Study Skills 1

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Objectives

By the end of the course, students will be able to :

- set academic goals, apply effective learning strategies, and demonstrate achievement in their courses.
- demonstrate independent learning skills and apply critical thinking in academic and real-life contexts.
- develop and apply reading, writing, and research methodology skills effectively.

Chapter 01 : Management for Study

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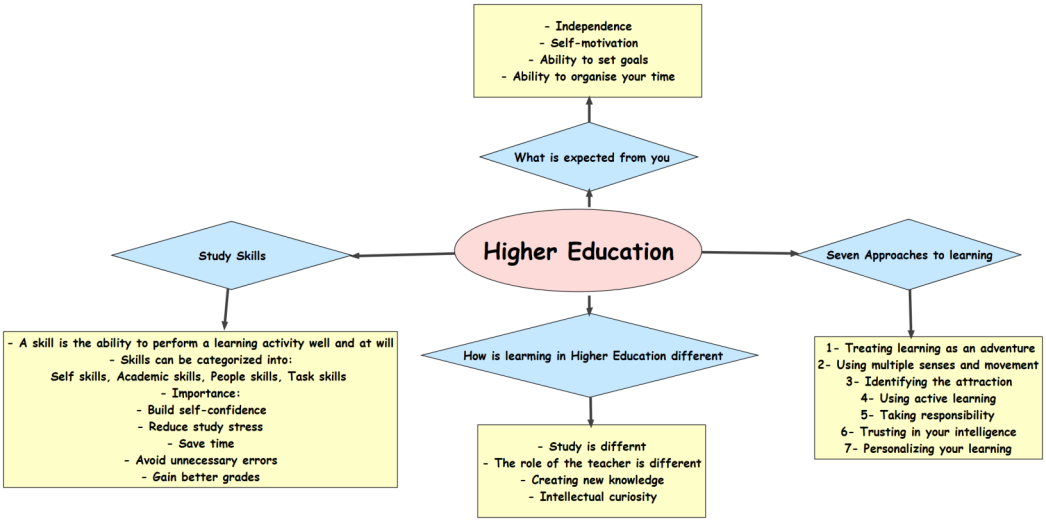
1. Lesson 01 : Introduction to the Course

Objectives : By the end of the lesson, students will be able to :

Understand the structure of Higher Education.



1.1. Seven Approaches to Learng

1- Treating learning as an adventure:

Small children treat life and learning as a big adventure. They are curious and learn extraordinary amounts without trying particularly hard – simply through being relaxed, observing, playing, questioning, trying things out for themselves, making mistakes, wanting to understand. They don't treat setbacks as failures nor do they

worry about what others think or tell themselves they might not be able to learn. If they fall when learning to walk, they have another go, and another, until they succeed. Adults can learn in this way too – if they allow themselves.

2- Using multiple senses and movement:

The more we use our senses of sight, hearing and touch, and the more we use fine muscle movements in looking, speaking, writing, typing, drawing, checking, deciding, the more we help our brains to help us learn. Combining the information from multiple senses and movements enables the brain to make more connections and associations. These help it to make sense of the information, lay down memories and recall it better later. This book encourages you to use your senses to the full and to incorporate movement into your study to make learning easier and more engaging.

3- Identifying the attraction:

It is easier to learn if we keep desirable outcomes in mind rather than force ourselves to study out of duty. Some aspects of study may be less attractive to you, such as writing essays, meeting deadlines or sitting exams, and yet these also tend to bring the greatest satisfaction and rewards. You do have it in your power to find in any aspect of study an angle that sparks your curiosity, drives your personal motivation, or makes it meaningful – to find the hidden gold that attracts you. For example, visualise yourself on a large cinema screen enjoying your study – or your later rewards. Hear your own voice telling you what you are achieving now. Your imagination will catch hold of these incentives and find ways of making them happen.

4- Using active learning:

We learn with a deeper understanding when we are actively and personally engaged:

★ juggling information

★ struggling to make sense

★ playing with different options

★ making decisions

★ looking for links, connections, meaning, significance, solutions.

5- Taking responsibility of your learning:

In Higher Education, it is expected that you will take on increasing responsibility for your learning and that you are ready and able to study under your own direction for much of the week, as a responsible adult. This prepares you to lead and manage, whether in academic life, work or other contexts. This means developing a range of abilities, not least in being able to evaluate and make judgements about your own work, with a fair but critical eye, prioritising what needs further work, getting on with doing so, and monitoring how well you are doing what you planned to do.

6- Trusting in your intelligence:

Many students worry that they are not intelligent enough to do well, especially at times when the course seems tough. If they didn't do well at school, they can doubt whether academic ability is ‘in their genes'. If they excelled at school, they can worry they have ‘lost it'. Worry and stress make it harder to learn. With the right preparation, attitude and strategy, it is likely you will do fine. Trust that you can achieve well – and make it happen..

7- Personalizing your learning:

Each of us learns in an individual way – and our circumstances, experiences and interests vary. We each enjoy particular aspects of the course or methods of assessment more than others. We connect with some material and not others. We might prefer to learn on our own or socially, digitally or with paper and artefacts; to be on campus or at home, and so on. You can do well without personalising your learning, but you can make study more effective, efficient and enjoyable if you adapt how and when you go about it so that it fits you best. It is worth taking time to understand and consider the many factors that contribute to optimal learning and to work out what really works best for you It is likely that you will find different things work better for aspects of the course you feel confident about or enjoy, and those you don't, as well as for different tasks, the mood you are in, who you are learning with, how much time you have, or the time of the day.

1.2. How is Higher Level Study Different?

1- Study is different:

As a student in Higher Education, the most noticeably different features are likely to be:

★ the teaching methods, especially the emphasis on independent study

★ the assumption that you have the maturity and intelligence to ‘get on with it', managing your own study, goals and life

★ that academic work is more difficult and complex

★ the strong emphasis on ‘understanding' rather than ‘information'

★ learning how knowledge is created

★that time may seem to operate differently: good time management skills are essential

2- The role of the teacher is different

Teachers at this level are usually known as lecturers, tutors or professors. As well as teaching, they are usually expected to engage in research and scholarship, which might feed into their teaching. When they are not involved in teaching-related tasks, they may be preparing research papers for publication and conferences, or applying research or professional skills in industry, government and elsewhere.

3- Creating new knowledge:

Higher Education is about creating knowledge as well as teaching it and learning about it. Depending on the subject, this is through:

★ thinking, discussion and writing to develop theoretical understandings

★ experimenting to test out theories

★ investigating original sources or past knowledge, finding new ways of looking at these and bringing new interpretations

★ applying knowledge and understanding to new situations.

4- Intellectual curiosity; learning community:

Studying at this level is about being part of an adult learning community in which everyone, students and lecturers, are active in finding out new things for themselves and sharing them with others. It is assumed that you are intellectually curious, keen to find things out for yourself and to contribute to developing new understandings. Universities play an important role in:

★ encouraging research into new areas

★ leading debate on contemporary issues

★ critiquing existing understandings

★ synthesizing knowledge

★ generating new understandings of the world

★ stimulating economic development

★ ... as well as teaching students.

Depending on your institution, teaching is likely to be designed in ways that encourage you to do the same. Typically, you are required to:

★ engage with debates in your subject

★ hunt out answers for yourself

★ develop your capacity to think in more creative, systematic and subtle ways

★ be open to new perspectives

★ undertake projects

★ consider the broader significance and relevance of what you find out.

1.3. What is Expected from you ?

Advice

As a student you are expected to have the following characteristics:

• Independence.

• Self-motivation.

• Openness to work with others

• The ability to work out things for yourself

• Ability to set goals to improve your work

• Ability to organize your time.

• Ability to work out when and how you learn best.

1.4. Study Skills

Definition: What is a Skill ?

A skill is a learned ability rather than an outcome achieved through luck or chance and can, therefore, be relied on reasonably securely when you perform an equivalent task again.

