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LEARN TO LEARN

HOW DOES SINGING IMPROVE MY EXAMS?

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1.0 Introduction

Learning is one of the most important characteristics of human beings, everyone learns from an early age onwards. Some things are more important, others not so. Learning is also a very important part of school. With a few exceptions, everyone has to study for school to get good grades and remember important things.

There are several ways of learning. Some people learn better when listening to something on the subject. Some prefer to learn visually, and others like to read about the subjects and write down important terms about it. Another group of people prefer to learn with their hands as they like to touch things which can help them remember information because they link it to everyday objects. In this paper, I will write about the learning types and give tips for better learning methods in class and at home.

To make this work a little more exciting, I will also create a survey in which I will hand out questionnaires to all participants, to find out if they know what their perfect way of learning is and if they get good grades whether they have found their way of learning or not. If not, this questionnaire may be their opportunity to find out their learning type and give them tips on how to learn appropriately.

With this work I want to find a better way to learn for myself. I am not sure whether I have already found the most efficient way to learn and wanted to do a little more research with this written work. So maybe I will find the best way to learn.

2.0 What is learning?

Almost everything we do, results in learning something. Still for some people, learning is a performed skill, and it is associated with educational purposes. From birth onwards we are learning. We are learning to eat, to pay attention, to walk, etc. As we get older, we learn more and also excessive skills. We mostly associate learning with school and studies, but what exactly is learning?

There are many definitions of the verb to *learn* but the one that always pops up, is “to gain knowledge or understanding of or skill in [something] by study, instruction, or experience”¹.

The word learning is often used to discuss higher education teaching, so it is important to clarify what we mean when we talk about learning. Education researchers agree that learning goes much deeper than memorizing and retrieving information. Deep and sustained learning involves understanding, connecting ideas, and making connections between previous and new knowledge, independent and critical thinking, and the ability to transfer knowledge to new and different contexts.

Learning is a process that leads to change as a result of experience, increasing the potential for improved performance and future learning. Changes in learners can be at the level of knowledge, attitude, or behavior. As a result of learning, learners view concepts, ideas and/or the world in different ways.

Learning is not something done to students, but something they do for themselves. This is a direct result of how students interpret and respond to their experiences.

While there are subject differences in what students learn, it is important to remember that content or information is only part of what is learned in a university course. Regardless of their major, students must have significant opportunities to develop and practice relevant intellectual skills/thought processes, motor skills, and attitudes/values. Additionally, students need the opportunity to develop interpersonal and social skills that are important for their career and personal success. Examples of these skills include teamwork, effective communication, conflict resolution and creative thinking. As teaching assistants and trainers, we need to remember that learning is not just about the content, we need to focus not only on the content, but also on the thought process and other types of learning.

However, in this paper I am just going to talk about the learning we do at school or at university.

¹[https://www.merriam-webster.com/dictionary/learn#:~:text=1a\(1\)%20%3A%20to,realize%20learned%20that%20honesty%20paid](https://www.merriam-webster.com/dictionary/learn#:~:text=1a(1)%20%3A%20to,realize%20learned%20that%20honesty%20paid)

3.0 The importance of learning

Learning is a very important tool to nourish our soul. It is a necessity for personal and professional life because it allows us to better understand and process things in life. Learning helps to acquire thinking skills and enables us to connect with people from different cultures in a variety of ways. Only in this way we can deal with the constant changes in our lives and move forward with ease. Learning is a process that promotes the acquisition of competences, knowledge, and skills in order to develop future opportunities.

We need to encourage the habit of reading, build a network that encourages learning, ask questions, conduct surveys and research, and explore different types of learning so that every day is a day to learn something new.

Curious minds are the best because they want to explore different and challenging horizons without hesitation. If you want to go this way, you have to show your intentions, be sincere, ask for clarity, be curious, experiment, reflect and stay motivated. The growth of intelligence helps us observe the world with bright eyes, evaluate what we see and what we have learned, and then apply our knowledge to daily life.

Lifelong learning is becoming increasingly important. Continuous learning is of great importance from several perspectives. On the one hand, it increases the chances of professional success. On the other hand, it promotes mental health and offers benefits in old age.

The term *Lifelong learning* means that people learn throughout their lives and independently get information in order to develop their skills. It includes everything that a person acquires during his entire lifetime, for example to obtain qualifications or simply to get more knowledge.

Learning is a conscious attempt by learners to find opportunities in their world. The learner is motivated because it is a reliable way to increase income and status and improve living standards. We have to remember that learning helps us to acquire knowledge and skills, with which we can enhance our potential in the job market.

It helps to find a sufficient job, succeed in the ideal job profile, and increase your income. Learning is not a deep-rooted but an acquired skill that anyone can get with a little perseverance and determination. It helps to maintain a positive attitude in life, because when the income corresponds to your desires, it will increase your self-confidence and improve the quality of life.

The meaning of learning is that it can encourage personal development and thereby promote professional development. It provides new opportunities and leads to income growth, improving your private status and the status in the community.

4.0 The importance of learning to learn

For all the learners, there is a fundamental problem that hinders their educational progress. The more you learn and the more skills you acquire, the harder it gets to learn more. Although practice can improve performances on specific tasks, it also gets you to enter a different stage of learning in which you are just doing instead of thinking. This may sound like an ideal situation as if you have mastered the skill until you realize that you have not made any progress in this later stage of learning.

Normally, we find learning strategies that fit us when we are children, we also use these strategies to learn for life. It always depends on what time in our life we learned the strategies. It is much simpler for children to learn a memorization method that it is for elderly people.

4.1 The 3 stages of learning:

The 3 stages of learning show us the transition from not having any skills and being a beginner to becoming an expert. It is like a child learning to catch a ball, a beginner trying to serve a ball in Tennis, or even an athlete transitioning from intermediate to advanced level. When an athlete practices something, we can see the development and achievements he reaches. We can see the movement pattern they use to perform the skill.

To illustrate: if we watch kids throw a ball, we can see them throwing it further over time and their moves becoming more fluid. *Stages of Learning Theories* aim to explain the processes underlying this progression in performance.

The first people to come up with the three-stage model, were Paul Fitts and Michael Posner. Their theory considers the attention requirements when learning a new skill and the amount of practice time needed to reach each stage. Although we often divide the model into three different stages, the athletes shift back and forth on them.

