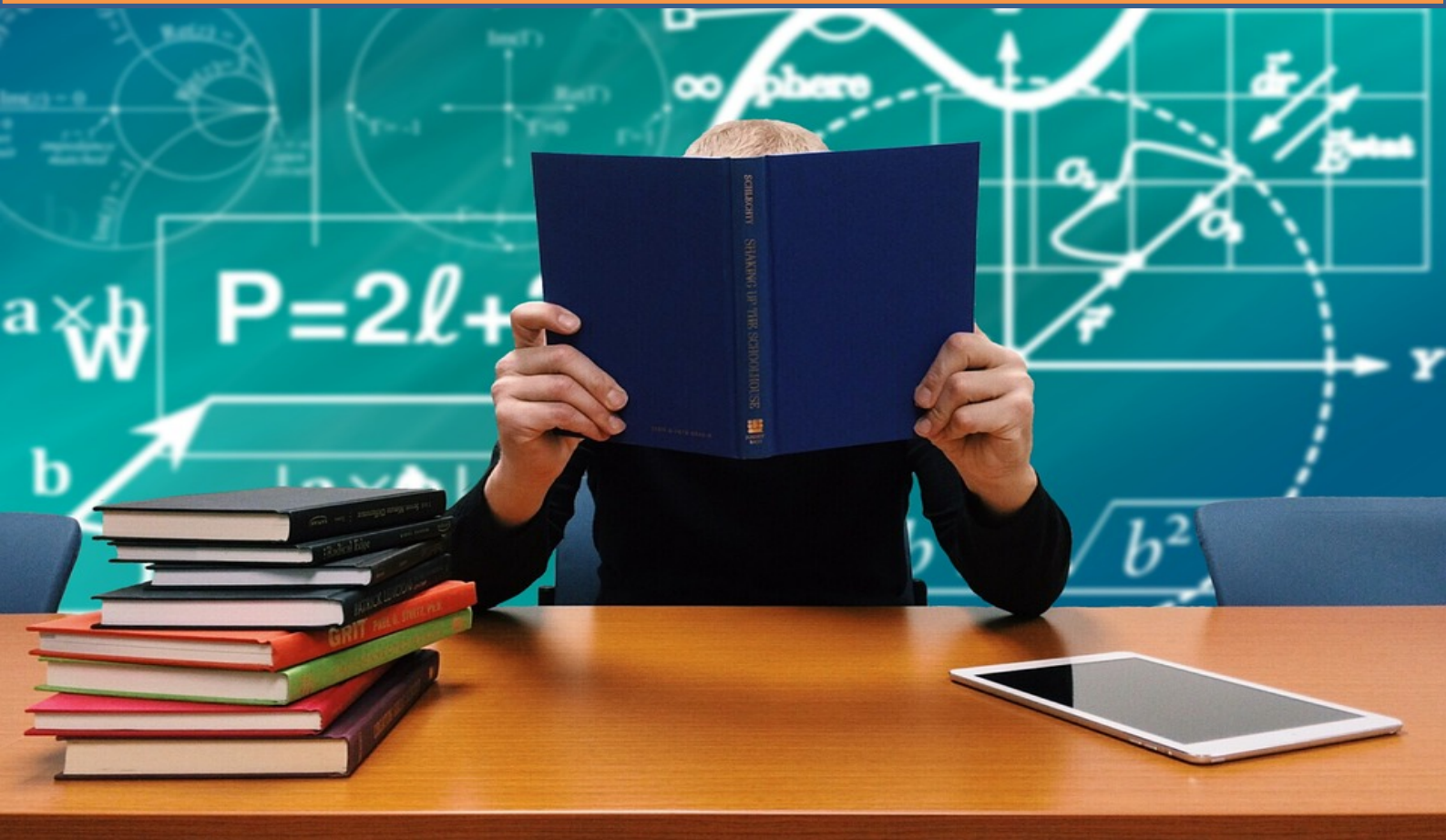


Difficulties with learning

Causes and solutions

Using the 7 learning styles as an educational tool



[Jean-François MICHEL]

IMPORTANT – before you read this guide

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Chapter 1 – Little stories of underachievers

1. He wanted to become a pilot in the air force. With poor abilities and a precarious health, he was unwanted in the military

Georges is a skinny student. He is rather inattentive in class and has a strong character. He even slaps a teacher in high school. He is passionate about flying and he naturally aspires to become a pilot in the air force.

Once his schooling is finished, he presents himself at the nearest barracks to prepare for his military service and join the air force.

The military doctors do not share his views: how can this scrawny and frail young man who is constantly held back by health issues serve in the army? "He's going to get hurt, he can't even withstand a one-kilometer foot race", exclaims a barracks captain. The military doctors pronounce Georges unfit for military service.

What a difficult start! No matter, Georges opposes the decision and insists on joining the air force by putting pressure on the decision-makers. He even uses his network of influential acquaintances. Finally, he benefits from a little help and, in spite of his weaknesses, is accepted on an air base but only as a mechanic.

It is the first step but his ultimate goal is far from being reached. Georges wants to be a pilot. Yet he has to accept unrewarding chores such as cleaning up living quarters, hauling oil containers and mostly, watching other young men fly their own plane. He cannot stand it for long and once more insists on being taken on as a student pilot.

After a few months and with stubborn insistence, he succeeds in joining (illegally) a group of young novice pilots. Finally!

At 20 years of age, has Georges fulfilled his dream? This is far from certain. The dream has even turned into a nightmare because Georges' training as a pilot is a real disaster.

Shortly after the beginning of training, he misses two landings. He breaks down several aircrafts. His instructors are incensed: « How can this control stick dunce still be here? » Among his classmates, he has a reputation for being a “plane wrecker”. His instructor takes fright of this daredevil and writes these notes about him: “too much self-confidence, craziness, and unbelievable luck!”