Definition: What are Study Skills ?

The term ‘Study skills' here is used to refer to abilities, habits, understandings and attitudes that enable achievement in your studies. These can be categorized into four-easy to remember, inter-related areas:

- Self
- Academic
- People

- Task

Why are Study Skills important ?

Study skills help you:

- know what you are doing
- organize your independent study
- build your confidence
- reduce study stress
- improve the quality of your work
- enjoy study more
- study more efficiently
- save time
- avoid unnecessary errors
- gain better grades

1.5. Practice

Exercice

In Higher Education, it is expected that you will take on increasing for your learning and that you are ready and to study under your own direction for much of the week, as a responsible .

1.6. Exercice

Exercice

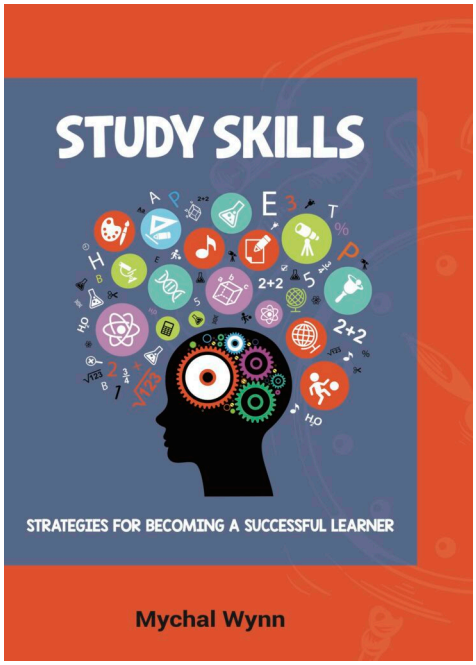
A skill is

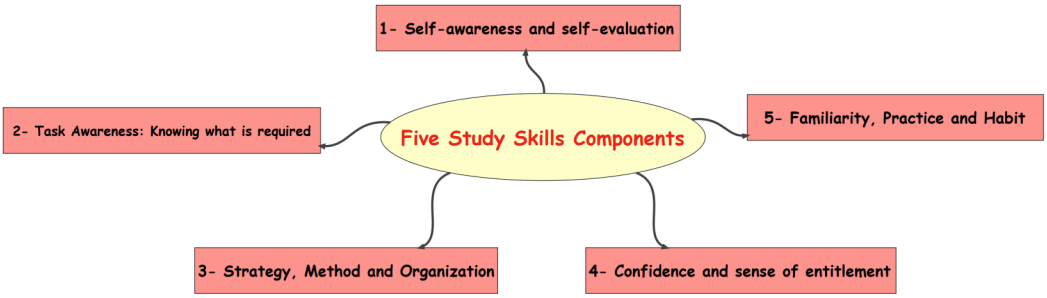
- Alearned ability
- An outcome achieved through luck and chance

2. Lesson 02 : Developping Study Skills

Objectives : By the end of the lesson, learners will be able to :

- Define study skills
- Develop effective study skills





2.1. Five Study Skills Components

a-Self-awareness and self evaluation

To develop a skill, you need first to know where you are starting from. What are your current strengths and weaknesses? What do you want to achieve? Where do you need to improve? How are you going to improve? What are your resources? What could obstruct your goals? Ways of developing such awareness include:

★ using self-evaluation questionnaires

★ monitoring your progress

★ maintaining a reflective journal or blog

★ group discussion and chat

★ feedback and criticism from other students

★ feedback and comments from tutors.

b-Task awareness: knowing what is required

To score a goal you need to know where the goalposts are. In an academic context, this means finding out what is expected of you and what your lecturers are looking for whenever you are set a new assignment.

Essential information is usually provided in course handbooks, web pages, through a virtual learning environment and in assignment briefs In particular, for each subject, find out about:

★ the curriculum – the course content

★ the outcomes or objectives – what you must know or be able to do by the end of the course

★ how marks are allocated – what gets good marks? What loses marks?

★ the special preferences of each lecturer – if in doubt, ask.

c-Strategy, method and organisation

It is easier to study and saves you time if you have a method for working and are well organised. A skilled student uses strategies, and with practice these become automatic.

d- Confidence and sense of 'entitlement'

If you are to succeed as a student, you have to believe that such success is possible for you. However, many students feel that academic success

is for other people rather than for them. This may be because of their experiences at school, or because nobody from their family has a degree.

Often, it is because they hold particular ideas about intelligence, especially their own academic abilities, and so do not give themselves 'permission' to do well..

e- Familiarity, practice and habit

All skills improve through practice, feedback and monitoring. The more you study and reflect on your learning, the more you become:

★ adept at finding shortcuts

★ aware of underlying skills, qualities and habits that you can improve

★ able to see patterns in what you do

★ able to focus on study for longer

★ able to perform skills automatically.

The way to study well and easily becomes a habit. If you have been away from study or are not used to managing so much unscheduled time, you may find you need to build good study habits.

[cf. study skills]

2.2. Practice

Exercice

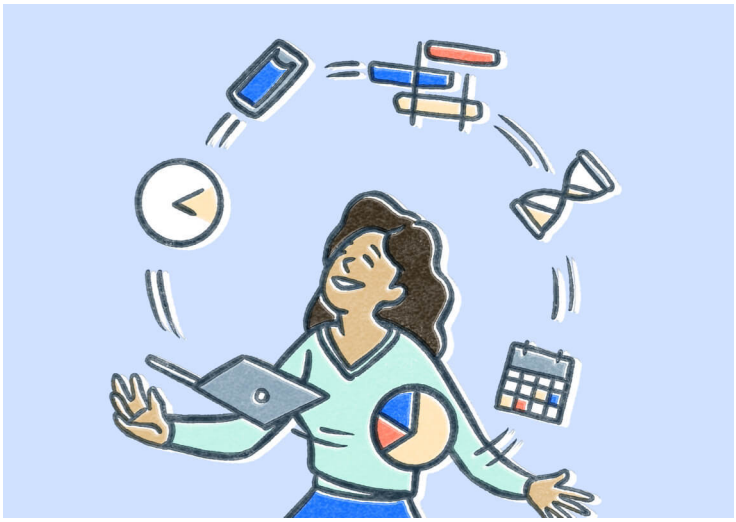
To develop a skill, you need first to know :

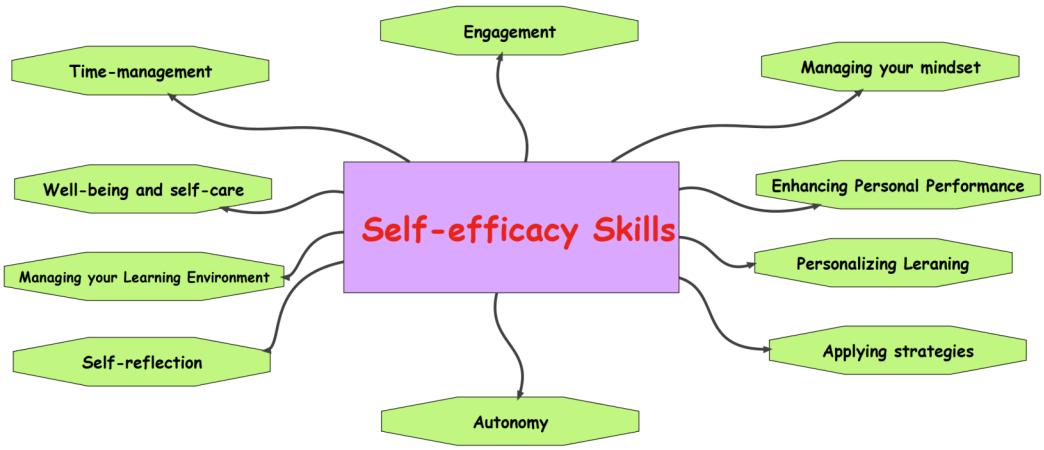
- ☐ What are your current strengths and weaknesses?
- ☐ What do you want to achieve?
- ☐ How are you going to improve?