4.1.1 Stage 1: Cognitive

The first stage is called the cognitive stage; it is also called the beginner stage of learning. While being in the cognitive stage, the learner is trying to find out what he should do. The theory states that the learner is trying to understand the needed information mentally.

To explain these different stages, I am going to take the example of a tennis player.

A beginner tennis player needs practice. Serving the right way will take a lot of time. He will have to try every method there is to serve and he needs to take in a lot of information. How does he need to hold the racket? Where do his feet need to be? How should he move his arms? How does he have to time the movement and where does he have to hit the ball to?

All these questions listed are the thoughts that are going around in his head, while learning to serve. The cognitive stage is a stage where you are often not sure what to do and where you make many mistakes. They actively take part in problem-solving and they will try to make sense out of what they are getting taught. That is also why the stage is called the cognitive stage because the person is mentally processing, learning, and understanding the topic.

Improvement in this stage goes pretty fast and with less practice than in the second and third stage.

4.1.2 Stage 2: Associative

The second stage, called associative stage, is there to learn how to perform the skill correctly and how to adapt the skill. In this stage, the learner is trying to turn the information in his memory into some

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knowledge on how to perform the skill. In other words, the person is trying to turn the “what to do” into a “how to do”.

In the associative stage, there is less self-talk and athletes can use less thinking to complete larger skills, but the movement as a whole still needs cognitive thinking and problem-solving skills.

When entering the association phase of learning, the tennis players will begin to extract clues from their environment. This may include the location of their opponent and the height of the net on the goal line they want. These cues are being used to create optimal movement (called perception-action coupling).

The different aspects of tossing a ball and the arm movements are often performed with less thoughts, but the sequence of these actions still requires attention and problem solving. Therefore, the performance in this stage is better than in the cognitive stage of learning, but compared to expert performers, they still have a greater degree of variability in hitting results.

A person can stay in this stage for a shorter or longer period of time, it depends on their tasks and on how much they practice. Some people will never progress past this stage if they don't invest enough time into their development. There are also people who revisit this stage, for example athletes who want to refine their skills. Possibly they have been in the third stage, the autonomous stage, for a long time but need to regain some precision in different maneuvers and go back to the cognitive and or just to the associative stage.

4.1.3 Stage 3: Autonomous

After enough practice you will reach the autonomous stage where people can almost automatically perform the skill. They won't need to think too much about what they are doing anymore. The third stage consists more of doing instead of learning. Athletes in this stage need less conscious control of movements and what they are doing is mostly without any efforts. A tennis player will have more time to concentrate on where his opponent is on the field, because he will hit the ball without any efforts.

In this stage the performers are also more open to multitasking as their whole attention is no longer needed to control what they are doing in the first place. Still, even if the athlete can perform all the skills without and efforts, he needs to practice them. Practice at this stage usually includes scenario exercises based on real-time games, challenging individuals by forcing them to complete multiple tasks. If the exercise becomes too simple, the coach or trainer can increase the difficulty by adding more opponent players, speeding up the exercise, or letting the individual perform skills in the exercise in a more fatigued situation.

One issue that can be caused by the autonomous stage is the difficulty to get out of it and change the technique. This will require the performer to break down the technique and adjust it and practice it until it becomes autonomous again. For example, changes in the rules of professional golf forced Adam Scott to change his now forbidden technique of pressing the long putter on the body in order to provide extra support during putting.

5.0 Different types of learning / Different types of learners

Every student has a sort of strategy to learn that works best for them. Some take notes, some listen to lectures and others need to do things with their hands. There is no method that fits every student. That is why scientists have done research to find the different learning types and to understand how the students learn new information.

Scientists have been researching on the different types of learning for the past years. There are many different ways to learn, and no one is certain to know how many ways there really are. Some say there are 8 ways, others say there are 7, but the most popular theory is the VARK model. The VARK model explains that there are 4 types of learners: the visual, the auditory, the kinesthetic and the verbal learner. Most people learn in combination of all these styles, but still almost everyone has one type of learning they pursue preferably. Each of these 4 styles have a corresponding way of teaching.

5.1 Visual learning style

5.1.1 What is visual learning?

The visual learning style is self-explanatory. Everything is about learning information by looking at them. This can take many forms, from spatial awareness, color and tone to brightness and contrast and other visual information. Examples of visual learning include watching videos or live demonstrations of cooking, making furniture according to diagrams, viewing diagrams to understand statistics, writing instructions on whiteboards for people to follow, etc. Visual learning focuses on what we can see, so anything that we see, or watch is part of visual learning.

Learners who tend to learn visually like to see things to help them learn, rather than listening or experiencing them. For teachers who want to develop lesson plans that help all students, it's important to understand learners who like visual teaching. It's also important for the teachers to identify the visual learners in the classroom. Students saying that they can't picture things or that they want to see a picture or a graph to understand exercises are often visual learners. It's easier for the student and the teacher to explain and understand if they know the learning style. Teachers who know that the students need a visual example in the class are able to give lessons that everybody understands.

5.1.2 Strengths of a visual learner

Visual learners have strengths that help them in the classroom hence teachers should include them to help students be more efficient in the learning process. Some of these strengths are:

- They have the ability to visualize objects very easily
- They have a good sense of balance and alignment
- Almost every visual learner is very well organized and color oriented
- They can picture words from a book or an image in their mind effortlessly and can identify simple similarities and differences in things
- They often use images to help and visual aids to explain themselves
- They also follow instructions and manuals very well and take good notes of the lessons

5.1.3 Learning strategies in class

To get the attention of visual learners, teachers should incorporate visual learning strategies in their classes. It's important for teachers to include different techniques in the classroom so the students have the freedom to try them to learn. Some examples for techniques are:

- Include images, videos, or diagrams, etc.

