



General Study Skills

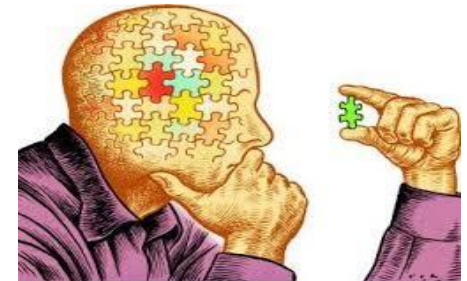
EIT

- Qualities of a good student
- Basic principles of self-management
- Modes of learning
- The learning cycle
- Setting up goals and managing time
- Developing effective reading skills
- Critical thinking
- Creative thinking
- Taking notes
- Writing exams

Qualities of a Good Student

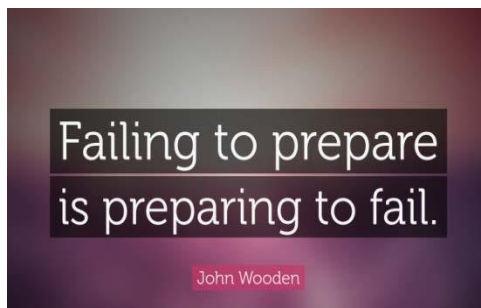
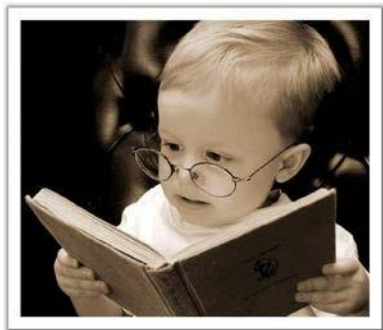
Successful students pursuing online studies generally have the following qualities:

- They have a **good attitude** and know how to **remain motivated**
- They **manage time** proactively:
 - They schedule study time for each unit/module
 - They begin assignments and projects early and finish on time.
- They **think critically** and even **creatively**, and apply this in their studies
- They **build effective strategies** for taking notes, and use these notes to their advantage.



Qualities of a Good Student

- Learn as much as possible from the assigned **reading materials**
- Prepare for, and complete, assessments successfully and **on time**
- Collaborate with lecturers/instructors and fellow students in and outside of class
- Exercise proper writing skills during note-taking and in your assessments
- Remain healthy and instill **good habits** in order to **remain motivated** and experience **less stress**
- Have control over own **financial situation**



Be aware of the ‘soft’ issues:

- Habits
- Attitudes
- Beliefs
- Perceptions

hab·it

'habət/

noun

noun: **habit**; plural noun: **habits**

a settled or regular tendency or practice, especially one that is hard to give up

- If you do not already have a proper study habit, you will have to put in some effort towards establishing one.
- It can take from 66-254 days for a new habit to become ingrained (or to get rid of an old one)! The '21 days' is apparently a myth.

at·ti·tude

'adə,t(y)ōōd/

noun

noun: **attitude**; plural noun: **attitudes**

a settled way of thinking or feeling about someone or something, typically one that is reflected in a person's behaviour

- Your attitude towards hard work, diligence, ethical academic conduct (e.g. avoiding plagiarism) will be very important during your studies.

be·lief

bə'lēf

noun

plural noun: **beliefs**

an acceptance that a statement is true or that something exists

- Whether you believe that you can 'make it' in your studies, or whether you believe you can't, you will be proven correct in either case.

per·cep·tion

pər'sepSH(ə)n

noun

plural noun: **perceptions**

a way of regarding, understanding, or interpreting something; a mental impression. Synonyms: impression, idea, conception, notion, thought, belief, judgment, estimation

- Be careful here: your perception that maths is difficult does not automatically mean it is difficult.