3. Lesoon 03 : Self-Efficacy Skills

Objectives : By the end of the lesson, learners will be able to :

- Identify self-efficacy skills.





3.1. A Transformational Experience

Extra

The experience of studying in Higher Education can be life-changing. Most graduates look back on this time with great fondness. In part, this is because of the unique opportunities it offers:

★ to study interesting subjects

★ to feel stretched intellectually

★ to explore new ideas

★ to engage in a wide range of new activities, not easily available elsewhere

★ to find out about yourself and how you rise to the challenge of academic study

★ to consider the kind of person that you want to be in the world

★ to make friends that can last for life.

3.2. The Importance of Self-Efficacy Skills:

Self-efficacy or being able to ‘manage yourself' can make a significant difference to your time as a student and beyond. It is one of the most important attributes to bring to study and to take into life beyond your course. It is worth spending time thinking about this and developing your self-management abilities.

3.3. Self-Efficacy Skills

Good self-management is essential in higher education because of the increased expectations for autonomous learning and personal responsibility, and the level of challenge. Effective management of your time, emotions, attitudes, habits and life matter more as you progress upwards through the course. Self-efficacy is a broad concept; it involves such skills, qualities and attitudes as these 10 below.

1 Engagement: taking an active part in shaping your learning and success.

2 Autonomy: being able to think for yourself, and to make good choices to direct your own study.

3 Managing your mindset: adopting the right attitudes to drive your success and inspire you.

4 Enhancing personal performance: always looking to improve further, using feedback, data, observation and reflection.

5 Personalizing learning: identifying and applying approaches that work best for you.

6 Applying strategies: creative, reflective, effective, active, well-motivated (C·R·E·A·M).

7 Time-management: using time to best effect; ensuring your work is submitted on time.

8 Well-being and self-care: balancing study, work and life; managing stress.

9 Managing your learning environment: coping with the broader learning context.

10 Self-reflection: thinking meaningfully about the consequences of your actions and thought patterns for your study, well-being and future.

3.4. Practice

Exercice

What is "Autonomy" ?

Exercice

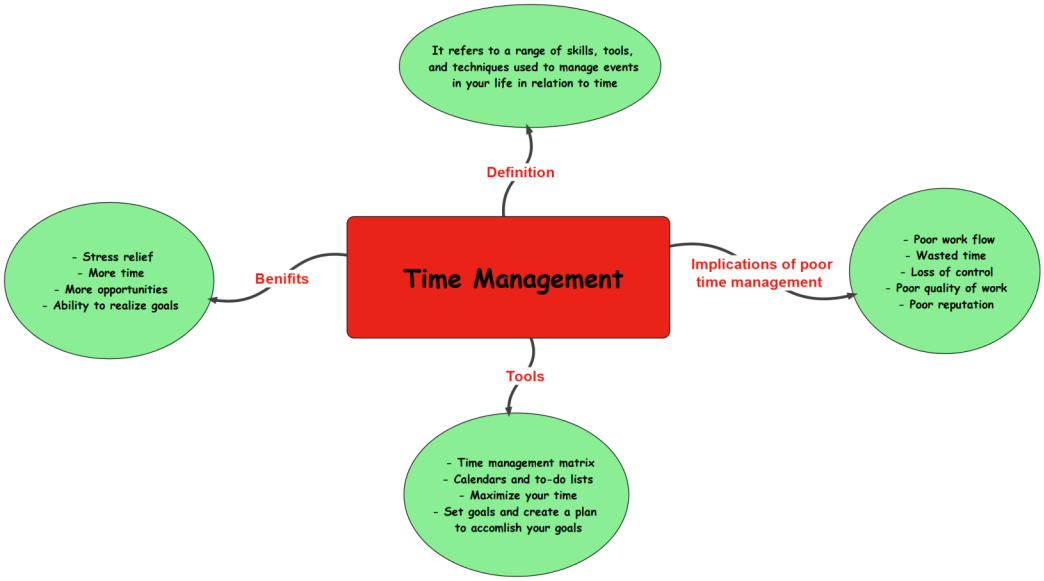
"C-R-E-A-M" strategy stands for :

- O creative, reflective, effective, active, motivated
- O creative, regular, effective, active, meaningful
- O creative, reflective, engaged, active, motivated

4. Lesson 04 : Time Management

Objectives : By the end of the lesson, students will be able to :

- Identify Time wasters
- Apply Effective time menagement skills



4.1. Introduction

There is a titanic difference between secondary and higher education when it comes to managing time and academic responsibilities. In secondary education, there was the kind of learning that includes an explanation of everything. On the other hand, when students enter university, they find out that what they learn is a lecture, that only includes superficial information and the rest is their job to know about and explore further (Britton & Tesser, 2001).

Time management is a skill that every student should not only know, but also apply. A lot of university students complain about running out of time when asked to do a certain task, they get frustrated because they are not able to make it before the deadline.

Time management is extremely important, especially when it comes to university students because it will boost their grades and enhance their productivity (Laurie & Hellsten, 2002). However, most of the time students face problems like task aversion and uncertainty, so they start to procrastinate because they lack organizational skills. As a result, students will not be able to organize duties according to their priorities, so they get distracted asily, ending up procrastinating. As we can see, time management is quite essential to any university student, and it is one of the keys to higher academic achievements (Kelly, 2004)

4.2. What is"Time management" ?

Definition

Time management refers to a range of skills, tools, and techniques used to manage events in your life in relation to time. Time management is really a misnomer. We don't really manage time – we manage ourselves and our life events in relation to time.

It is the process of organizing and planning to divide your time between different activities.

If time is divided carefully among different activities, then you'll end up working smarter, and will be able to do more work in less time –

even when time is tight and pressures are high.

4.3. The importance and Benefits of Time management

Scheduling and managing time wisely are important for college students. Successful time management can assist you in keeping important personal and academic appointments and deadlines. If you have difficulty " finding time" to accomplish your daily tasks and academic requirements you may experience anxiety, frustration, guilt and other self-defeating feelings.

The ability to manage your time effectively is important. Good time management leads to improved efficiency and productivity, less stress, and more success in life. Here are some benefits of managing time effectively:

1. Stress relief

Making and following a task schedule reduces anxiety. As you check off items on your "to do" list, you can see that you are making tangible progress. This helps you avoid feeling stressed out with worry about whether you're getting things done.

2. More time

Good time management gives you extra time to spend in your daily life. People who can time manage effectively enjoy having more time to spend on hobbies or other personal pursuits.

3. More opportunities

Managing time well leads to more opportunities and less time wasted on trivial activities. Good time management skills are key qualities that employers look

for. The ability to prioritize and schedule work is extremely desirable for any organization.

4. Ability to realize goals

Individuals who practice good time management are able to better achieve goals and objectives, and to do so in a shorter length of time.

4.4. Implications for Poor Time Management

Let's also consider the consequences of poor time management:

1. Poor workflow

The inability to plan ahead and stick to goals means poor efficiency. For example, if there are several important tasks to complete, an effective plan would be to complete related tasks together or sequentially.

2. Wasted time

Poor time management results in wasted time. For example, by talking to friends on social media while doing an assignment, you are distracting yourself and wasting time.

3. Loss of control

By not knowing what the next task is, you suffer from loss of control of your life. That can contribute to higher stress levels and anxiety.

4. Poor quality of work

Poor time management typically makes the quality of your work suffer. For example, having to rush to complete tasks at the last minute usually compromises quality.

5. Poor reputation

If clients or your employer cannot rely on you to complete tasks in a timely manner, their expectations and perceptions of you are adversely affected.