With no progress in sight and an increasing number of aircrafts sent for repair, the instructors' recommendation is clear: this student does not understand the nuts and bolts of flying. Georges is threatened to be expelled from the air force school. But he is lucky to have one instructor supporting him, which for many makes no sense. The army instructors worry: “What if he kills himself or someone else?”

Yet even if Georges' beginnings as a pilot were quite laborious, the instructor was right: notwithstanding his early reputation as the pilot dunce, Georges Guynemer was to become an ace pilot of French aviation. His tactical sense and his exceptional ability to operate a plane (while just shortly before he was to be expelled from the army) made Georges Guynemer a real hero during the First World War and a model of bravery and genius for his comrades in arms. A fine destiny indeed for a dunce.

2. With poor results in chemistry at the baccalaureate level, he wanted to become a chemist...

Louis is a sensitive student who loves to daydream. He is certainly hard-working but his teachers notice that he gets easily discouraged. He shows goodwill but does not stand out from others and his grades are not usually higher than average. Nothing could make anyone predict an exceptional future that would go down in history. His family does not encourage him to follow the path of the elite, which is usually higher education. His father does not plan on paying prolonged schooling to his son.

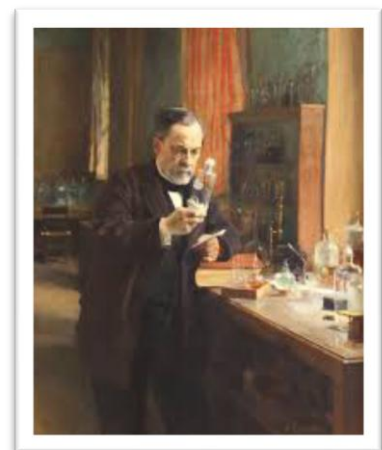
Louis would like to choose chemistry as a field of study and get into an engineering school. A bitter disappointment!

Louis' baccalaureate grades do not seem strong enough to pursue his goals. His recommendations and grades in chemistry are poor. It is a difficult setback for this young graduate who wants to choose chemistry as a specialization and prepare for Normal School.

Considering his grades and the level of his abilities, Louis appears too ambitious and is in all likelihood heading directly for a major disappointment. His natural tendency to get discouraged and his homesickness are also weighing down on him.

However, Louis has two major assets that his teachers have always highlighted: precision and a gift for observation. Those are indispensable qualities for the pursuit of a scientific career. Louis enters the competitive exam for Normal School. The result is not fabulous but it is enough to be admitted with the not-so-glorious rank of 15 out of 22. He decides to enter the exam again the following year. This time, he performs better and ranks 5th.

What happens next? He pursues his studies at the Normal School and graduates. A nice performance for someone who has overcome many hurdles in school and was not destined for such a path. But it got better. He was to become a scientist who



made major discoveries and his name would go down in the history of humanity:
Louis Pasteur.

These two stories (and we could cite many more) demonstrate that nothing is set in stone. It is certainly possible to have a rough start and go on to become an ace. If a student performs poorly in mathematics, English or foreign languages, they may still be able to succeed in those domains.

I am in fact a perfect example of this. In school and during my experience in higher education, even my kindest teachers have always hinted that I was not gifted in foreign languages and that persevering was useless. My grades, which never exceeded 35%, seemed to prove them right. Taking numerous private lessons and participating in language study trips in foreign countries did not even help. Yet I taught for almost 15 years in Germany and of course in the language of Goethe, which I had to learn in record time.

What happened? What suddenly made everything fall into place? In my case, being in Germany helped, as well as the method used to learn German. But those are no explanation for what truly made a difference.

Chapter 2 – What underlies our intellectual performance?

1. A psychological effect

Why do we sometimes obtain good results and sometimes bad ones? Why do some succeed in school and others do not? Obviously, the lesson or course must be mastered but this may not be enough.

Did you ever fail at something even though you were perfectly prepared for it? Did you, in the same curious way, ever succeed while feeling entirely unprepared? So then, what has happened?

Everything is based on our state of mind. What does that mean? In a state of fatigue or stress, research has shown that the brain is much less efficient. The processes for memorization and creativity are slowed, even halted. However, when we are

confident or having fun, our intellectual agility is much bigger, which heightens our likelihood of reaching our goals. That is how students who succeed do it, more or less unconsciously. But of course, educational achievement is not limited to this.



For example, did you ever dry up during an exam even though you had thoroughly prepared for it? You knew your topic inside out! But suddenly you seem to remember nothing! Disappointed, you hand back your exam copy and when you are about to leave the room, everything comes back to mind and you finally realize that this exam was actually rather easy. The solutions now seem obvious to you. What has happened? You have done nothing special but leave the room!

In fact, your state of mind has changed, or rather you have changed it unconsciously: as soon as you hand back your copy, it all seems behind you and you think of resting. You are relaxed. It is over! Your state of mind has changed and you are not in a stressful state anymore. This explains why we succeed at things without really expecting it or why we fail at others even though we had worked really hard to prepare.

Sometimes we want something so badly that we unwillingly put ourselves in a tense mood, a negative state of mind that results in failure. For example, we all more or less have felt this during our driving test.

Your intellectual and cognitive performance is dependent on your state of mind. When you feel stressed, discouraged or tired, your performance will suffer. When you are motivated and passionate, your performance will greatly increase.

This is the reason why it is fundamental to find enjoyment when we learn or undertake a project. Enjoyment is the motivation that urges a top-level athlete to pursue and continue with intense training. Without pleasure, the athlete will stop.