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- For group projects, trying to find all the visual learners and group them together so they can use their strengths. Let them choose how they want to present their work (e. g. poster projects or short videos)
- Having some reflection time at the end of the lesson so visual learners can visualize the work
- Do not call a visual learner immediately after a presentation to have them repeat in a few sentences what was presented, because they need some time
- Encourage the students to color their notes how they like it but keep some white space in the notes. If they are overloaded with information, it becomes difficult to read
- Include some colors into presentations and assignments
- Write down homework or to-do lists on the whiteboard so visual learners can see the plan. It might even benefit the students who learn while reading and writing
- While reading in class, teachers should give the students some time, so they can picture in their head what they are reading
- Show the students how to make flashcards, this also helps the students who like learning while reading and writing
- Play some short videos during the lesson and discuss it later
- To not get distracted, sit in front of the class

5.2 Auditory learning style

5.2.1 What is auditory learning?

Auditory learners are people who learn better when they absorb information through sound when they hear someone speak or when they speak. They tend to think about their thoughts after saying them out loud, rather than thinking carefully about them before. Because, for them, speaking out loud helps them understand the concept.

When information is presented to auditory learners through strategies that involve conversations (such as lectures or group discussions), they learn best. They can profit from repeating classes, recording their lectures, group activities that require classmates to explain ideas, etc.

You can find auditory learners by searching students who are taking part in lectures. You can see them nodding along or asking a lot of questions rather than taking notes. Furthermore, they are quite slow at reading and often read aloud to themselves. They also repeat words you tell them and might interrupt you to ask questions to help with their memory.

5.2.2 Strengths of an auditory learner

Auditory learners have a lot of learning skills. A few of them are:

- They are very good listeners, debaters, and speakers
- They can connect very easily with people through conversations and storytelling
- They are great multitaskers
- They often have a good sense of rhythm and music
- They have a good memory. They remember names, details, lyrics, and little pieces of conversations very straightforwardly
- They learn languages easily and understand the grammar without major difficulties
- They express themselves very confidently and are not reserved reading aloud, or comment in discussions

5.2.3 Learning strategies in class

Auditory learners are the most engaged people in the classroom. They learn very easily by just hearing what the teacher says. They are good listeners and are mostly very social, but they get distracted very quickly by everything else in the classroom. Auditory learners often study with voice recordings of the lessons and memorize the vocabulary by converting it into a song. Here are some ideas for teaching auditory learners in class:

- Call them up, they like reading out loud in class and answer questions
- Let them record the lesson or let the teacher record the lesson, so they can listen to rephrase it again
- Do group projects, discussions, experiments or performances
- Encourage the students to talk about the lesson to each other
- Give them individual attention and instructions, so they can talk to you about what they are learning
- As a teacher, watch your body language and vocal tone
- Allow the students to listen to some music or if everybody agrees, play quiet music for the whole class

5.3 Reading/writing learning style

5.3.1 What is the reading/writing learning style?

Reading/writing learners learn best when they see words, either because they are writing them down or reading them. Words are the most powerful tool for them, and their strength lies in written assignments. Being a words preferring learner means always carrying textbooks, novels, articles, handouts, or journals with yourself. You will find reading/writing learners by looking for the students who take detailed notes, look in the dictionary to learn new words or search online to find answers to questions. They also get their knowledge by writing and rewriting notes and reading them again and again silently in their head.

There are diverse methods for a reading/writing learner to learn and understand their lessons. For example, it would be easier for them to write something to describe diagrams and charts or take quizzes by writing them. Writing assignments are their favorite tasks.

5.3.2 Strengths of a reading/writing learner

The reading/writing learner has almost the same strengths as a visual learner. While the visual learner imagines a lot in his head to remember it, the reading/writing learner writes it down in his own thoughts and reads it afterwards. He repeats everything until he has everything in mind.

- Like the visual learner, the reading/writing learner is very well organized and color oriented
- They have a good sense of balance and alignment
- They also follow instructions and manuals very well
- They recall information very easily after writing it down in the lesson
- They enjoy reading and like doing it in their free time
- Reading/writing learners take very good and detailed notes
- They prefer to write assignments then to talk during presentations
- They can express themselves better while writing information down instead of talking They are fascinated by words and like to learn new ones
- They usually have a big vocabulary and find it easy to learn new languages

5.3.3 Learning strategies in class

The best way to learn as a reading/writing learner is to write assignments, do research, to read in textbooks and do even more reading. Reading and writing learners favor the traditional and simplest way of gaining new information. But still, the teacher needs to form the lesson in an interesting way, so the students have fun while absorbing everything and getting it on their paper.

- The teacher should write everything on the blackboard, they think to be important. Reading/writing learners will include their own thoughts and write down every detail
- Bring handouts to the classes that include the important information so that students color their notes the way they like
- Let them translate images, charts, and diagrams into words. For the different classes, let them write out instructions for every step they take if they need it
- While talking in class try to bring some emotions into your voice and find a rhythm
- Give them fun games as assignments, like crosswords, scrabble, or other quizzes
- If possible, encourage role-playing while reading

5.4 Kinesthetic learning style

5.4.1 What is kinesthetic learning?

A kinesthetic learner goes for learning by doing. They like practical learning, like using all their senses while doing something new. The best way for kinesthetic learners to absorb information is through first-hand experiences, practice, examples or simulations. Therefore, they need to use tactile experiences to understand things better. For example, they remember an experiment better, if they do it by themselves. Kinesthetic learners are simple to find because they usually can't sit still during their lessons. Kinesthetic learners pay more attention when their body is moving. They manage information better if they don't need to concentrate on material only.

5.4.2 Strengths of a kinesthetic learner

Kinesthetic learners learn best by doing and are comparable to the tactile learners with the exception of tactile learners not being as physically active and they are more concentrated on touch. Some of the strengths kinesthetic learners have are:

- They learn best through movements and experiences or even games and by using their hands
- They need to move while thinking about new information
- They remember how to do tasks even after just doing them once
- They physically handle what they are learning. It's better for them to just do the work instead of listening to somebody who tells them how it's done
- They have perfect hand-eye coordination, agility and they have great timing
- They are often enthusiastic and loud; they are also highly intuitive

5.4.3 Learning strategies in class

Due to kinesthetic learners learning best when they are moving, they learn better by:

- Using real-life examples and experience to build stronger memory connections
- They need the opportunity of little trips, shows or experiments
- They should put many examples in their notes
- While listening, they search or ask for real things that happened
- They need autobiographies or documentaries and videos
- The teacher should move a lot and demonstrate everything possible

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- If possible, the teacher should try to divide the lesson in different categories and maybe change the location of teaching
- If other students don't get interrupted by it, let the kinesthetic learners move in the classroom, as it will help them remember faster
- The attention of kinesthetic learners follows movement (not so important who's movement). Encourage them to take notes and drawings of what they hear
- Let them use a laptop or tablet to write their notes, so they can remember information by the movement of their finger

5.5 Multimodal learner

5.5.1 What is a multimodal learner?

Multimodal learners are learners, who have various preferences while learning. They do not need a singular learning style. The majority of people are multimodal learners.