4.5. Understanding Where Your Time is Spent

Fundamental

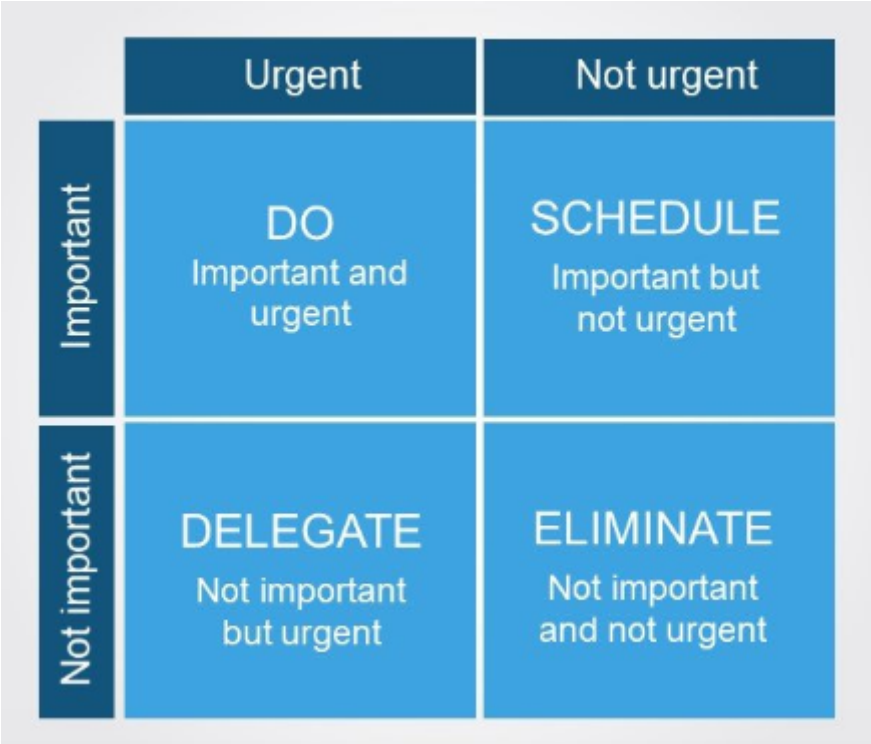
To begin managing your time, you first need a clearer idea of how you now use your time. This activity will allow you to:

- Determine how you spend your time
- Allow you to set aside specific time for class, study, work, family and social activities
- Identify activities wasting your time
- Identify new areas of your schedule for activities related to your goals and priorities.

4.6. Time Management Matrix

Definition

A time management matrix is a tool used to prioritize tasks based on their level of urgency and importance. It helps individuals allocate their time effectively by categorizing tasks into four quadrants: urgent and important, important but not urgent, urgent but not important, and neither urgent nor important. The goal of a time management matrix is to focus on important tasks and minimize distractions from non-essential ones.



4.7. Time Management Tools

Method

a- Calendars and to-do lists

1. Use a calendar – electronic, online or paper. online calendar. Whatever formats you choose, use it. Look at your calendar daily.

2. Plan your day each morning or the night before, and set priorities for yourself.

3. Look ahead in your month. Try to anticipate what is going to happen, so you can better schedule your time.

4. The first week of school, use your class syllabi to put due dates for assignments, test dates, and appointments for the entire semester in your

calendar. Put reminders on your calendar three to four days prior to the due date.

5. Don't over-schedule yourself. Build extra time into your weekly schedule prior to appointment or assignments as a buffer in case an unknown emergency arises.

6. Maintain and develop a list of specific tasks to be done each day; set your priorities and get the most important ones done as soon in the day as you can. Evaluate your progress at the end of the day.

7. Employ the ABC prioritizing method for your to-do list tasks – high (A), medium (B) and low priority (C) – to your activities, so you don't waste time doing low priority tasks.

8. When quality study time is needed, reduce distractions; turn off the phone and e-mail, shut your door or find a quiet study spot to avoid any distractions.

9. Schedule time for yourself. Get six to eight hours of sleep per day and have fun as well.

b- Maximize your time

1. Continually look at ways of freeing up your time.

2. Delegate responsibilities whenever possible.

3. Consider your natural biological rhythm when planning your day's activities; if you are not a morning person, don't schedule important meetings or classes early in the day.

4. Try to use waiting time (e.g., at a doctor's office or mechanic) to accomplish another task such as reviewing notes or doing practice problem

c- Set goals and create a plan to accomplish your goals

1. Think on paper when possible; it makes it easier to revise your goals.

2. Put up reminders in your home or office about your goals to keep them in mind.

3. Set deadlines for your goals and check in with your goals and calendar frequently to make sure you are still on track. Modify your goals or schedule as necessary.

4. Reward yourself when you get things done as you had planned.

4.8. Practice

Exercice

Time management refers to a range of , tools, and used to manage in your life in relation to Time management is really a misnomer.

Exercice

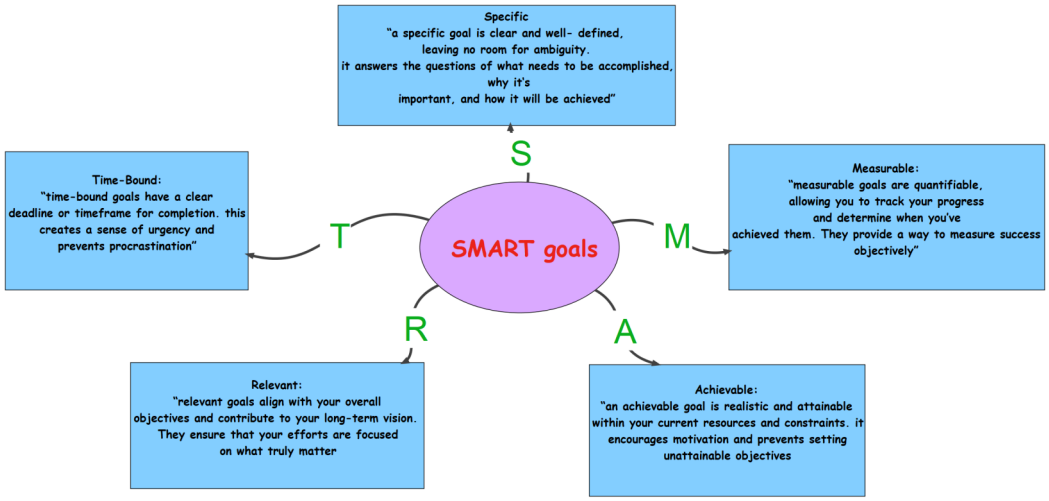
Poor time management leads to :

- ☐ Poor workflow
- ☐ Ability to realize goals
- ☐ Loss of control
- ☐ Poor quality of work

5. Lesson 05 : Goal-Setting

Objectives : By the end of the lesson, students will be able to :

- Identify the link between time management and and goal setting
- Describe a SMART goal
- Set SMART academic and personal goals



5.1. What is Goal setting ?

Definition

Goal setting involves deciding what you want to accomplish and creating a roadmap to do so. Specific, measurable, achievable, and relevant goals must be set to achieve this.

5.2. What is Time Management ?

Definition

In time management, you plan and control how you spend your time. Time management involves setting priorities, managing distractions, and using your time effectively.

5.3. How are goal setting and time management linked?

In order to achieve your desired outcomes, setting goals and managing your time are both important. The more clear your goals are, the better you can manage your time and focus on the activities that will help you achieve them.

Time management and goal setting are linked in the following ways:

• **Setting goals gives you a sense of direction.** You can spend your time more effectively when you know what you want to accomplish.

• **Prioritizing is easier when you set goals.** By prioritizing your tasks, you can focus on those that are crucial to your goals.

• **You can stay motivated by setting goals.** The more clear and focused your goals are, the more likely you are to stay motivated and focused.

• **To achieve your goals, you need to manage your time well.** It is possible to accomplish your goals by managing your time efficiently.

• **You can stay on track with time management.** It is less likely for you to get sidetracked or procrastinate when you have a plan for how you will spend your time.