Self management is about taking control of one's life. Use the following tips for managing yourself:

- Accept responsibilities
- Decide what you want to achieve and get there - do not wait for things to happen, **make things happen!**
- Realise that you can change (if necessary). Remember that most people do not feel comfortable when a change is about to occur. But change is inevitable, so it helps to be prepared
- Develop a personal ethical code. Do what is right for you and for others
- Enjoy your life and enjoy meeting new people online

Learning online is different from learning at school

- At school, teachers and guardians assume much of the responsibility to set up a mode of learning that will enable you to master at least the core of the anticipated outcome.
- With post-secondary studies (especially online studies) that responsibility is transferred to you.
- At EIT, you can use different modes of learning. These include attendance of webinars/tutorials, replay of recorded sessions, reading of prescribed reading material, and online research.

Remember that **different students learn in different ways**, which tends to depend on their:

- Personality
- Cognitive processes
- Previous learning experiences

Therefore, **success turns out when you choose the right equation**. You need to:

- Identify the variables that suit you most
- Allow them to function together
- Tweak (optimise) where necessary

Academic learning is a 4-step process:



Prepare

- Prepare for the classes by going through the reading material and watching the pre-recordings
- Log into the classroom *before* the webinar starts (not 5 minutes afterwards)
- Complete assessments as required (by the due dates) or request extensions if circumstances require
- Ask questions during webinars/tutorials or email your instructor/lecturer afterwards to clarify things you do not understand

Absorb

- This refers to the actual consumption of new ideas, information, or experiences
- It begins at the moment you attend a session or read a textbook

Capture

- Capturing is about taking notes based on what you have absorbed
- You need to take good notes because there is so much to learn and you can't memorise it all
- You will need to go back over the material again, think about it and see how each lesson fits together to form the big picture
- The more effective your note-taking skills, the better your learning abilities

Review

- Reviewing involves going over:
 - Your class notes
 - Your textbook or reading material
 - Any other course materials including:
 - Webinar recordings
 - Online media
- Through reviewing we can also accumulate new information and construct new ideas
- The end of the learning cycle loops back to the beginning in order to prepare for additional learning

When we set goals and think about how to get there, it helps us realise how even the little things we do can keep us moving toward them.

- The following are some of the guidelines for setting up goals:
 - Goals should be **realistic**
 - Goals should be **specific**
 - Goals should have a **time frame**
- Evaluate how important the goal is and your motivation to reach it.

Setting up Goals and Managing Time

Use a table like the one below to set up your goals:

Goal range	Describe your goal	Priority	Timeframe	What you need to do to get there
Short term goal(s) (This week, this month) <ul style="list-style-type: none">• 1• 2	<i>1. The goal is to get A+ in the next assignment</i>	High	20 days	Collect/access materials/software, discuss issues with team mates, etc.
Mid-term goal(s)	<i>The goal is buy a new laptop to support my studies</i>	High	6 months	Research available models, save money
Long-term goal(s)	<i>Ensure 80%+ throughout the BSc course</i>	Extremely high	3 years	Everything being discussed in these slides.

You must have a **positive attitude** to reach your goals.

- Here are some characteristics associated with a **positive attitude**:
 - Enthusiasm, for and enjoyment of, daily activities
 - Acceptance of responsibility for your actions and feeling good about success
 - Generally upbeat mood and positive emotions, cheerfulness with others, and satisfaction with yourself
 - Motivation to get the job done
 - Flexibility to make changes when needed
 - Ability to make productive, effective use of time

- Here are some characteristics associated with a **negative attitude**:
 - Complaining
 - Blaming others for own failures
 - Anger, resentment
 - Lack of motivation
 - Unwillingness to change or adjust according to the changing situation
 - Unproductive use of time
 - Procrastination

Managing time is a key aspect in maximising productivity as a student. It involves the following factors:

- Determine how much time you need to spend studying
- Know how much time you actually have for studying and increase that time if need be
- Be aware of the times of day you are at your best
- Use both short and long time slots for studying
- Schedule study activities in realistic time slots
- Use a system to plan ahead and set priorities
- Stay motivated to follow your plan and avoid procrastination

Setting up Goals and Managing Time

Use the table below to manage time by adjusting your daily activities:

Activity	Number of hours per week
Sleeping	
Preparing food and eating	
Health and wellness	
Part time job	
Attending webinars	
Reading	
Home cleaning, shopping, etc.	
Commuting	

Prioritising

- This is just one method. Use whatever method appeals to you.