Various preferences are interesting and differing. For instance, you can have two favorites, mostly Visual and Auditory or Reading/writing and Kinesthetic. Others have three preferences like Visual, Auditory and Reading/writing or Auditory, Reading/writing, and Kinesthetic. Others don't need to choose between the different styles, because they have their strengths in every type.

Being a multimodal learner and having the choice to use one, two, three or even four methods, gives them the chance to approach a subject in different ways and interact with other people. While a small amount of people use their multimodal skills to annoy others - such as asking the person they are working with if they can give them a written answer even though they know they prefer giving oral information - most people use it to match with the person they are working with, so they can work together in the same way and help each other.

There are 13 different preferences a person can have out of the four strategies: visual, auditory, reading/writing, and kinesthetic. Some multimodal learners find it necessary to learn with more than one strategy while learning and even communicating.

5.5.2 Strengths of a multimodal learner

A multimodal learner has his strengths in every method. There may be some methods they like more than others and they can vary through the different classes they are taking. It also varies for which type of multimodal learner they are destined. As already mentioned, there are 13 different possibilities for a multimodal person to learn. But same as for the 4 main learning techniques, they have their own strategies that fit them. If they like learning visually, they will need to use more images, videos, or diagrams. If they tend to learn like an auditory learner, they will have to use recordings and or discussions. But if they tend to learn like a kinesthetic learner, they will use real-life examples, experiences or they will move around a lot. However, if they prefer to learn like a reading/writing learner, they will use handouts, color them how they like and write resumes for faster learning. They also like taking all kinds of quizzes.

5.5.3 Learning strategies in class

Multimodal learning strategies are the same as for the single techniques in class. So if a person likes to learn like a visual learner, the teacher should:

- Use textbooks with lots of pictures and diagrams
- Incorporate visual elements into the courses, such as PowerPoints or videos
- Let the students organize their ideas in diagrams, graphs, or doodles

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- Use illustrations or pictures to explain things
- Assign color schemes or use different fonts to point out terms
- Include visual items such as art, diagrams, or models
- Give the students time to visualize the lesson
- Write down to-do-lists on the blackboard, so students can see what they have to do. It might even benefit the reading/writing learners

If they tend to learn like an auditory learner, the teacher should:

- Read paragraphs in a text or let the students read
- Repeat themselves often enough, in particular the important concepts
- Explain what they have said with podcasts, songs, or maybe videos
- Go through the test or the assignment before starting
- Set discussions or debates in motion
- If possible, let the students take their test in another room so they can read the questions aloud
- Assign speeches and presentations
- The teacher should also work on his body language and vocal tone

If they are to learn like a kinesthetic learner, the teacher should consider:

- While explaining something in front of the class, use gestures and work with models
- Real-life examples and scenarios
- Going on trips, so the kinesthetic learners can see and maybe even feel what they are learning
- Planning experiments so they can try themselves what they are learning
- Let them move around in class if they are not disturbing other classmates
- Let them take a break to move around for a while, or watch a short video of easy sport exercises they can recreate in class
- Let them take notes on paper, tablets, or laptops so they can remember it through finger movement

Nevertheless, if they prefer learning like a reading/writing learner, the teacher should:

- Use textbooks with mostly written explanations
- Give the students a written example on how to interpret diagrams
- Encourage them to take notes in class and color them afterwards
- Include detailed explanations on assignments and tests
- Categorize the most important study matter
- Include multiple choice questions, short answers, and essay questions on a test
- Give them funny quizzes such as scrabble or crosswords
- Encourage roleplaying while reading

6.0 Learning Mistakes

Making mistakes while learning is normal, and we can mostly learn from them. Sometimes they can make us remember facts in another or better way. By learning mistakes, I am talking about learning the wrong way. For instance, memorizing material instead of understanding it and trying to find a way to solve it. Different methods lead to different mistakes. Some things that may lead to mistakes, but I won't consider as such, are disabilities such as dyslexia, APD (Auditory processing disorder), LPD (Language processing disorder) or NLD (Nonverbal learning disorder). As their name already connotes, it is a disorder, and it cannot be prevented or cured. The mistakes I am going to talk about are some of the most common ones.

As announced earlier, one of the most common mistakes is memorizing material that should be understood. This strategy is often used to learn the formulas in physics, chemistry, or math classes. Even if you need to remember them all for exams, memorizing is usually a mistake. As a student we get sheets full of formulas and sometimes it seems as if memorizing them would be the only way to learn them. But especially by looking at formulas we have to see why they are getting used and how we can combine them with other formulas. The problem with memorizing them is we don't understand the connections between them and facts about the subject. When approaching every subject this way, the need to memorize things goes away. Formulas are remembered easily because they are logical and if we understand the subject, we understand the structure of the formula.

Not learning enough is also a very common mistake. Many students think after reading their notes or highlighting them and going to every class is enough learning, but it is not. These things might be useful to some extent but learning means giving answers to questions without looking at the preformulated answer that's standing in the books or notes. There is no way of learning too much, even though some subjects may need some more work than others. The ideal way is to learn regularly and not everything at once. Self-testing can also be a helpful way to remember things better. You can either write an exam yourself, for classes like math or chemistry, or if you are reading a book for a class where you need to remember deeply, you can write notes down, but instead of writing down facts about it you can write down questions. Later on, you can use these questions to learn by answering them and if you answer them right, you have understood the material, if you don't, take your book and reread the parts you forgot.

While learning enough can be a huge benefit, it needs to be in the right environment too, no matter if it's alone or in a group. A good environment has a few characteristics: it must be a positive place, where you feel safe and organized. When learning in a classroom, it should also be a place with positivity, and we should feel connected. The teacher should also be positive, organized, confident, and good with people. You should not stress about things just because others do. Often the problem is not you, but the environment you created around yourself.