Those who have a learning trajectory similar to that of Georges Guynemer or Louis Pasteur work more and persevere through setbacks because for them learning is

associated with pleasure. This is why it is better to revise for an exam or engage in creative work (such as writing a thesis, a presentation or even a book) when in a good state of mind. Instead of staying confined at home and insist on working or on writing a text, it can be

To improve your state of mind, work on changing your perception of what you are going through.

wiser to go out and breathe some fresh air. “Wasted time!” some might think. Maybe. But this bit of wasted time is compensated by increased productivity and efficiency. Instead of spending 3 hours trying to solve problems with great mental torture, it is often more productive to see a friend or go for an afternoon walk because, upon returning, the solutions will be found in 5 minutes, and the overall time spent will be lessened.

I remember a friend who was studying law to become a judge. She was finishing her last year at the school for magistrates in Berlin. She had worked relentlessly during a whole year to prepare for the competitive exam which was known to be difficult. She had not finished revising the whole program and only had 15 more days to prepare. She was under tremendous stress because she felt like she had not worked hard enough. It was not just her imagination because she actually did not know the whole program. And nothing more seemed to fit in her memory.

She felt her mind on the brink of a breakdown. Clearly, there was no point in persisting and wasting time, so she decided to leave for a week-long vacation in the mountains. This break and the resulting contact with

If you need to revise for an exam or an evaluation, the key is to pay attention to the quality of your state of mind.

nature changed her state of mind. When she came back from her vacation, she decided to spend the remaining week preparing for her competitive exam, and much to her surprise, she passed (while still feeling bitter as if she had failed)!

2. A matter of perception

If performance and intellectual capacity depend on our state of mind, how can we change it? Why are some students motivated by school while others are not? How is it possible to find enjoyment in unpleasant activities such as mathematics? It is well-known that mathematics are terrifying for a lot of us. Yet some are passionate about

this discipline, or at least find some enjoyment in it. How can this be explained? Most simply, through our perception.

Do you think that we can perform well intellectually if we do not like what we do? Of course not! And it is exactly the same for a student who attends school. If they do not like the school environment, they will not be able to tap into their intellectual capacities, as immense as they may be. It could be argued that we cannot always get what we want. Of course not, especially in school. Sometimes, we must simply accept constraints. But there are different ways to accept them. Either you have a positive perception and transform this constraint into a challenge (a blessing in disguise). Or you have a negative, even very negative perception and you enter a vicious circle.

In the latter case, things become a real ordeal. The person's state of mind becomes totally negative. What do you think will happen to school or university grades? They can only be poor. This is compounded by very poisonous feelings: that of being a hopeless case and especially, of being worse than others. The comparison trap destroys any willpower that was left.

Remember Albert Einstein. He did not like school because he thought that there were too many constraints and useless things to learn. He did not like literature, which was reflected in his grades. However, he loved physics and his uncle played a role in this love by modeling immense pleasure in deciphering nature's laws and by keeping up to date with scientific progress. Eventually, Einstein turned the constraint of school to his advantage: he preferred to work at home and daydream in school.

Of course, school is what it is. I am not trying to convey that school is a source of demotivation. I only want to clarify that the main difficulty for young people is that they do not know how to change their perception of school. It is perceived as a chore rather than an opportunity. Young people are feeling bored rather than enjoying themselves. What can be done? Students' motivation is not solely the teacher's responsibility. The student must also take on a large part of this responsibility. It is widely known that a person who refuses to take charge of themselves cannot be helped.

In the fight against school failure, the key is to help the student change their perception of their abilities and of school itself. This is how you can change their state of mind. I admit that switching from a vicious circle (negative state of mind – bad results) to a virtuous circle (positive state of mind – good results) is no easy task.

However if you are a parent, a teacher or an instructor, showing to your child or student that they learn differently from others while having the same intellectual capacity is often enough to transform their perception. Helping them define their learning style will reinforce this new positive vision of school or training. It is the parent's or the teacher's responsibility to communicate an inspiring perception of their subject or of the school system, especially to demotivated students, to those who lack interest in school or to those whose vision does not compel them to work.

3. A simple technique

How can we change and adapt our perception? If the root of motivation is a matter of perception, how can we modify it to our advantage? For example, how can we transform our perception of mathematics? How can we feel motivated by math?! Yet some students are able to feel motivated by it, so why not us?

The mistake is to believe that math does not like you and that the feeling is mutual. The reality is that you do not know how to make math interesting, you do not know how to alter your perception of this subject. Those who succeed in math have a perception that enables them to enjoy this discipline.

Much rests in how you ask questions. The brain reacts brilliantly to all queries: it always finds an answer. You simply have to ask the right questions. If you ask yourself, "Why don't I like math?" » you will obtain excuses such as « Because I am bad » or « It is the teachers' fault because they are unclear". However, if you ask yourself, "How can I make math learning fun?" or "How can I have a good time?" you orient your brain to find solutions.



As we have just seen, we can choose our perception of reality and it becomes our source of motivation. If you want to orient yourself toward school success or, if you are a parent, help your child succeed, it is important to learn to have a good perception. School success is not a matter of destiny or serendipity.

4. We all learn differently

We all have different ways of learning, of assimilating information, and of reasoning logically during math, physics or economics exercises.

Unfortunately, our educational system (in high school or university) cannot take into consideration each student's uniqueness: how could an instructor in a business, a teacher, or a university professor adapt to each person's learning needs with classes reaching 20, 30 or 35 students?

If a student does not understand the course material, it is simply because the teacher or instructor tackles topics in a way that is different from the student's way of learning. What matters is to become aware that each person has their own style of learning. It is especially important to understand how we learn best and to not confine ourselves in situations of failure or underperformance at school.

Do we know, for example, that Albert Einstein did not like school? He preferred to learn alone in his own way and was thus a solitary and non-conformist person. His attitude was exasperating to his teachers. Was he simply being provocative? Not at all! He simply had enough genius in his youth (already!) to understand that he learned differently and he decided to work in the way that was best for him. His grades in math and physics were excellent even if he lagged somewhat behind in other subjects.