	Urgent	Not Urgent
Important	I (MANAGE) <ul style="list-style-type: none">• Crisis• Medical emergencies• Pressing problems• Deadline-driven projects• Last-minute preparations for scheduled activities	II (FOCUS) <ul style="list-style-type: none">• Preparation/planning• Prevention• Values clarification• Exercise• Relationship-building• True recreation/relaxation
	Quadrant of Necessity	Quadrant of Quality & Personal Leadership
Not Important	III (AVOID) <ul style="list-style-type: none">• Interruptions, some calls• Some mail & reports• Some meetings• Many "pressing" matters• Many popular activities	IV (AVOID) <ul style="list-style-type: none">• Trivia, busywork• Junk mail• Some phone messages/email• Time wasters• Escape activities• Viewing mindless TV shows
	Quadrant of Deception	Quadrant of Waste

Pomodoro Technique

- Developed by Francesco Cirillo
- Based on a tomato-shaped kitchen timer
- Basically allows you to break work into 25-minute 'chunks'
- You can download the app (there are many of them)
- For more documentation, search for the 'Pomodoro Technique Illustrated' online



We often think about doing something tomorrow or next week, when it can be done right away – this is an example of procrastination.

- Some people think that they can only study very early in the morning when all is quiet. This prohibits them to study at all for the rest of the day – another form of procrastination.
- Procrastination creates a **psychological barrier** in our mind and can let us down a tough and challenging environment.
- **Procrastination is powerful** – most of us battle it daily, others occasionally. It can become a deeply-ingrained habit!

Since procrastination is a psychological issue, we need **psychological strategies** to get out of its barrier.

- Since consistent procrastination is a habit, accept it and work to **eliminate it**. Each time you overcome it, the habit becomes weaker.
- Schedule times for studying using a **daily or weekly planner** and check it frequently to remain on schedule.
- *Counter a negative with a positive*. For example, think about the advantages of doing a certain task right now instead of doing it tomorrow.

- Sometimes a fear of failing causes people to procrastinate. Approach your study with a positive mindset and take one task at a time.
- **Study with a motivated friend if possible.** The company of a motivated person can help you understand how other people do things differently.
- **Get help from others.** If you really can't stay on track with your study schedule, or if you're always putting things on hold until the last moment, seek a mentor or student counselor to assist.

Some tips for successful **scheduling**:

- Studying is more effective **immediately** after a session. Try to set aside an appropriate slot in your schedule just after class.
- Be realistic about the time allocation for each activity. Consider the setup time for joining a webinar/tutorial, or the cup or coffee you have afterwards.
- **Don't overdo things.** It is not necessary to study four or five hours non-stop.

- Schedule social events that are already on calendar, and also leave gaps in the schedule for other social activities.
- Try to schedule some time for your **health and fitness** at least three days a week. You need not join a gym. Even a walk outdoors will suffice.
- If a study activity is taking longer than scheduled, try to **adjust your weekly planner**.

Scheduling your Activities

An example of a weekly planner:

HOURS	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
6-7 AM	[Wavy line across the row]						
9-10		Math		Math		Math	
10-11	Bike ride??		History		History		Work
11-12 PM		English	lunch	English	lunch	English	
12-1	Work	lunch	start English paper	lunch		lunch	
		A&P	Gym	A&P		A&P test today	
		study A&P		study A&P	Gym		
			do math problems		do math problems		

Daily/Weekly Schedule Form

Weekly Schedule Spreadsheet.xls [Compatibility Mode] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles

	A	B	C	D	E	F	G	H
1		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
2	6:00							
3								
4	7:00							
5								
6	8:00							
7								
8	9:00							
9								
10	10:00							
11								
12	11:00							
13								
14	12:00							
15								
16	1:00							
17								
18	2:00							
19								
20	3:00							
21								
22	4:00							
23								
24	5:00							
25								