Something you should not do while learning is to start on short notice. Often, people who don't understand the material are the ones to start learning rather late, as they don't want anyone to know that they don't understand the lesson or can't solve the problems. So, they often wait for a longer time to ask questions, until they think, they know how everything works. You should rather fail early so you can learn earlier because all the mistakes you do can help you afterwards. The earlier you notice what your mistake was, the earlier you can change it. You may look dumb to some people, but you earn through it. To have the perfect learning ways, you should never hold back, but still remember that you want to learn something from every attempt you make.

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Occasionally we learn without motivation or without being interested in the subject. Many people convince themselves, that the subjects they don't master are boring and they immediately don't like them. But that is the wrong approach. Classes can be interesting; it just depends on how you learn for them. You can choose to learn in a boring or interesting way, no matter what the teacher is like. You can start to make the course more approachable by connecting it to things you care about. Math is not just formulas and numbers; it can be associated with the nature and the parallels between them are fascinating. Connections to something important in your life can bring new interests in classes. Another way to get interested in subjects is to look for questions, trying to find out why everything is the way it is. Being curious is a good way to not get bored. Of course, there will always be themes you hate, or you are bored by. You will always have favorite classes and less interesting classes, but by making connections and trying to be curious you can make them a little more interesting. Your classes will be more fun considering that making the subject interesting will also make it easier to learn.

7.0 Tips: how do you learn best?

7.1 Time management

Good Time management gets you to accomplish your goals faster and more effectively. If it is difficult for you to find a good schedule, it can help to know which technique you can use to develop time-management skills. But why is time management important?

Time management skills are a broad set of skills that help you manage the time you spend in your workday and ensure you use it as efficiently as possible. Some basic time management skills include:

Set priorities

By setting priorities you are assigning importance levels to different tasks and ensuring that tasks of higher importance are completed before tasks of lower importance. Effectively prioritizing tasks requires you to have a solid understanding of how long each job will take to complete. Proficiency in prioritizing responsibilities will also help you to complete essential tasks more efficiently.

Planning

It is essential to be able to analyze tasks and develop a schedule so that you can complete these tasks. You need to have strong planning skills to create an effective time management and ensure you have a structured understanding and application of your responsibilities when planning your tasks.

Stress management

The ability to identify your personal stress level and make adjustments at work can keep your stress levels low. Reward yourself, delegate tasks, and take breaks when you need to, so you stay focused and motivated as you complete every day-to-day task on your schedule. Knowing your stress level will also help you use your breaks effectively throughout the day. Know when to say no to tasks that overwhelm you. A perfect way to know when to take breaks is to set a timer. Start with working for an hour and then taking 20 minutes off. Go down to 30 or 45 minutes and take 10 or 15 minutes off. Afterwards you can stay at that length, or you can go down even more. Working 20 minutes and taking 5-minute breaks. You can easily find out how you work best with this strategy.

Target setting

Setting clear goals for yourself throughout your learning, such as completing a specific task or part of your work is an important part of time management. Setting a set of realistic and optimal goals allows you to feel every achievement throughout the day as a new motivation and encouragement. Goal setting can work in combination with stress management to help you increase your hourly and daily efficiency.

Communication

Communication represents your ability to express your goals, plans and needs both orally and in writing. Good communication skills enable you to create effective schedules and plans. It also allows you to complete tasks more efficiently through assignment and teamwork.

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Here are 10 tips for improving your time management:

1. Start the task early

If you know that you will have to start a task at some point and you know what it is about, starting it before you actually have to can help you to overcome the initial preparation phase of the task. This enables you to start strategizing, which also helps overcoming procrastination.

2. Set limits for what you will say yes to

Many people will try and do all the work possible and even more to make a good impression and show how dedicated they are to their work. However, taking on too many responsibilities can make it very challenging to develop a schedule that fits all tasks. Setting limits on how much work you're willing to accept from others can help you avoid taking on too much responsibility.

3. Give yourself breaks

Taking time out of your day to briefly disconnect from what you are working on will allow you to relax and return to your tasks with a new perspective. Learning when to take your breaks throughout the day will also help you develop effective stress management habits.

4. Prioritize your tasks

You should determine which tasks need more attention. Prioritizing specific tasks can help you focus on the things that need more work than others. Practicing prioritizing tasks can give you an idea of how to better structure your schedule and determine which tasks you can delegate.

5. Schedule your tasks and their deadlines

Take the time to develop a detailed schedule for each of your event tasks and set strict deadlines for them. Doing this can help you visualize which tasks require more effort and can help you better understand how quickly you can get the job done. Get in the habit of updating your schedule every once in a while, as a comprehensive schedule can serve as a foundation to help you improve your planning and prioritization skills.

6. Organize your workspace

An organized workspace can help you save time in your day because you don't have to search for the materials you need to complete each task. Plus, developing organizational skills will help you enhance your planning capabilities. Not having to search for specific documents or task materials will help reduce everyday stress.

7. Learn your patterns of productivity

Everyone has different patterns of productivity throughout the day. Some people are more productive earlier in the day, while others may not be able to work efficiently until later in the evening. Determining what time of day is most productive for you can help you use every part of your day more efficiently. By scheduling faster or easier tasks at less productive times, you can ensure that your highest productivity is spent on longer, higher-priority tasks.

8. Use technology to help keep you accountable

Time-tracking and day-to-day management software are increasingly integrated into the workplace every year. Time tracking software allow you to calculate the time it takes to complete a single task,

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and daily management software integrate your time tracking results into your schedule. Altogether these software will help you to create a better and more accurate schedule and can help you catch yourself before you get distracted or procrastinate for too long.

9. Focus on one task at a time

Multitasking seems to be an effective strategy to do things faster. However, those who focus on completing two tasks separately, generally complete each task faster and with higher quality than those who multitask. Taking the time to focus on one task at a time will also help you reduce the likelihood of distraction.

10. Reinforce your good habits

When you complete tasks or notice that you have improved your productivity, you may want to reward yourself after this little success. Finding yourself an enjoyable reward that doesn't interfere with your day-to-day productivity may reduce stress and motivate you to continue developing your time management skills.