In my case, my biology teacher had pointed out that it was important for me to understand « the why of things ». It was useless for me to take notes if I was not 100% certain to understand what I was writing down. He advised that I instead listen

carefully in class and not hesitate to interrupt him if something was unclear. At home, I should spend time understanding “the why of things”.

For example, instead of blindly learning a mathematical formula, my work was to understand its meaning and why it had been written in this way. My biology teacher had promised to ignore the homework that I did not have time to finish because I spent more time trying to understand the meaning behind the material and he convinced my math teacher to do the same.

Another example is the case of the failing sophomore student to whom I was giving private lessons. I was surprised by how much this high school student entertained doubts about everything, and especially about himself. After each exercise, he would mention: “This is what I found but it’s wrong anyways”. I demonstrated to him that he could reason very well and that he was able to solve complex problems. This was enough for him to gain back some self-confidence and after only two private lessons he was able to obtain more than satisfactory grades not only in economics but in other subjects as well.

My biology teacher had, in the same way, demonstrated to me that my learning style was different from the learning style of my classmates. I had to become aware of this and make sure that my difference was respected. I also had to stop labelling myself as a failure in school.

Finally, becoming a good student can be relatively simple. I am convinced that holding external factors responsible for our difficulties, such as teachers, instructors, the system or even destiny, is pointless and does not address the right issue. The key is to examine our own learning style, understand if it is appropriate within our context and figure out how teachers can help.

Discover your learning style (see the next section) and explore how you could learn more effectively. Do not let yourself feel destabilized because others understand faster or obtain better results than you do. If you are a teacher, instructor or parent, try to adapt to your students’ or child’s learning style. And remember one thing: school failure has little to do with destiny or with someone’s genetic predisposition.

5. How do you learn effectively?

Here is a little exercise. Take a minute to answer the following question: how do you learn in a way that is effective?

You may tell me that you need to do summaries, to underline, to write, to repeat, to draw graphs. However, those are not learning strategies. They are better than nothing, but they are insufficient because they are imprecise and not very effective. Knowing this, it is much harder to answer the question, isn't it?

During my career as teacher and instructor, in which I have had thousands of students, I usually received two types of answers when I asked "how exactly do you learn?"

The first type of response was "I don't know, but I manage well anyhow". It usually came from students who succeeded easily in school.

The second type of answer was "I have some idea, but in any case I have a hard time memorizing the material". It usually came from students who were experiencing varying levels of difficulty.

The key is to know precisely the way that we learn effectively.

In short, none of the students really knew how they learn. And this has not really changed over time. In summary, there were students who succeeded easily and for whom the question was more or less relevant. And there were those who, in the best of cases, only had a vague idea.

And here lies the problem: **when unaware of one's precise way of learning, it is impossible to adapt, to anticipate. For the student, this means being unable to change their negative perception of learning and of school for a more positive one.** And no matter what the student does, their mind unconsciously and insidiously

reduces their whole experience to the following cause and effect relationship: *if I do not understand, if I face difficulties, it is because I am not good, I am not intelligent.* Worse, the mind could conclude: *if I do not understand, it is because I am a hopeless case.* The key is thus to know precisely the way that we learn effectively. This helps in changing one's perception so that one can experience pleasure in learning.

Chapter 3 – How to become aware of one's learning style

How it is possible to become aware of one's learning style and master this process? Is it complex? In fact, it is very easy. It is enough to simply use the tool of the "7 learning styles".

If you wish to know how the tool was conceived and built, I refer you to the end of this guide in the section on the "Story of the 7 learning styles".

1. Simply knowing how we learn most effectively: the 7 learning styles

The educational tool of the 7 learning styles helps you to understand precisely how you learn, but also how you teach if you are a teacher. How does it work?

The learning style of a person is made up of their identity style, their motivation style and their comprehension style, a combination of only three elements.

On a first level, the identity style concerns the student's attitude in a learning context. Seven different identity styles are defined: the perfectionist, the intellectual, the rebellious, the dynamic, the agreeable, the emotional, and the enthusiastic.

For example, the perfectionist is a student who will always make sure that their work - homework, thesis or other - is irreproachable. If they judge that their undertakings are not perfect, according to their own standards, they become

prone to discouragement. The typical symptom of this behavior is the expression of comments such as « I am useless» or « I can't do anything». Such a downward spiral of self-diminishing thoughts can lead to a mental block. Teachers, instructors and parents must be vigilant when criticizing a student with a perfectionist style. Negative comments such as « you are not good, your work is bad» have a great destructive power for the perfectionist. A more appropriate attitude is to give value to what can be perceived as imperfect and to change one's vocabulary – what is « bad» can be transformed into « points to improve».

The emotional will not be sensitive to this attitude. They react in a very different way. They do not care for perfection. What matters to them is creativity and beauty. They can be talented in artistic domains. However, they can easily feel downhearted without knowing exactly why. Do not try to reassure or comfort them by asking what is wrong. Often, they do not know. They have difficulty mastering their emotions which can lead to theatrical reactions when upset.

On a second level, the motivation styles, four of which exist, concern the external elements that determine a student's interest.

For example, a person who is sensitive to the motivation style «is it useful? » will not feel motivated as long as they do not know how the subject matter can be useful. One of the possible roles of a teacher or instructor with a person of this motivation style is to explain the relevance of the subject. For example, when I hear a student tell me «I do not like this topic, it won't be useful to me! », I can be convinced that this student has this motivation style. It is important to note that a person can hold two motivation styles with one being dominant.

On a third level, the three comprehension styles enable us to understand through which sense (visual, auditory, kinesthetic) information is being registered.