Current Calendars

Calendar September 2013

September 2013						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

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Yearly Schedule

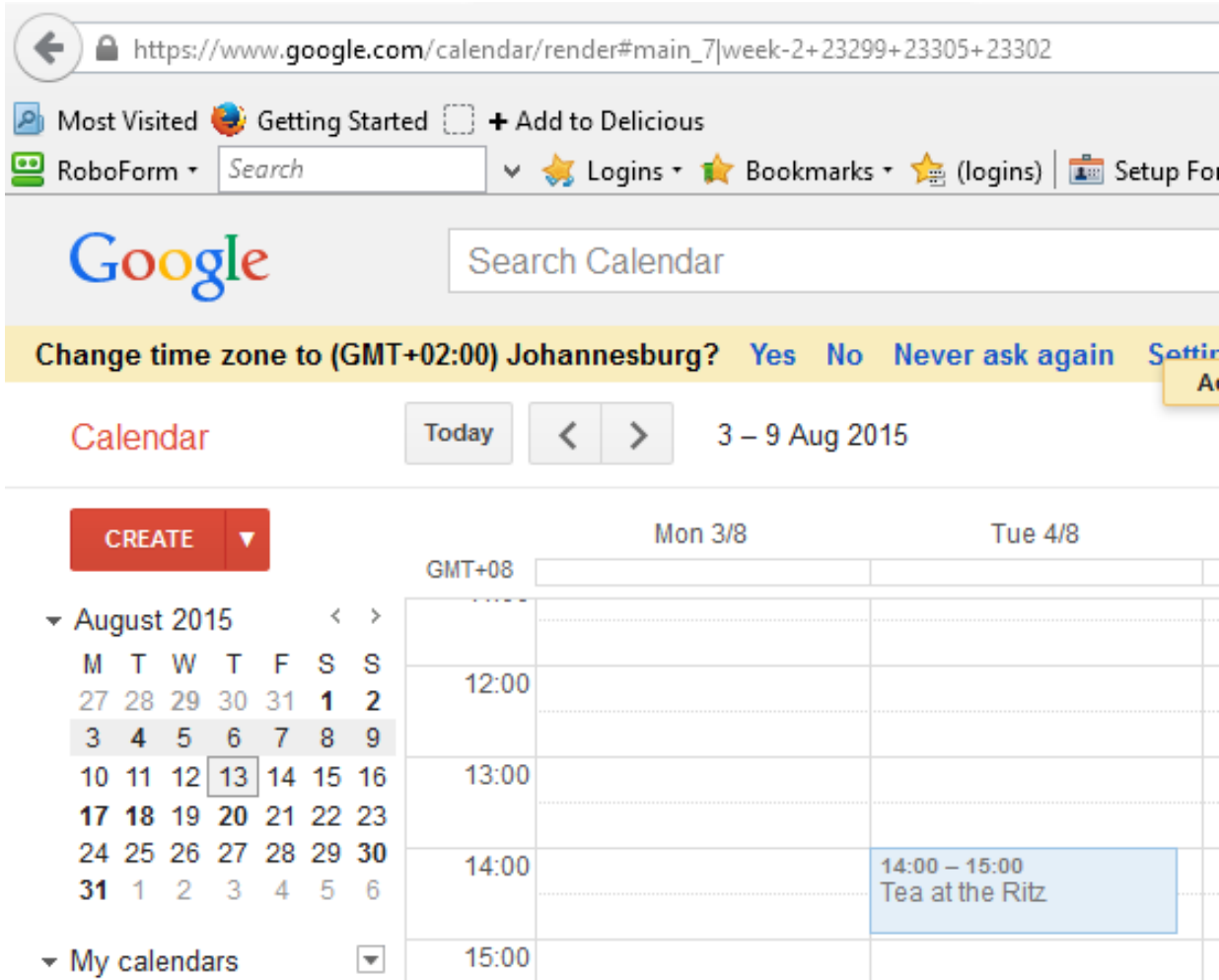


2014 Calendar

Calendarpedia
Your source for calendars

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2	1 We	1 Sa	1 Sa	1 Tu	1 Th	1 Su	1 Tu	1 Fr	1 Mo	1 We	1 Sa	1 Mo
3	2 Th	2 Su	2 Su	2 We	2 Fr	2 Mo	2 We	2 Sa	2 Tu	2 Th	2 Su	2 Tu
4	3 Fr	3 Mo	3 Mo	3 Th	3 Sa	3 Tu	3 Th	3 Su	3 We	3 Fr	3 Mo	3 We
5	4 Sa	4 Tu	4 Tu	4 Fr	4 Su	4 We	4 Fr	4 Mo	4 Th	4 Sa	4 Tu	4 Th
6	5 Su	5 We	5 We	5 Sa	5 Mo	5 Th	5 Sa	5 Tu	5 Fr	5 Su	5 We	5 Fr
7	6 Mo	6 Th	6 Th	6 Su	6 Tu	6 Fr	6 Su	6 We	6 Sa	6 Mo	6 Th	6 Sa
8	7 Tu	7 Fr	7 Fr	7 Mo	7 We	7 Sa	7 Mo	7 Th	7 Su	7 Tu	7 Fr	7 Su
9	8 We	8 Sa	8 Sa	8 Tu	8 Th	8 Su	8 Tu	8 Fr	8 Mo	8 We	8 Sa	8 Mo
10	9 Th	9 Su	9 Su	9 We	9 Fr	9 Mo	9 We	9 Sa	9 Tu	9 Th	9 Su	9 Tu
11	10 Fr	10 Mo	10 Mo	10 Th	10 Sa	10 Tu	10 Th	10 Su	10 We	10 Fr	10 Mo	10 We
12	11 Sa	11 Tu	11 Tu	11 Fr	11 Su	11 We	11 Fr	11 Mo	11 Th	11 Sa	11 Tu	11 Th
13	12 Su	12 We	12 We	12 Sa	12 Mo	12 Th	12 Sa	12 Tu	12 Fr	12 Su	12 We	12 Fr
14	13 Mo	13 Th	13 Th	13 Su	13 Tu	13 Fr	13 Su	13 We	13 Sa	13 Mo	13 Th	13 Sa
15	14 Tu	14 Fr	14 Fr	14 Mo	14 We	14 Sa	14 Mo	14 Th	14 Su	14 Tu	14 Fr	14 Su
16	15 We	15 Sa	15 Sa	15 Tu	15 Th	15 Su	15 Tu	15 Fr	15 Mo	15 We	15 Sa	15 Mo
17	16 Th	16 Su	16 Su	16 We	16 Fr	16 Mo	16 We	16 Sa	16 Tu	16 Th	16 Su	16 Tu
18	17 Fr	17 Mo	17 Mo	17 Th	17 Sa	17 Tu	17 Th	17 Su	17 We	17 Fr	17 Mo	17 We

Google Calendar