7.2 Music

One of the most stressful times for students, regardless of their academic performance, is exam time. Since we all live in a competitive age, they are under enormous pressure to strive for excellence, where even a 90% grade is not good enough for some colleges. Uncertainty, peer pressure and inappropriate expectations can overwhelm students' minds.

Stress is no one's friend. In fact, research has found that it can lead to a variety of physical and mental problems. To cope with exam fever, one must overcome unnecessary but all-pervasive stress. A relaxed and confident attitude during exams is almost half the battle. Singing has been found to be a great stress buster and has huge benefits. This activity is very calming and cathartic, and it can help a person relax. Music stimulates inner energy and focus, which is where karaoke comes in.

You do not have to be an accomplished singer to use karaoke to overcome stress. Invite some friends and family over and sing the stress away. Screaming out whatever you want to your favorite songs can be healing and, in that way, you can try to let go of all the stress you are currently living with.

Playing music in the background can also help you to improve your concentration while studying. Here are 5 reasons why music can improve or help you study more effectively:

1. Enhance Exam Performance

Tests have proven that by listening to your favorite music, your overall mental and emotional state will improve. Music can improve your way of thinking and block any negative thoughts that might get in the way of your concentration. With better focus, you can retain more information and prepare for upcoming exams.

2. Beats Stress and Anxiety

When it comes to music, we all have our preferences. Maybe you like it because of the lyrics and what you can associate with them, or you might just like the rhythm of the song. No matter what it is, listening to your favorite music makes you feel better and happy because our brain releases endorphins. That is why most doctors' offices have soothing music, it helps calming down and can even reduce anxiety, it also helps to reduce stress.

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3. Improve focus

It is known that music activates your brain and helps to increase your focus on certain activities. To help you focus on your studies, it is best to stick to classical music or other songs with rhythm and no lyrics. If you play music with lyrics, you tend to jump in and sing, which can affect your concentration.

The best music to help you focus better are the ones that keep you motivated.

4. Eliminate interference

A great way to cut out distractions, especially if you're in a loud area and trying to study, is by getting your headphones out and listening to some music. By blocking out loud and distracting noises, you can focus on what needs to be done. In fact, some artists also prefer to listen to music to cut out distractions and just focus on their work.

5. Make tedious tasks more fun

If you're reviewing or have some repetitive homework, playing some music in the background might help improve your perception of the task at hand. Rhythm can help you accomplish monotonous tasks more efficiently and doing activities that match the beat of the music can also make it less boring. While studying, music can help improve your sense of what you're reading or memorizing, while rhythm can help you retain more information or act as a trigger to help you remember facts for exams.

No matter what type of music you like to listen to and no matter your learning method is, it is still your choice whether to incorporate music into your daily life. Remember, there's no wrong in trying to review or learn with music, and plenty of research shows how music can help improve your cognitive function.

7.3 Tips to learn better at home

Over the last few chapters, I gave some tips on how to learn for the different styles. These tips were rather to learn in class, in a noisy place amongst people. Here are now some tips on how to learn better at home.

7.3.1 Visual learner

To learn better from home, you should always have an organized work and living space and not have things around you that could distract you. To not get distracted, sit turned away from doors and windows and don't hang maps or bulletin boards on your walls. Use organized material and try to work with images or videos a lot. Highlight important information, like definitions, formulas, or other facts. Flashy colors stand out a lot and catch your attention more so that you can connect the colors to different subjects and visualize them later. Use flash cards, post-its, to-do lists or other reminders. Draw charts, graphs, symbols, or other things next to your text, or print them out and try to visualize them. Do it from time to time so you can practice visual memories when you study or review, afterwards you can try to put them back into words. Rewrite your notes, but not by copying them but by visualizing them. Write your own tests or ask your teacher for old tests to practice and to know how to organize yourself.

7.3.2 Auditory learner

As an auditory learner, you should learn in quiet areas of your house and avoid rooms with other people that are having conversations, music, or a TV. Use jingles, mnemonics, rhymes, or videos to learn different definitions or subjects you need to know by heart. You can also make them yourself and record them. Explain the information to yourself, talk out loud. Read a text out loud, with a lot of

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expression so you can understand everything better. Brainstorm a lot but talk out loud and record it. Pretend to explain the material to another person, as being able to explain it to somebody else can help you understand and rephrase everything better. You can also read your material out loud and record it so you can listen to it everywhere you go, like an audio book. Basically, record yourself doing everything so you can listen to it later.

7.3.3 Reading/Writing

If you learn better when writing down or reading something, write your notes down multiple times, and read them silently. When you have read them, try to write them down in your own words again, and use colorful pens or highlighters to see the most important information first. Use lists, handouts, and write short explanations for charts, diagrams, or graphs. Get old tests or write your own and practice with them. Practice with multiple choice questions or you can also organize your key points into a PowerPoint slideshow. Write a lot of flash cards or post-its and hang them around your room or the house so you can learn wherever you go.

7.3.4 Kinesthetic learner

If you are a kinesthetic learner, you should use all your senses – sight, touch, taste, smell, and hearing. Try to be physically active while studying. Do not just sit at your desk, stand up, walk back and forth while reading your notes or textbook out loud and use your finger as a guide while reading. To help your fidgeting while studying, try listening to some music, ideally some classical music without too many lyrics. However, if it distracts you too much, turn it off. Something that can also stop your fidgeting is to chew gum, it helps you to stay focused. Buy a small chalkboard to hang in your room and write down the most important stuff to learn. Try to act out what you are learning as talking out loud can help. It is the same for exaggerated movements and hand gestures. Dance, pantomime, or role-play, point your finger at things and express your emotions, whatever helps you best. You have to try different things to find what suits you best. To bring some fun into learning, you can create some games, such as Twenty-One Questions, taboo, or charades.

7.3.5 Multimodal learner

It is easier to learn as a multimodal learner because you can use the different methods for different subjects. If the subject is more crafty, most multimodal learners can use a kinesthetic way of learning. If the subject consists of watching YouTube videos, a big part of the multimodal learners can use the auditory way of learning. Same goes for the reading/writing style or the visual learning style. Still every multimodal learner is different as there are 13 distinct versions of a multimodal learner (see chapter 5 for more specific explanation). But as a multimodal learner can learn like every type of learner, the tips for them are the ones listed above.