It is important to note that these terms, expressed for the first time by neurologist Jean-Martin Charcot, are generic and are not related to the way they are used in Neuro Linguistic Programming (NLP), for example. In addition, neuroscience research has demonstrated that there are no visual or auditory memory. For example, visual memory lasts a quarter of a second. (1)

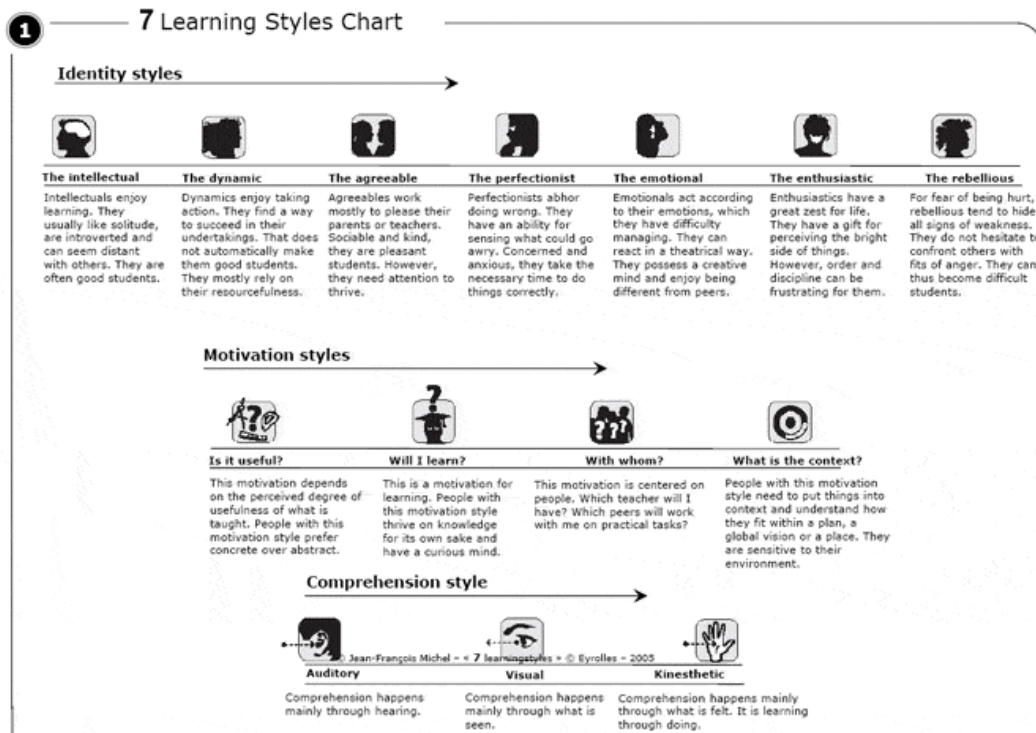
Visuals, for example, need to see things, such as with graphs and colors. They will have great difficulty understanding a class in which the teacher or instructor uses only speech. The problem is that certain subject matters can hardly be taught otherwise, for example philosophy, French, or to a lesser extent, economy. In contrast, students who register information mainly through audition will feel at ease.

Kinesthetics need to feel, to learn through doing, to understand the reason for things. This is one of the reasons why we find many people with this style in manual jobs. This population is more at risk of school failure. However, a person with a kinesthetic style is not necessarily doomed to fail or destined for manual work. They simply have the kinesthetic style as a dominant feature, as a preferred sensory canal.

We all have the visual, auditory and kinesthetic senses. Which sensory canal do you prefer for processing information? Your answer is your dominant sensory canal and it is combined with the two other sensory canals which play a lesser role.

Learning style = 1 Identity style + 1 motivation style + 1 comprehension style

An example of learning style : "Dynamic"+ "Is it useful" + "Visual"

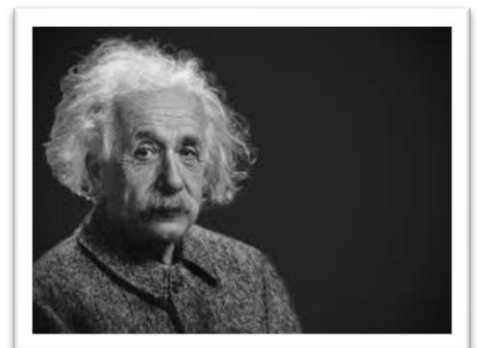


(Chart of the 7 learning styles available on page 24 of this guide)

2. Which learning style was Albert Einstein's?

Each one of us combines the three levels of styles (identity style, motivation style and comprehension style) to make up a global learning style which determines the way that you learn.

For example, Albert Einstein had an intellectual identity style. In school, he would isolate himself and he preferred to work at home, on his own. This trait was among those most remembered by his teachers.



At the University of Zurich, Einstein was known for his lack of diligence in class. He had more faith in his personal work. He perceived periods of compulsory work in class as an ordeal. There were moments where he lost all motivation for physics. Once he graduated, he led his work on physics on the fringes of the scientific community.



Einstein had a motivation style of the type « is it useful? ». He became interested in physics at a young age. His uncle often took Albert with him at the electrical equipment factory he owned so he could visit the workshops. There, Albert found meaning in learning physics to satisfy his curiosity. Naturally, he also found it useful to learn mathematics. He was often ranked first in those topics but would lag behind in the rest of his schooling, especially in literature. He did not find much motivation for investing himself in literature, if only minimally in order to graduate. Incidentally, he failed the entrance examinations at the University of Zurich because he was not sufficiently strong in non-scientific disciplines. Einstein's attitude was perfectly legitimate for someone with a fundamental need for understanding the « why of things ». In his opinion, there was too much rote learning and it was difficult to ask questions in school, and even more to obtain answers. However, he was completely misunderstood by his college teachers.