The screenshot shows the Google Calendar web interface. At the top, there is a browser address bar with the URL `https://www.google.com/calendar/render#main_7|week-2+23299+23305+23302`. Below the address bar are navigation links for 'Most Visited', 'Getting Started', and '+ Add to Delicious'. A search bar is present with the text 'Search'. There are also icons for 'RoboForm', 'Logins', 'Bookmarks', '(logins)', and 'Setup For'. The Google logo is on the left, and a 'Search Calendar' input field is on the right. A yellow banner asks to 'Change time zone to (GMT+02:00) Johannesburg?' with options 'Yes', 'No', 'Never ask again', and 'Settings'. Below this, the word 'Calendar' is followed by a 'Today' button, navigation arrows, and the date '3 - 9 Aug 2015'. A red 'CREATE' button is on the left. A calendar grid for August 2015 is shown, with the 13th highlighted. To the right is a time slot view for 'Mon 3/8' and 'Tue 4/8' in 'GMT+08' time. The time slots are 12:00, 13:00, 14:00, and 15:00. A blue event box is visible on Tuesday, August 4th, from 14:00 to 15:00, titled 'Tea at the Ritz'. Below the calendar grid is a 'My calendars' section with a dropdown arrow.

Learn to **speed read**.

- Take a lengthy chapter in a novel, and read for 5 minutes (use your phone as a timer)
- Calculate the number of words you have read per minute (roughly number of pages x lines/page x words/line, divided by 5)
- If it is an MS Word document, word count is even easier
- If your result is below 100 words/minute, you may wish to consider learning speed reading techniques.