8.0 Survey

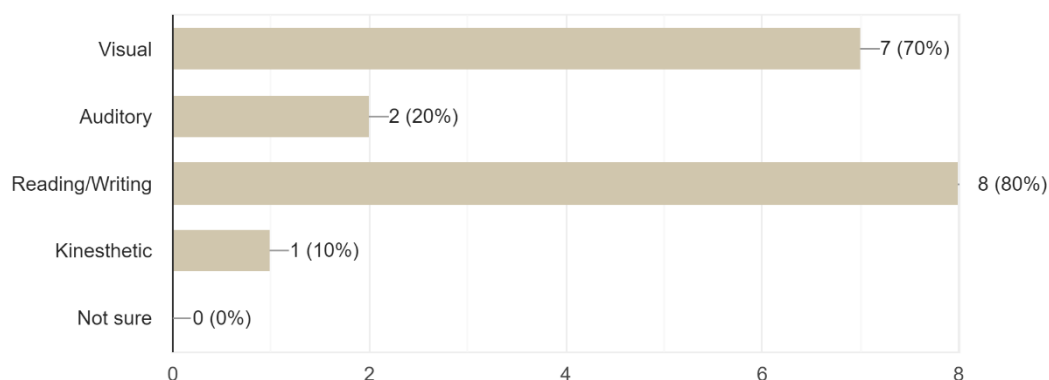
I put together a survey and gave it to 10 people in my entourage, including me. I made this survey to find out if people around me know how they could learn the best way possible. Everybody is different, so at first, I asked them how they are learning right now, and what they are doing to learn. Because I know that most people are not sure if it is the perfect way to learn, including me. I asked them if they think that their way is the best way for them. I then added the official VARK-Questionnaire as a link and asked them to fill it out. As a result, they got told how often they used the different styles in different situations. My next question was what their result had been, and I asked them to pick the styles that got over 5 points in the VARK-Questionnaire.

As my first thought to do this survey was to write a test afterwards and then give them another survey with different questions, I gave them tips on how to learn in the different styles. However, the majority of the participants did not learn for the test that was planned, which led to me not knowing how to proceed. I wanted to analyze, if they learned better with the way they got suggested from the VARK-Questionnaire. But when I got back the results from the second survey, most people said that they didn't learn, so I needed a new idea. So, a friend gave me the idea of just analyzing the first survey.

As my first idea for the survey was different, I needed my survey to not be anonymous and gave every person a number to type in at the beginning. I had initially planned to ask 10 people, but after a while I saw that 2 people never even completed the survey, so I asked someone else and did it myself too.

1 = WF 2 = AO 3 = FM 4 = MB 5 = MS
8 = EL 9 = SK 10 = AJ 11 = CF 12 = LH

As already listed above, the first question was just to find out how everyone learns. Everyone could choose the way or ways they learn. The first thing I noticed then was that no one chose the kinesthetic learning style, which I assume is because they didn't really know what it meant. The only person who chose it was me, but I think it is more because I wrote this whole paper and knew the exact definition of it. The majority of people said that they learn in a visual or reading/writing way, which is very common. Just 2 people chose the auditory way of learning, although the number of auditory learners is usually higher.



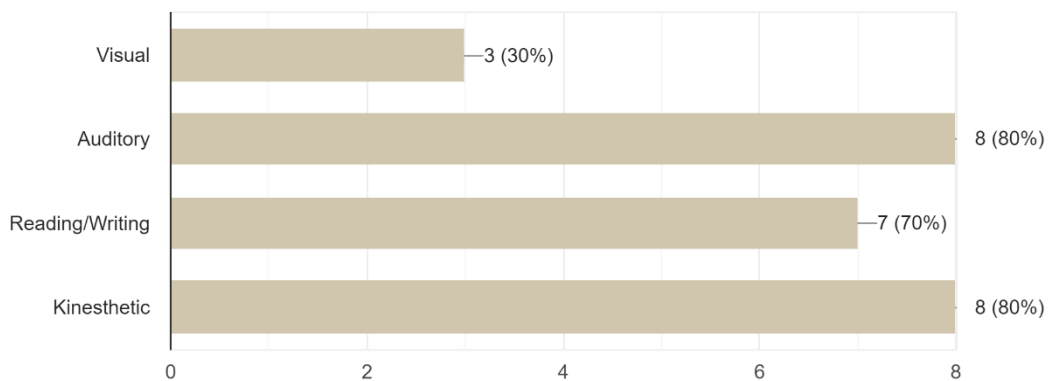
I then proceeded to ask how they learn and gave them as much free writing space as they wanted. The most common answer was to write a summary of the most important notes and read it again and again. Others said learning by doing and wrote that they do exercises for the majority of the time. Someone else said they explain it to themselves, tell themselves out loud and step by step how to solve the problem they are facing. Some said that depending on where they are they either learn in a completely

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quiet area where nobody can distract them, or they listen to music. Someone else said that they usually do not learn, they look through their notes one or two days before the exam and just know it. Others move through the room when learning by heart others just say it out loud over and over again.

To find out if everybody thinks their way of learning is good, I asked them if they think that it is their ideal way. Out of ten people six were convinced that it is their best way the other four said the opposite.

After that Yes or No question I gave them the link to the VARK-Questionnaire. Then, as already mentioned, I asked them for their results. As you can see on the diagrams, a lot more people learn in a kinesthetic and auditory way and way less people would actually learn better in a visual way.



The interesting part about this though is that out of ten people, just two knew how to learn ideally and four were completely wrong. The person to say that they usually do not learn, but only look through their notes one or two days before the exam and just know it, said for the first question that they usually learn visually. After the VARK-Questionnaire they got as a result to either auditory, kinesthetic or through reading and writing, but not visual. The same goes for two candidates saying that they usually learn visually or by reading/writing and as result they got to learn auditory or kinesthetic. Another person said they learned by reading or writing stuff down, and as a result they got to learn visually, auditory or kinesthetic. The other participants got a few of their styles right, as for example they chose that they learn visually, auditory and through reading/writing at the first question and as a result they got to learn auditory, kinesthetic and through reading/writing.