5.4. How can I improve my goal-setting and time-management skills?

Method

Setting goals and managing your time can be improved in several ways. To get started, follow these tips:

• **Set SMART goals.** A SMART goal is one that is specific, measurable, achievable, relevant, and time-bound. To increase your chances of achieving your goals, make sure that they are SMART.

• **Break down large goals into smaller tasks.** It is easy to feel overwhelmed and intimidated by large goals. You can make them more manageable by breaking them down into smaller, more realistic tasks.

• **Create a to-do list for each day or week.** Create a to-do list for each day or week after you've broken your goals down into smaller tasks. Staying on track and progressing towards your goals will be easier if you do this.

• **Prioritize your tasks.** All tasks are not created equal. Sometimes, a task is more important and urgent than in others. You should prioritize your tasks so that you work on the most important things first.

• **Set deadlines for yourself.** Keeping deadlines can keep you motivated and focused. Make sure deadlines are realistic and attainable when setting them.

• **Eliminate distractions.** To be productive, it is necessary to avoid distractions. As much as possible, eliminate distractions when working on a task. For example, you might shut off your phone, close unnecessary browser tabs, or find a quiet workplace.

• **Take breaks**. Taking breaks throughout the day is essential even if it's just for a few minutes. Breaks can help you remain focused and productive.

5.5. Setting SMART goals

Goal setting is the foundation of success. When setting goals, make sure they are :

• **Specific:** Clearly define your objectives. What exactly do you want to achieve?

• **Measurable:** Establish criteria to track your progress and determine when you've achieved your goal.

• **Achievable:** Ensure your goals are realistic and attainable, given your resources and constraints.

• **Relevant:** Align your goals with your personal values and long-term ambitions.

• **Time-bound:** Set deadlines to create a sense of urgency and accountability.

For example, instead of setting a vague goal like "I will try to get better marks," you could set a SMART goal like "I will raise my Math score from 50% to 75% in the Mid Term Exams by attending the revision classes regularly."

5.6. Examples of SMART Goals

Example

Example 1: Improve academic performance

“I will get an B in my upcoming exam in my MATH 104 class.”

Specific: I want to improve my performance in my upcoming MATH exam.

Measurable: The measurement for success is an B or above.

Achievable: I achieved a C in my previous exam so I believe I can increase one grade by using resources like tutoring, TA office hours consistently through the semester.

Relevant: The goal of getting a B is relevant because it will help me with making progress to my degree.

Time-bound: My exam is in 3 weeks.

Example 2: Improve My Productivity

“I will improve my productivity using Pomodoro technique and study with maximum focus for2 hours.”

Specific: Study using Pomodoro technique.

Measurable: I will keep an account of how many hours I have been productive using Pomodoro technique.

Achievable: Study regularly and Pomodoro technique is a tool for staying productive in those study periods.

Relevant: Studying better will help me understand the course better and enable better grades.

Time-bound: The goal is to keep this habit for 2 months.

5.7. Practice

Exercice

The acronym SMART stands for :

- Special, Meaningful, Achievable, Reflective, Time-bound
- Specific, Measurable, Achievable, Relevant, Time-bound

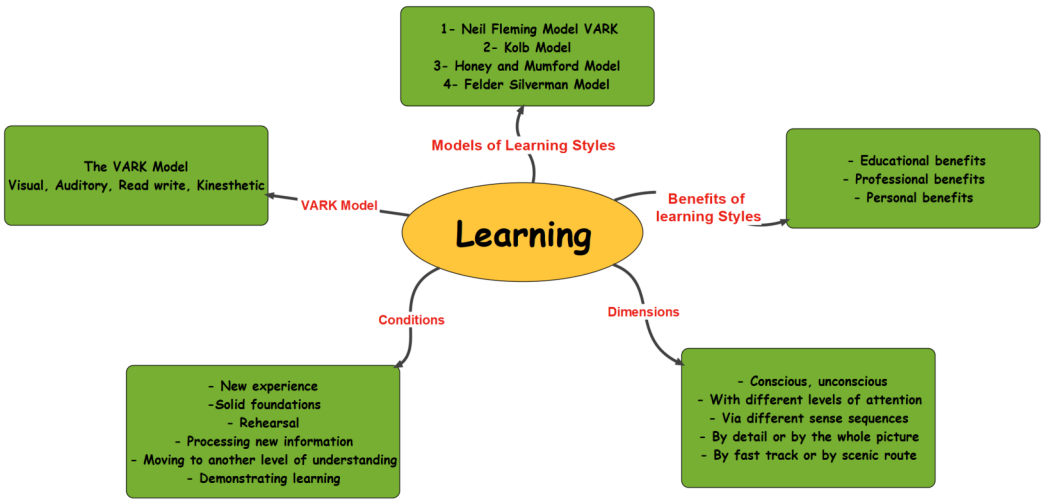
Exercice

Mention three tips to improve your time management and goal setting

6. Lesson 06 : Learning and Learning Styles

Objectives : By the end of the end of the lesson, students will be able to :

- Understand learning, its dimensions and conditions
- Identify learning styles models
- Recognize personal learning styles.



6.1. What is Learning ?

a) Learning as a process:

Learning is clearly more than just intelligence or study skills. It is, rather, a multi-faceted process, involving such factors as:

★ each person as an individual learner and his or her learning history,knowledge, experiences, skills, ambitions, interests, attitude, self-belief and circumstances

★ the current learning context including teaching methods, resources, materials, peer group and physical environment

★ the content and expected outcomes of the learning being undertaken

★ and the interactions between these.

We can say that learning has taken place when we both understand something and can explain, teach or demonstrate it to others.

b) Learning at a university level:

Some people think that memorizing ‘facts' is all there is to learning. Certainly, it is useful to have information readily available when you need it. For most courses, however, what counts is not how many facts you can fit into your answers, but how you use information. You will be expected to demonstrate different aspects of learning such as:

★ that you have made sense of course material

★ that you can evaluate and select what is relevant and important, and what can be omitted

★ that you can interpret information in a reasonable way, as relevant to the subject discipline

★ that you know how ideas are linked and interconnected

★ that you can apply knowledge, methods and algorithms to new problems and contexts

★ that you can structure and present your ideas and knowledge in a convincing argument

c) Five dimensions for learning:

Many different routes can be followed to arrive at the point where learning has taken place. These vary in level of enjoyment and active engagement; we might not even be aware that learning has taken place. Below are five dimensions along which learning activity can vary.

Five dimensions of learning

1 Conscious or unconscious

2 With different levels of attention

3 Via different sense sequences

4 By detail or by the whole picture

5 By fast track or by the scenic route

d) Six conditions for learning:

For learning to occur at all, and for us then to know that the learning is complete, we need the following:

1 New experiences

2 Solid foundations

3 Rehearsal

4 Processing

5 Understanding

6 Demonstration

6.2. Learning Styles

When you learn, you use different learning styles. You may use one learning style often and the others rarely. Also, you use different learning styles to learn different things. Therefore, to learn effectively, you must be knowing your learning styles.

Effective learning happens when you use the learning style that suits you best. When you learn in your preferred learning style, you become more interested, engaged and will be able to learn effortlessly.

Perhaps the most simple way of describing ‘learning styles' is to say that they are different methods of learning or understanding new information, the way a person takes in, understand, expresses and remembers information.

While most of us may have some general idea about how we learn best, often it comes as a surprise when we discover what our predominant learning style is.

The learning style means the physical characteristic, thought and feeling that an individual uses for stably acknowledging, reacting and interacting with the environment. It is important and affects the learning motivation and efficiency of the learner.

1. There is no “best” way to learn. There are many different learning styles, and different styles are suited to different people and/or situations.

2. Everyone has a mix of learning styles, typically with one dominant style.

3. Learning styles guide:

a. The way we learn

b. The way we internalize experiences

c. The way we recall information

d. The words we use

Why are learning styles important to the learner?

1. When the learner knows and understands his or her learning style, the learner is more capable of selecting suitable techniques that may improve learning.