Finally, Einstein's comprehension style was mainly kinesthetic (with a visual component). Young Albert was pretty slow. Why? Because he needed to feel things. When asked how he found his famous theory of relativity, he answered that he imagined feeling the effect produced by sitting astride a beam of light.

3. Behaviors differ according to styles

According to the student's learning style, it is important to understand that different, even contradictory, behaviors will be exhibited.

For example, even if they are attentively listening, a kinesthetic student may not understand what you are saying, even though you keep on repeating the same

explanations, whether it be a mathematical formula, a theory or homework instructions.

As a teacher, this situation can be disconcerting. Imagine that you are explaining something, obviously something that seems simple to you, and that the person you are talking to is totally silent, and in spite of your efforts to be as straightforward and clear as possible, they still do not understand. Frustrating, isn't it?

And yet, kinesthetics will need to feel what you are saying, which is no easy task and can be tedious for the mind. Therefore, kinesthetics need to be given time to digest information.

According to one's identity style, reactions when faced with difficulties will be totally different. Let us consider the example of a person with a kinesthetic comprehension style combined with the identity style "agreeable". Even though they have not assimilated what you are explaining, they will not dare mention it for fear of seeming disruptive or stupid.

It is however the worst attitude for them. Because they still do not understand, they will assume that their teacher is unclear or that the subject matter is too complicated to master. On the other side, the teacher who thinks that their student has assimilated the explanations will be surprised to realize that in the end, the student is still in the dark. This is how misunderstanding is bred in the relationship between student and teacher.

What must be done? The student's mistake is to entirely blame the teacher (who explains poorly). The teacher's mistake is to entirely blame the student (who has limited intellectual ability). Both must become aware of how they function differently. Students must know how they function and learn best, but very few are aware of it.

This is the reason why each time I take charge of a new class, I insist that each student becomes aware of their operating mode when learning. Using the tool of the "7 learning styles" greatly facilitates this understanding and this realization. However, I require that all students convey their learning style to me because I cannot discover

it by myself, even if, when observing their behaviors, I can sometimes guess what it is.

The teacher or instructor must become aware that each student is different, and especially different from them. Lastly, one must take into account that we all have the same brain, and thus the same intellectual potential. From there on, the teacher can be in tune with their students. Being in tune does not simply mean hearing the student but being attentive and understanding. The nuance is subtle but makes all the difference.

4. How to discover one's learning style.

There are many ways to discover one's learning style. The first way is to explore the chart of the 7 learning styles (available at the end of this guide) and to figure out which style seems to best correspond to one's way of learning. This method sounds simple but it has a major disadvantage in that we might try to see ourselves in a style that is not truly our own. In addition, it is very difficult to have a clear vision of one's own style. Why? Because our learning style is influenced by unconscious psychological phenomena. It is not easy to become aware of what we do not perceive in day-to-day life.

The second way to discover one's learning style, which is more simple, comfortable and reliable, is to take the online test of the 7 learning styles on the web site 7learningstyles.com. According to a survey conducted by the EPHEC of Bruxelles as well as experience gained in 1600 schools and training centers, the test has a reliability of 85% to 90%. Aiming for 100% reliability would not have necessarily been better. The test contains 50 questions (which take about 15 to 20 minutes to fill out) and including more questions to increase the test's reliability would become a drain on attention. In addition, the users must keep a critical mind. As reliable as the test results may be, they should not be assimilated as absolute truths.

The test gives a precise idea on the way we tend to function in an educational setting (whether a learning or a teaching situation). It does 90% of the work and helps the student reconsider their work methods and find solutions appropriate to them. The last 10% must be done by the student. To this purpose, detailed comments are provided along with the results.

Lastly, it is important to know that one's learning style does not change with time. Whether you are 15 or 77 years old, it will stay the same. However, behavior can change. Therefore, it is unnecessary to take the test multiple times. Only once is enough.

The most simple, comfortable and reliable way to discover one's learning style is to take the online test on <https://www.7learningstyles.com/>

Important ! Please note that the learning styles are not descriptions of personality. Two people can have identical learning styles yet have completely different personalities. The human being is much more complex. Also, no learning style is superior compared to others. Under certain circumstances, some learning styles can be a better fit than others. The most important idea is to be aware of one's learning style and to adjust to the situation accordingly. The 7 learning styles give a point of reference on a map. But, using Alfred Korzybski's metaphor (2), the map is not the territory it represents.

5. What kind of concrete impact can we expect on school performance?

When the student becomes aware of their learning style, should an improvement in school performance be expected? It is a reasonable question in our western society obsessed with spectacular results and with the need for an absolute answer on whether or not a specific tool works. However, reality is more complex and nuanced. Many factors must be considered, such as shortcomings that must be addressed, the level of motivation or the student's inherent aptitudes. That is why a student, even if using the best learning technique in the world, may not always see an overnight difference in their grades.

A survey was conducted in 2016 by the École Pratique des Hautes Études Commerciales (EPHEC) of Bruxelles. It looked at the impact of using the 7 learning styles on their students' school grades.

The survey concluded that, for students experiencing difficulty in school, using the 7 learning styles enabled them to significantly improve their school grades. (3)

This survey and its results were officially presented at the symposium on higher education in Grenoble in June 2017 (4).

However, the most important issue to look at is the desire to learn. This is the ultimate goal in every environment, whether the learning occurs in school, in an apprenticeship or in a business setting. If a student does not currently have a motivation to learn in school, it does not mean that they will never have the desire to learn or that they will never succeed. Maybe they simply have not found their own path. It is possible that, for this student, the classroom is not the best environment in which to find motivation for learning. Below is Laura's story, a student who attended my management classes, a perfect example to illustrate this.