- Average reading speed for adults is around 200 words/minute
- You can triple this by reading phrases instead of words
- Aim for at least 1000 words/minute
- Enroll for a speed reading course, or find free ones online, e.g. *readspeeder.com*

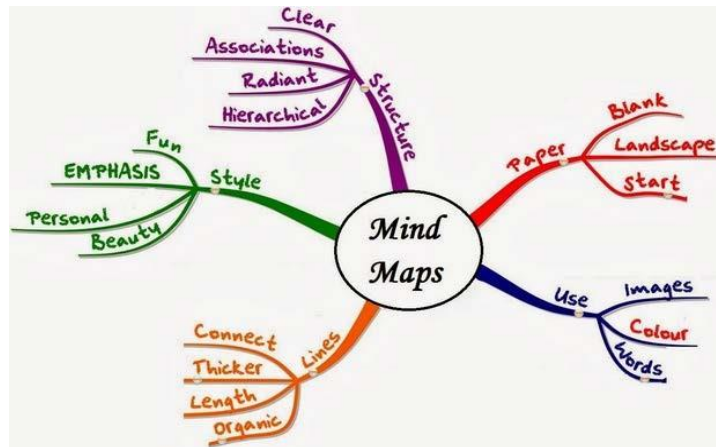
Active reading involves the following steps:

- **Preparing:** Look at the table of contents. How does it compare with the course syllabus? What can you learn?
- **Reading:** Start by taking a look at your class notes. Look for answers to the questions you have written down during note-taking. Pay particular attention to the first and last lines of each paragraph.
- Think about the relationships among section titles, and graphics.
- **Capturing the key ideas:** Find answers to your questions. Solve some of the exercises at the end of each topic/section. See how the worked examples are solved. Define new keywords you found in a section. Highlight important sentences and paragraphs for future references.
- **Reviewing:** Answer the question “What did I learn?”. Write a summary of the assigned reading. Think about new knowledge.

Strategies for **textbook reading**:

- Schedule a suitable time
- Find a space where you are most comfortable
- Try to avoid distractions
- Avoid reading fatigue
- If you are reading to complete an assessment, complete the most difficult question early

- If you can speed read, make several passes through the text
- The first pass or two gives you an overall impression, thereafter you can slow down on the important sections
- Draw **mind maps** as you go along



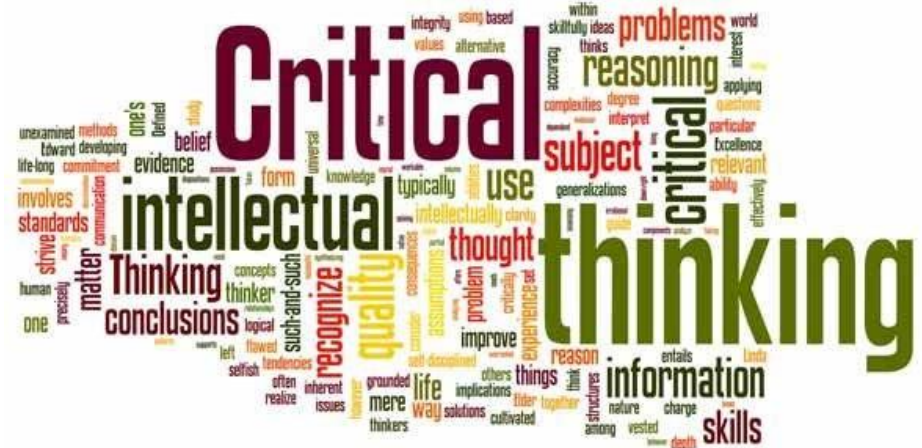
Reading strategies for **mathematics texts**:

- Do not skip over mathematical terms/texts as you read through the text
- Read the formulas and make sure you understand the meaning of all the factors
- Substitute actual numbers for the variables and work through the formula

- Make formulas real by applying them to real-life situations
- Do exercises within the assigned text to make sure you understand the material
- Do not proceed to the next section until you have mastered the material in the current section
- Seek help from the instructor by e-mail if necessary