The last part of the survey was about the different tips for the learning styles, which are the same I listed either in chapter 5 or in chapter 7 under the matching style. Either way all the tips that were included in the survey are in this paper too.

9.0 Inference

I put a lot of work and time into this paper, and I am rather proud of the outcome. I learned a lot by writing this and sometimes it was fun to work on it to shut off everything around me, even if I often felt stressed about getting this done. Everything I wrote in this work is going to help me for my future life.

When I think about how I learned a year ago versus now, I see that I do not stress as much anymore. I used to be awake every night to get definitions into my head and learn for the test the next day. I used to start 2 weeks prior to the exam and yet I somehow still got bad grades. Now, after these tips I read on the internet and in books, I still learn a lot but not as much. I take time off if I need it, and do not think about exams constantly. I get better grades by learning but without exaggerating. Still, I don't think that I found my perfect way to learning. I did a big progress, but I think I can do better.

I cannot really give a definite answer to my question of how singing improves my exams, as it is a little bit tricky. Singing can help in some way, but it is not really possible to get better grades by just singing. Music in general is there to relieve stress. Karaoke for example can help you in a way to sing your stress away but it won't help you to get straight A's in every subject (more to this in chapter 7.2).

10.0 Sources

What is learning?

- <https://www.skillsyouneed.com/learn/learning.html> (March 16, 2022)
- [https://www.merriam-webster.com/dictionary/learn#:~:text=1a\(1\)%20%3A%20to,realize%20learned%20that%20honesty%20paid](https://www.merriam-webster.com/dictionary/learn#:~:text=1a(1)%20%3A%20to,realize%20learned%20that%20honesty%20paid) (March 16, 2022)
- https://www.queensu.ca/teachingandlearning/modules/students/04_what_is_learning.html (March 16, 2022)

The importance of learning

- <https://www.marketing91.com/importance-of-learning/> (November 1, 2021)
- <https://www.lernstudio-wattenscheid.de/lerntipps/267-wieso-ist-lebenslanges-lernen-heute-so-wichtig.html> (November 1, 2021)
- <https://www.marketing91.com/importance-of-learning/#:~:text=The%20importance%20of%20learning%20is%20that%20it%20helps%20the%20individual,help%20in%20reaching%20specific%20goals> (November 1, 2021)

The importance of learning to learn

- <https://the1thing.com/2013/10/23/the-importance-of-learning-to-learn/> (November 20, 2021)
- <https://sportscienceinsider.com/stages-of-learning/> (November 20, 2021)
- <http://www.improvingpdhpe.com/hsc-notes/stages-of-skill-acquisition-2/> (November 20, 2021)

Different types of learning / Different types of learners

- <https://www.wgu.edu/blog/visual-learning-style-strategies2007.html#close> (October 15, 2021)
- <https://www.thoughtco.com/visual-learning-style-p2-1857113> (October 15, 2021)
- <https://allroundclub.com/blog/auditory-learning-style/> (October 15, 2021)
- https://www.showmeimages.com/news/auditory_learner.html (October 15, 2021)
- <https://blog.outschool.com/the-auditory-learner-strengths-strategies-learning-activities/> (October 15, 2021)
- <https://www.thoughtco.com/auditory-learning-style-p3-3212038> (October 15, 2021)
- <https://learningstyles101.com.wordpress.com/blog/read-write-learner/> (October 15, 2021)
- https://ace.fsu.edu/sites/g/files/upcbnu296/files/Study_Strategies_by_Learning_Styles.pdf (October 20, 2021)
- <https://bau.edu/News/types-of-learning-styles/> (October 20, 2021)
- <https://sphero.com/blogs/news/learning-styles-for-kids> (October 20, 2021)
- https://www.ccri.edu/success/pdf/sc_LearningStyles-FINAL.pdf (October 20, 2021)
- <https://virtuallspeech.com/blog/teaching-strategies-different-learning-styles> (October 20, 2021)
- <https://vark-learn.com/strategies/kinesthetic-strategies/> (October 20, 2021)
- https://www.uc.edu/content/dam/uc/aess/docs/LACResources/Strategies%20for%20Kinesthetic%20Learners_6_25_2012.pdf (October 20, 2021)
- <https://child1st.com/blogs/resources/113159303-teaching-strategies-that-meet-the-needs-of-kinesthetic-learners> (October 20, 2021)
- <https://blog.outschool.com/the-kinesthetic-learner-strengths-strategies-learning-activities/> (October 20, 2021)

LEARN TO LEARN

- <https://www.indeed.com/career-advice/career-development/kinesthetic-learning-strategies> (October 21, 2021)
- <https://vark-learn.com/strategies/multimodal-strategies/> (November 28, 2021)
- <https://www.prodigygame.com/main-en/blog/multimodal-learning/> (November 28, 2021)

Learning Mistakes

- <https://www.scotthyoung.com/blog/2013/10/17/7-learner-mistakes/> (February 3, 2022)
- <https://www.indeed.com/career-advice/career-development/improve-time-management-skills> (February 7, 2022)
- <https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/singing-is-the-perfect-stress-buster-during-exams/articleshow/30720183.cms#:~:text=It%20has%20been%20found%20that,is%20where%20karaoke%20comes%20in> (February 11, 2022)
- <https://www.kent-teach.com/Blog/post/2019/04/01/how-music-can-help-you-study.aspx> (February 11, 2022)

Tips

- <https://www.cowley.edu/academics/skills/tipstk.html> (March 9, 2022)
- https://test.ccri.edu/success/pdf/sc_LearningStyles-FINAL.pdf (March 9, 2022)
- <https://www.how-to-study.com/study-skills-articles/tactile-kinesthetic-learner.asp> (March 9, 2022)
- https://ace.fsu.edu/sites/g/files/upcbnu296/files/Study_Strategies_by_Learning_Styles.pdf (March 9, 2022)
- <https://schools.magoosh.com/schools-blog/8-top-study-tips-for-kinesthetic-learners-preparing-for-the-praxis-core> (March 9, 2022)
- <https://vark-learn.com/strategies/readwrite-strategies/> (March 9, 2022)
- <https://www.cowley.edu/academics/skills/tipsvl.html> (March 9, 2022)
- <https://www.cowley.edu/academics/skills/tipsal.html> (March 9, 2022)