6. Laura's story

Laura was last among her schoolmates and did not put any effort during class, especially in her management course (this detail will become important). She was discouraged. She did not understand what was going on with her. Nothing was more irritating to her than hearing her parents and teachers say that she was ruining her future. And yet, they were not entirely wrong. I did not want her to perceive me as giving her a life lesson, so instead of saying what she had already heard from others, I encouraged Laura to take the test. "It's fun, it only lasts 20 minutes and it can change a life" I told her. When she discovered her learning style, her intuitions were confirmed: she had chosen the wrong path for her. Her comprehension style was kinesthetic and her motivation style was "is it useful?". The courses she was taking were far too abstract and felt remote from her preoccupations. She could only register the material through an immense effort of reworking it at home. Being a "dynamic" in her identity style meant that she perceived her situation as a failure,

which was unacceptable to her and only reinforced her discouragement and lack of motivation.

In a logical step, Laura interrupted her schooling, which many of her teachers disapproved. Resigned, she mentioned to me that her only skill was to know whether a store was welcoming or not. Even if Laura was a young adult, I took care of explaining the situation to her parents: their support was crucial in this delicate phase of her life.

If you expected a miracle such as “Laura started studying and became first in her class!”, you must be disappointed, are you not? We are far from the glamour of success stories that we often hear from Hollywood or Silicon Valley startups.

Laura opted for a fast-track training in hairdressing to obtain a professional qualification. It is important to mention that this was not a default option. This decision was her wish and she fully owned it. Laura took pleasure in learning and obtained her diploma with flying colors. I understand that a professional diploma in hairdressing may sound less than prestigious, but no job is menial. She quickly found work as a hairdresser. She was in commerce, a domain which suited her well.

Failure has nothing to do with choosing a profession that does not seem glamorous enough according to society’s definition of success or to the image that Hollywood projects. Failure is to persist on a path that is not ours, that does not correspond to who we are, even if it is prestigious. How many students have been pushed, under social pressures, to undertake higher education, only to eventually lose their essence? Professional success is when a person can blossom and excel, but it does not necessarily correspond to the success that society recognizes. This requires courage and good self-knowledge, which are both signs of maturity. This has nothing to do with a sudden impulse or a passing fancy. However, a student’s decision to change path can often be perceived as such by their parents if they misunderstand what is going on and are worried about their child’s future.

Imagine a father who runs a family business. He dreams that one day, one of his sons will take over the management of the family business. Therefore, he hires his

youngest son, at 17 years of age, in the sales department. But his son underperforms and he is bored. After being patient for 5 years, the father is exasperated by his son's lack of motivation and by seeing him spoil the future that is offered to him. When the father asks his son what he wants to do with his life, the latter hesitates between raising poultry, shoemaking and singing (even though he knows nothing about music). Don't laugh! This story is not taken from a humorist's sketch, it is a true story. It takes us back to 1953, with a son named Jacques and a father named Romain Brel. We know the rest of the story...

What has Laura become?

What about Laura? What has she become? Logically, she has become a hairdresser blooming in her chosen profession and well-liked by her clients. Passing by the salon where she works, I wanted to get some news from her since it had been 3 years since I had last seen her. But Laura was not there. "Maybe she changed to a different salon!" I thought to myself. Yet the employees knew her well. She had become the owner of the salon and she was their boss. I did not see her around so I imagined that she had taken the day off. In fact, Laura had not touched her scissors for quite a while. She was taking management and accounting classes at the Chamber of Commerce to learn how to manage the three salons she had acquired. Isn't this fascinating? If you remember, she was last of her class in management. When we saw each other again, I got a kick out of reminding her. She burst with laughter. Now she perceived usefulness in management and accounting to run her businesses, which felt very concrete to her. The context had changed and thus her perception of learning. She owned three hairdressing salons and did not intend to stop there. "I want to reach beyond a million Euros in turnover" she told me, full of ambition. A Hollywood-style story...

7. « The importance of knowing one's learning style even when holding a diploma from one of the world's top universities" From Isabelle Gingras, PhD Psychologist

"I have a PhD in psychology from Stanford University". For years I internally repeated this affirmation but it was not to glorify my accomplishment. Quite the opposite. I was trying to reassure and to justify myself, which I needed. During conversations, I always felt stupid. I would look at people who discussed matters around me, at work or during a meal with friends, and as soon as the conversation went beyond the concrete and the present, I felt left behind. Nothing made sense to me and I had to face the obvious: others kept on going without difficulty. Did I have a problem with concentration? With intelligence? Or experience? I feel lucky because I could reassure myself: I have a PhD in psychology from Stanford University. So obviously, I would tell myself, I am not stupid. This conclusion pointed to the inadequate definition of intelligence adopted by society. Even so, I started doubting myself. During lectures, I had the bizarre impression that the speaker was not talking clearly. When my husband would explain something to me, I would get impatient: "How can I understand? I can't *feel* it! ». I had to admit to myself that it took a lot more time for me to understand information compared to others, and to do so, I had to play with the material in a much deeper way. I had the impression that I could only understand if I could transpose myself directly in the context. I do have that PhD, but at Stanford, I remember succeeding only through countless revisions. I would keep quiet during meetings and then I would review what was said for hours, alone in my studio, to understand the conversations that had taken place around me at light speed. Or so it seemed to me.

When Jean-François Michel asked me to assist him in the writing of his book on the 7 learning styles and to help him improve the conceptualization of the test, I had the opportunity to discover my own learning style. The result came as a relief. My main comprehension style is kinesthetic. Since I have become aware of this, I do not waste time doubting myself anymore. Instead, I organize my environment to maximize my

kinesthetic connection to my surroundings and to the materiel that I need to assimilate. And if that is impossible, then I do my best, but at least I know why I am slow or why I have the impression that I misunderstand the material or the conversations. Instead of blaming myself, I try to find solutions. It is a drastic change of paradigm. And a much healthier way to face life!