2. Learning styles are not fixed; they can be developed. Less dominant areas can be strengthened.

3. Research indicates that different learning styles use different parts of the

brain. By involving more of the brain during learning, we can remember more

of what we learn.

4. Using multiple learning styles (i.e., trying study skills that are typical of other learning styles) may improve learning and may make learning easier.

5. Learning styles are often closely related to our working style and to our skills and strengths. This should be a major consideration in career choice.

6. Knowledge of dominant and less dominant learning styles should not discourage students from pursuing careers in which they are interested.

6.3. Different Learning Styles Models

Different models are used to define learning styles. Here's a summary of what four leading theorists say about various types of learners and how they learn:

• One common model is the **VARK model** that classifies the learners into four categories. The concept of the VARK theory was introduced by **Neil Fleming**, an educational developer, in 1987.VARK is an acronym for these learning modalities: Visual, Auditory, Read/Write, Kinesthetic.

• According to psychologist **David Kolb** learning styles are cyclical: Experiencing, Reviewing, Concluding, and Planning. Kolb says that learning styles evolve due to genetics, life experiences, and influences of the environments in which learners exist.

• There are four distinct learning styles According to **Peter Honey and Alan Mumford**: Activist, Theorist, Pragmatist, and Reflector.

• The **Felder Silverman** denotes four areas of personality that contribute to learning. The model creates four dimensions for learning styles. They are active or reflective, sensing or intuitive, visual or verbal, inductive-deductive, and sequential or global.

6.4. The VARK Learning Style Model

One of many instruments for determining learning style is the VARK questionnaire, developed by Neil Fleming. The VARK system categorizes learners into four styles: Visual, Aural, Reading/Writing, and Kinesthetic. Many learners show strength in more than one learning style.

Visual learners: learn best from visual images that do not include writing. Graphs and diagrams are easy for them to understand. They remember faces and places and tend to recall information by picturing it in their minds. If you want to invite a visual learner to come to your house, draw a map. In college, a visual learner is going to find it relatively easy to “read” a pie chart in a

business class or perceive differences between artists' painting styles.

Aural or auditory learners: do well with hearing information. They remember words to songs and can recall conversations in detail by hearing them in their minds. If you want an aural learner to come to your house, just tell him or her how to get there. In college, an aural learner will remember lecture material in a variety of classes and may be skilled at memorizing things like music or lines for a theatrical production.

Reading/Writing learners: are at home with written material. They comprehend and remember what they read, and they often enjoy writing. If you want a reading/writing learner to come to your house, provide written directions. College classes have traditionally been geared to the reading/writing learning style; these learners can take notes in most classes and will benefit from reading them as a method for study.

Kinesthetic learners: learn by doing. Hands-on activities and real-life experiences help them remember. If you want a kinesthetic learner to come to your house, the simplest way is to take him or her there yourself or get someone else to do so. Another way to give directions to a kinesthetic learner would be to provide details about what to look for on the way there, making

your directions as experiential as possible. College classes like science labs, acting, or sports teach to the strengths of kinesthetic learners.

6.5. Learning Styles Tips and Strategies

Method

VISUAL

• Doodle diagrams of your written information in the margins

• Create a flowchart for the progression of your notes and ideas

• Make flashcards that include pictures or diagrams as visual clues

• Highlight key information in your texts or notes

• Create a chart or a series of boxes to remind you how to complete math equations

• Use a computer to convert data and notes into charts, tables, graphics, pictures, etc.

• Vocabulary mnemonics

• Hangman game

• Timelines

AURAL/AUDITORY

• Use a computer to record your notes read aloud. Convert this information to download for iPod using iTunes

• Read your notes aloud when studying (mind your surroundings!)

• Work with a regular study partner to review out loud

• Work in a group where you can discuss the information

• Tape lectures. If available, set the counter to zero when it begins and note the number at difficult times during lecture. Review these recorded times later for extra review.

• When learning new material, especially equations, talk your way through the material.

• Singing/ creating a song

• Use of metaphors/similes to compare and remember (as long as they are voiced)

• Use Internet resources like YouTube.com

• Invent acronyms

• Mnemonic devices

READING/WRITING

• Re-write your notes after class.

• Use colored pens and highlighters to focus in on key ideas

• Write notes to yourself in the margins

• Write out key concepts and ideas

• Compose short explanations for diagrams, charts, graphs

• Write out instructions for each step of a procedure or math problem

• Print out your notes for later review

• Post note cards/post-its in visible places (when doing dishes, on the bottom of the remote, etc.)

• Vocab mnemonics

• Organize your notes/key concepts into a Power point slideshow

• Compare your notes with someone else's

• Repetitive writing

• Hangman game

KINESTHETIC

• Type your notes after class -Create a YouTube video as a group to study later individually

• Write your notes onto flashcards - Scrabble -Make posters

• Review flashcards while walking, at gym, etc.

• Dog-ear pages in the reading where you can find critical information

• Sit near the front of the room

• Walk back and forth, move in some way, when studying notes

• Read your notes out loud

• As much as possible, create models for the information at hand

• Use the internet to research your subject material

• When possible, visit locations for your material (library, museum, historical sites, etc.)

• To learn a sequence or equation, use one note card for each step.

• Highlight material when reviewing/studying

• Use a dry-erase or chalk board to study or review

• Taboo-type game/ charades

• Correlate physical movements with ideas/terms

6.6. Benefits of finding out your learning preference:

The following are the benefits of discovering your learning style:

• **Educational Benefits**

o When you know your learning preferences, you can maximize your potential.

o It will allow you to have a better understanding of your subject.

o It can also help you master difficult areas of study.

o It may also help you overcome some of the challenges of learning new material.

• **Professional Benefits**

o One invests in knowledge and skills throughout life.

o To be successful at work, you will have to be aware of the new trends in your industry.

o Therefore, you will have to learn daily.

o It can help you become an expert in your field.

o Most importantly, you can better organize yourself more efficiently.

• **Personal Benefits**

o You can easily understand information.

o Learning then becomes an enjoyable, not time-consuming, task.

o It can increase your confidence and self-respect.

o It can help you achieve your personal and professional objectives.

6.7. Practice

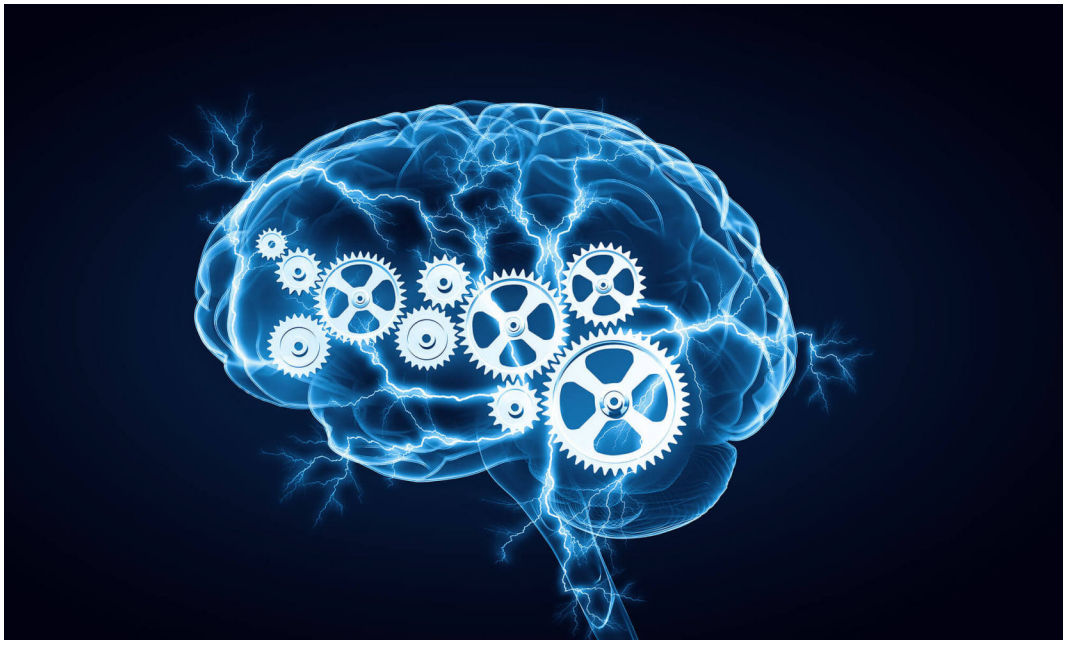
Exercice

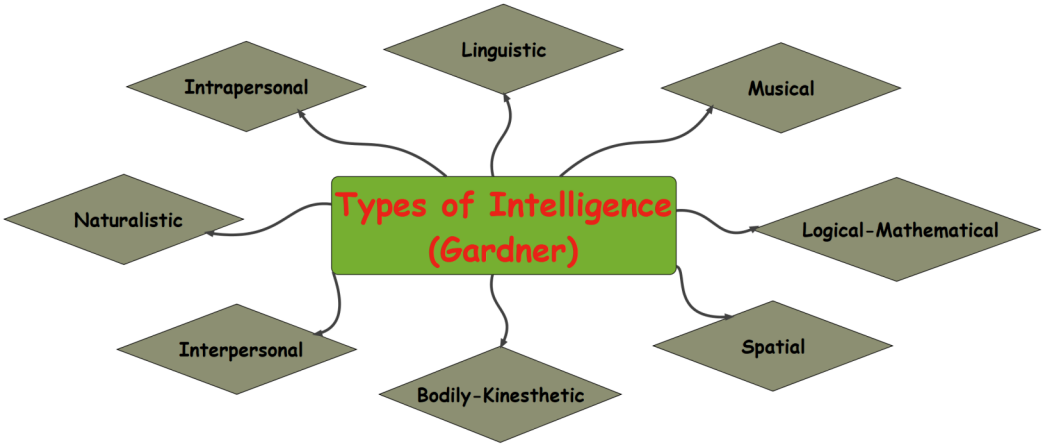
What is Unconscious Learning ?

7. Lesson 07 : Intelligence

Objectives : By the end of the lesson, students will be able to :

- Understand the concept of intelligence.
- Understand Gardner's theory of Multiple Intelligences.
- Label types of intelligence.





7.1. Ten Different Views of Intelligence

1 Intelligence is a general, underlying 'cleverness' which is fixed for life

Early psychologists believed each individual has a fixed, general level of intelligence, their intelligence quotient or IQ (Terman, 1975 [1916]; Spearman, 1927). A person who did well on one intelligence test would do well on others.

If you performed poorly on one test, that suggested you were generally less 'bright'. More recently, psychologists and geneticists have used studies of identical twins to support the idea of general intelligence (Plomin and Deary, 2015). However, other psychologists have argued against the concept of general intelligence (Thurstone, 1960) and the roles of genes (Gardner, 1993). Pairs of twins used in twin studies are

often brought up in similar environments and, as they look the same, they might evoke similar responses in other people so that their experiences could be unusually similar. Environment and culture can contribute to intellectual performance. ‘IQ' and academic achievement can change for societies, groups and individuals (Armor, 2003). In high income nations, IQ scores rose across the 20th century. Known as the ‘Flynn effect' this seems to be linked to increased levels of mass education (Baker et al., 2015).

The Raven's Progressive Matrices test was designed to measure abstract reasoning ability with people of any language, age or culture. The test requires participants to choose one visual pattern from a selection of options in order to complete a visual sequence (see below).Scores for Raven's correlate strongly with those of other IQ tests, including language-based tests, appearing to support the idea of a ‘general' intelligence.

However, although Raven's is meant to be culture and language-free, Asian children's scores, scaled according to age, rose by 15–20 points after they had lived for five years in Britain, a significant change (Mackintosh and Mascie-Taylor, 1985). This suggests that intelligence tests are just a snapshot of a person's experiences to date, within a given environment, rather than a good indicator of fixed potential.

2 There are different kinds of intelligence

Gardner (1993) argues that intelligence consists of separate independent systems that interact with each other. For Gardner, there are at least seven ‘intelligences': each consists of abilities in solving problems or producing objects relevant to a person's culture and environment. Neuropsychology suggests that different cognitive abilities such as speech may be semi-separate

‘domains' of ability, controlled by different circuits within the brain (Karmiloff-Smith, 1992). Some people show a weakness in one area such as a complete inability to recognise faces. Other people show poor development for most skills, but have an outstanding ability in one area such as drawing or mathematical calculation. This supports Gardner's view that intelligence is ‘multiple' rather than ‘general'. Research indicates that spatial abilities involve skills that can be differentiated from performance on other kinds of ‘IQ' tests. Spatial abilities can be important predictors of success in science, technology, engineering and maths (STEM) study and other life outcomes (Rimfeld et al., 2017). It is obvious that most of the intelligences on Gardner's list can be developed. For example, people can attend workshops to develop interpersonal

skills, and counselling or meditation to develop intrapersonal awareness. A scientifc way of thinking is formed through practice, training and exposure to the language and conventions of scientifc research. Skill in writing essays, reports or poetry can also be developed through training and practice.

3 Intelligence can be developed

In Japan, the Suzuki Violin Talent Education Programme has trained many children to play the violin to virtuoso level. The programme begins with exposure to music soon after birth and involves daily practice from an early age. Even the less remarkable students perform to a level that in other cultures would be considered that of a child prodigy (Suzuki, 1969; Gardner, 1993).

Similarly, children exposed to several languages from an early age tend to become multilingual quite naturally. People who start later in life can also develop into good violinists or linguists. The Suzuki Programme suggests the importance of the belief that anyone can learn to a high standard, as well as showing the role of environment and practice in developing skills. Excellence need not be the preserve of the few. Just as we would not, in general, expect excellent violin playing from somebody who rarely played the instrument, we would not expect outstanding intellectual performances from people whose minds are not regularly challenged by ideas and problems. University provides part of that necessary stimulation. As you go through your course, the language and thinking styles of your subject will become part of your own thinking processes and linguistic expression

4 Intelligence depends on life opportunities

As the Suzuki example illustrates, life opportunities can make a signifcant difference. Academic intelligence may be fostered by opportunities such as these:

★ easy access to books, equipment, and appropriate teaching

★ sufcient time to study, think or practise

★ stimulating conversations that require active engagement and reflection

★ validation by people who are important to you, of your specifc learning interests, whether for geometry, philosophy or cordon bleu cookery

★ being part of a culture that values academic intelligence.

There are ways in which you can increase these opportunities, such as by making use of library and online resources, through courses and study, and even through your choice of newspaper, radio and other media. If you did not have ideal opportunities for learning when young, or if you were not then ready for these, it might take some time and work to catch up but it can be done. It is done, every year, by thousands of mature students.

5 Intelligence depends on what is needed and relevant in the culture

According to this view, intelligence is not just something that individuals carry around in their heads, but depends on what a society regards as important, and the way this is made tangible through its labour requirements, social structures,

technologies, education, communications, networks – everything needed for the society and culture to continue. Intelligence is not measured in isolation as individual, but is seen as a social phenomenon (Vygotsky, 1978; Resnick, Levine and Teasley, 1991). For example, the intelligence needed in industrial settings is different from that required for a rural economy or life in the mountains or desert. Similarly, the education valued for girls, or for the youngest child within a family, has often varied from that valued for boys or for older siblings. Children adapt to what is expected of them. Sternberg (1985) described intelligence as being, in part, a sensitivity to the environmental context. This can apply to learning contexts also. One learning environment might match what a person is used to, making learning easy. For another person, the same environment and teaching methods might not work. Some people learn best in quiet stillness; others find that sitting quietly is a torture. Some

find it difficult to learn from books, and learn better by ear. One student learns best when the curriculum is highly structured; another when it is

flexible and offers choice about what they study, when and how.