Recently, I decided to learn snowboarding. Some friends recommended that I watch videos on Youtube to visualize. It didn't work. When I closed my eyes, I could not see any movement inside my head. If others tried to explain through words, I would look at them as if they spoke a foreign language. It did not make any sense. So I decided to take snowboarding lessons. Right from the start, I told my instructor : « Don't tell me anything, don't show me either. Take my hands and guide me through the movements ». Each time she explained things verbally or visually, I would take her back to my kinesthetic style of learning. After 3 hours of lessons, I could proudly surf. And when I closed my eyes, I would surf, but there was barely any image – I surfed in my head through the sensations that I had felt in my body while surfing.

Jean-François Michel's idea is very simple – its implication, far from it. We all know that we each learn differently. But how many of us keep this fact in mind in daily life in order to use it to our advantage and to make others around us benefit from it? And there lies the power of the 7 learning styles. Far from self-help books that multiply the steps to go through in order to “feel better”, Jean-François Michel's book is telling because it helps us know ourselves. And this in-depth self-knowledge helps us, like a compass, better navigate our environment. Carefully nuanced, the learning styles enable us to go beyond simplistic clichés by helping us discover the different sides of ourselves – and of those around us. And the principles are all the more interesting in that they do not emerge from abstract theories developed in laboratories, far from real human experience. The 7 learning styles were designed with students and teachers, tested with students and teachers, and refined with students and teachers. In the field, in their reality, and while taking into account their needs. And it works.

I wish you to navigate more serenely in our knowledge-oriented society, while being open to who you are and to the learning needs of those around you. Simple. But profound. Accessible. And eloquent.

8. What should be remembered?

- Be aware that each person learns differently.
- To positively change a student's perception and mindset, it is important that they discover their learning style. This is possible through the test available 7learningstyles.com
- When the student knows their learning style, the teacher or trainer can help them with efficacy and it is even better if the parents are involved.
**The outcome is a better understanding of the student's mental blocks which can be readily identified and treated accordingly.
Mistakes in career orientation are avoided.**

IV - Who am I ? Story of the 7 learning styles

1. Who am I

I started teaching in 1995 in Dresde, Germany, as part of my doctoral studies. Teaching and education were not my passion, I admit. How was it possible to motivate my students? Why were all my efforts to get them interested failing? These questions without answers rapidly convinced me to change path and to devote myself to what truly motivated me: psychology. I took the decision to start a degree to become a clinical psychologist with a private practice. This decision was difficult to

take because it meant abandoning my doctoral studies and the promising career of a researcher. Yet I was still teaching to maintain an income.

While being in the field of education where, in those years, few things had been explored, a cognitive psychology teacher encouraged me to work on the topic. While at first I was not enthusiastic (far from my goal of becoming a clinical psychologist), I elaborated a tool that at the very least could help me in my own work as a teacher, a tool to figure out how each person learns and how these differences could be explained. Along with my psychology classes, this work oddly put teaching and education in a new light which especially motivated me.

After a period of time working for a large American corporation where I worked on change processes and internal coaching, I decided to dedicate myself 100% to teaching and training. In 2005, helped by Isabelle Gingras, I shared my work and knowledge by writing and publishing the book “The 7 learning styles” (the original French version being “Les 7 profils d’apprentissage” published in 2005 and 2013). Since 2007, I visit school and training centers to help teachers and trainers put in place the 7 learning styles and guide their students.

This led me to intervene in a wide diversity of environments: from Groupe Automobile PSA in 2007 (to help their mentors) to the air force in 2014 (for their training center) to the football club l’Olympique lyonnais in 2016 (team building). The 7 learning styles can thus be used in a large variety of training and educational contexts and are used (at the moment of writing this book) by more than 1600 school and training centers in France and other French-speaking countries.

2. How were the 7 learning styles created?

The learning styles are a tool, not a method. The goal is to understand how we learn and teach. The 7 learning styles build on known psychological phenomena that are less accessible to people who are not familiar with the fields of cognitive and clinical psychology. The real value of the 7 learning styles comes from having selected what

worked (and left aside what didn't) through an empirical and experimental process to construct a tool that is simple to use. With a single goal in mind: efficiency.

More than 2000 students from different nationalities have taken part in this process: German, French, and Anglo-Saxon. In this work I was not alone: Isabelle Gingras, who holds a PhD in psychology from Stanford University, contributed to the validation and structuring of the 7 learning styles during the writing of the book "the 7 learning styles" / *Les 7 profils d'apprentissage* / (French version) published in 2005 by Éditions Eyrolles.

3. References

- (1) Alain Lieury, psychologist, memory expert. « Visual memory, a still tenacious belief » (La mémoire visuelle, une croyance encore tenace) : <http://www.scilogs.fr/memoire-et-cie/moi-monsieur-je-suis-un-visuel-la-memoire-photographique/>
- (2) Alfred Korzybski is a Polish-American philosopher and scientist. He is the author of the aphorism « A map is not the territory it represents. »
- (3) In this study, the students experiencing difficulties did not have major shortcomings in the courses taught.
- (4) Bachy, S. et Alen, I. (2017). Profils d'apprentissage : impacts sur les résultats académiques. IX^e Colloque Questions de pédagogies dans l'enseignement supérieur. Grenoble, June 13-16, 2017, 1-10.
- (5) Internal coaching is a method of support for employees working in a company. The coach is also a part of the staff. The advantage of a coach who is also an employee is their knowledge of the inner workings and of the subtle culture in the workplace. These subtleties cannot be readily understood by an external coach who is not working in the company. There is a certain "democratization" of coaching which is not kept only for management. Internal coaching has been developed and applied by Jacques Desplanque at IBM France at the beginning of the 21st century. The major weakness of this approach is that it depends on upper

management's will. When management changes, the coaching system can disappear.