If you did not do as well at school as you might have done, it may be worth reflecting on how you learn best – then compare this with the way you were taught. You might also consider what you were good at when you were a child, and what you valued as important. Were your interests shared and valued by the people around you – your teachers, parents and friends? If not, this could have made learning more difficult for you.

Are the things you value today shared by the people around you? Do they understand and support your desire to study? If not, as an adult, you can now take responsibility for setting up the right environment for yourself as a student. You might need to find suitable times and spaces for your study on campus or at home. You can organise information in a way that suits your learning preferences, such as by converting information to colourful charts or podcast recordings – whatever works for you. On the whole, your lecturers will not be able to create the ideal environment for you, as each person's needs will be different. So it's up to you to look after your own needs.

6 Intelligence is about applying what you know to new contexts

Sternberg (1984) emphasised that any skill is made up of underlying processes and sub-skills; he saw intelligence as the ability to transfer those skills easily when confronted with a new task. What is important is not just that you are able to perform a given task, such as making a pancake or writing an essay, but that you are able to apply what you know to new situations, such as making a cake or writing a report. However, it is not necessarily an easy matter to transfer a skill from one learning situation to another. Research into mathematical problem solving suggests that for skills to be transferred from one problem to another, the student has first to be helped to identify their common features and the underlying principles in solving that kind of problem. If students can recognise that two problems have similar underlying structures, they can apply the principles for solving one problem in solving the other. Also, unless the teacher makes the link between the old and the new learning explicit, the student may not realise that two problems are connected.

Further, the new learning needs to be at around the same level of complexity as that already covered (Reed, Dempster and Ettinger 1985). If teaching has not followed these lines, a student can feel lost and give up. In addition, students might think that the fault lies with their intelligence, rather than in the way the problem was presented. A good teacher will help students to see what they already know, and to use this as the basis for the next step in their learning.

7 Intelligence is a question of how much you know

The popular view of intelligence is that it is an ability to answer the type of closed factual questions set on TV quiz shows. This does not take into consideration aspects of intelligence such as creativity or coping in real-life situations. Another view is that intelligence is a capacity for abstract reasoning such as formulating hypotheses or deriving answers from first principles: you don't need to know much at all to reason well. Donaldson (1978) argued that the way we reason depends upon the particular context we are in and on what we already know. She demonstrated that both children and adults interpret what they hear by attending not just to the meaning of words, TV quiz shows. This does not take into consideration aspects of intelligence such as creativity or coping in real-life situations. Another view is that intelligence is a capacity for abstract reasoning such as formulating hypotheses or deriving answers from

first principles: you don't need to know much at all to reason well.

Donaldson (1978) argued that the way we reason depends upon the particular context we are in and on what we already know. She demonstrated that both children and adults interpret what they hear by attending not just to the meaning of words, but also to their personal understanding of those words based on their own thoughts and previous knowledge. It follows that the amount and kinds of background knowledge you bring to academic study will affect the ease with which you can process new information and reason with it. Our ability to think in abstract ways about something can depend on having already had real-life experience of similar problems. Butterworth (1992) describes how abstract notions such as ‘generosity' are actually concrete social realities: real-life experience allows us to develop a mental model, and this model later provides the basis for abstract thinking. If we have gaps in concrete experience – such as with manipulating numbers – we are likely to find it harder to move on to more abstract examples until we have filled the gaps.

Butterworth suggests that when presented with a familiar problem in an unfamiliar context, we may be unable to recognise that the two are similar. This can make us look and feel like complete beginners when it is not the case. It might take somebody else to point out the similarity between what we already know and the new learning. When we see the link, we can do the problem.

8 Intelligence can be measured

IQ tests only measure things that can be measured! Many areas of human excellence, however, cannot be measured easily – such as artistic and musical creativity, emotional maturity, sensitivity to others' needs, managing well in emergencies, being enterprising and inventive. Some people may excel in these areas and yet

perform poorly in tests that are language-based. Students who struggled with language- or number-based subjects at school can excel on university courses in the arts. Similarly, people whose spoken communication skills are weak can excel on a range of university courses Einstein's schoolwork was not very good – yet IQ tests are said to correlate well with school performance. Einstein claimed that his initial ideas on the relativity of time and space struck him in a moment of inspiration while he was daydreaming that he was riding on a sunbeam. This kind of imaginative thinking is difficult to measure using IQ tests.

9 Intelligence is about applying effective strategies that can be learnt

This book is based on the premise that what we regard as intelligence is often a question of good study strategies and skills that you can develop. For example, research shows that students who do best at problem-solving spend longer than other students in working out exactly what the problem is before trying to solve it. Other students look at the surface of the problem and do not see the underlying structure which connects it to problems they already know how to solve. Some students fail because they don't spend enough time considering the examples and information they are given; others copy out examples without reflecting on the underlying purpose of the activity (Keane, Kahney and Brayshaw, 1989). Successful students use strategies that can be learnt. Although the research mentioned above referred

to a particular kind of problem-solving, its findings apply to study in general. Some students skim across the surface of their learning, copying a bit from one book and a line from another, without really looking at why the work was set, what the information means, its relevance to them, nor how it might be applied to new contexts. With most university assignments you benefit from taking time to reflect, clarifying what is really being asked, the issues within the title, the reasons it was set, why it is phrased exactly as it is, and the best strategy to use. This way of thinking and working can become a habit.

10 Intelligence is a question of habit and practice

As with any skill, study skills develop through frequent use until your application of them is like a reflex and feels instinctive. Rapid and skilful

reading comprehension develops through constant reading, and familiarity with specialist texts typical of your subject. The more you write, the better your

writing skills are likely to be. The more you apply your mind to thinking in critical analytical ways, the more fine-tuned your thinking ability. If you want to achieve well, constant practice, coupled with critical reflection on your work, is essential

7.2. What is MI theory?

Definition

In 1983 Harvard psychologist Howard Gardner published his theory of multiple intelligences in his book Frames of Mind. Gardner identified eight separate intelligences. He defines intelligences as independent mental abilities characterized by core operations. For example, musical intelligence focuses on the core operations of recognizing pitch and rhythm. Gardner states that most people have at least seven of these intelligences, but that in some people one intelligence may dominate, and in other people the intelligences blend

7.3. Gardner's Types of Intelligence:

Below are descriptions of Gardner's eight intelligences.

Linguistic intelligence: the ability to use language to express one's thoughts and to understand other people orally or in writing

Musical intelligence: the ability to hear music in one's head, and to hear tones, rhythms, and larger musical patterns

Logical-mathematical intelligence: the ability to manipulate numbers, quantities, and operations accompanied by a love of dealing with abstraction

Spatial intelligence: the ability to represent the spatial world visually in one's mind

Bodily kinesthetic intelligence: the ability to use the whole body or parts of the body to solve a problem, create a product, or put on some kind of production.

Intrapersonal intelligence: the ability to know and understand one's self, including goals, tendencies, talents, limitations

Interpersonal intelligence: the ability to notice and make distinctions among other individuals; a strong understanding of other people

Naturalist intelligence: the ability to discriminate among living things and to see patterns; also, a sensitivity to features of the natural world

7.4. Applying multiple intelligences to study contexts

Gardner suggests that different intelligences interact, a view also supported by genetic behaviourists (Kan et al., 2013; Plomin and Deary, 2015). Students who work in a multi-sensory or a multi-disciplinary way often find that learning in one area enhances learning in other areas. If you develop a sense of rhythm, this can improve not only music and dance, but maths and spelling. Similarly, students who are sensitive to shades of colour can use these to structure and organise information might be applied to new contexts. With most university assignments you benefit from taking time to reflect, clarifying what is really being asked, the issues within the title, the reasons it was set, why it is phrased exactly as it is, and the best strategy to use. This way of thinking and working can become a habit.

7.5. Practice

Exercice

In Harvard psychologist Howard published his theory of multiple intelligences in his book Frames of Mind. Gardner identified separate intelligences. He defines intelligences as independent abilities characterized by operations.