- You have the capacity to think critically when you can determine the value of:

- An idea
- A set of beliefs
- A claim
- An argument



- In order to think critically, you need to use the following two processes to evaluate information and find a value/or conclusion:

- Logic
- Reasoning

Critical thinking is an important skill to have for:

- Effective communication
- Effective decision-making
- Creating new knowledge
- Uncovering bias and prejudices



During the critical thinking process, you need to deal with questions such as:

- What is the real problem or issue I am considering? What are my options?
- What do I know about each option? How good is my information?
- Which evaluation/validation method should I use?

Tips for **critical thinking**:

- Consider all points of view. Seriously consider more than two options
- Keep an open mind
- Answer three questions about your supporting data:
 - Do I have **enough** data?
 - Do I have the **right** data?
 - Is my data **credible**?
- Search for clues to contradict the point of view you think the most appropriate
- Develop a set of criteria to evaluate the strength of information you want to use to support your argument

The ability to look at things from a new perspective and come up with fresh solutions to problems is the end result of **creative thinking**.

The following conclusions are **not** generally true:

- Creativity is an inherited skill
- Creativity is free-form thinking. In general, free-form thinking often lacks direction or an objective whereas creative thinking is aimed at producing a defined outcome.

Tips for **creative thinking**:

- Drive your 'curiosity wagon'. The more 'known ideas' you get yourself exposed to, the more options you'll have for combining them into new concepts
- Develop your mental flexibility by looking for a second right answer
- Combine old ideas in new ways
- Think metaphorically
- Ask questions



Important reasons for taking notes:

- Notes reflect what was taught during the session
- Notes provide important clues for what information the instructor/lecturer thinks is most important (for example, to answer some of the questions in the assessment)
- Notes inscribe information kinaesthetically
- Proper note taking means more focus during the live session
- Notes often contain information that cannot be found elsewhere (e.g. in your textbook)

Tips for **note-taking**:

- **Focus** on the lecture/tutorial/webinar or on the reading material
- **Be consistent** and cover the entire session in your notes
- **Be selective** – develop some rules so that you know what to note down and what not to
- Remember that the average person speaks approximately 125-140 words per minute, and the average note-taker writes at a rate of about 25 words per minute

- Convert ideas into your own words/format
- Organise notes in a logical form
- Write clearly so that you can understand it when you read it next time
- Don't be too concerned with grammar and spelling



Create your own note-taking syntax based on the following questions:

- *Do I use complete sentences?* (Generally speaking, “No”)
- *Do I use any form at all? Are my notes clear or confusing?* (Decide how you feel comfortable)
- *Do I capture main points and all sub-points?* (Generally depends on their significance)
- *Do I streamline using abbreviations and shortcuts?* (Yes)

- Develop your 'D-day' program for exam preparation. Consider D as a variable; it could be any number based on your liking.
- Example: Considering $D = 5$, so let us develop a 5-day program.

Five days before the exam: **Organise**

- **Review class notes** and text notes in detail
- Compile a **list of topics** relevant to the exam
- List them in order of importance

Four days before: **Review** and **Recall**

- Review your notes thoroughly and explain them to yourself
- Pay extra attention to the topics that are more difficult for you to understand
- Use a suitable mnemonics device/visualisation tool (if possible) to organise the material as a trail to the big idea

Three days before: **Rewrite**

- **Rewrite** important sections of your notes or topics you have learned
- **Review your notes** repeatedly
- Figure out your own explanations instead of recalling what the text and your lecturers have said

Two days before: **Question**

- Make a **list of questions** that might be in the exam
- **Answer the questions** in as much detail as possible

One day before: **Prepare**

- Review your rewritten notes, questions and answers you have practiced the day before
- Take time to relax
- Do not be afraid – you will forget information if you create unnecessary test anxiety
- Go over the most important sections/topics once again



- College Success by, the Saylor Foundation (www.saylor.org)
- Academic Skills Coaching – Stanford University
- On being a successful graduate student in the sciences, John N. Thompson, Department of ecology and evolutionary biology, University of California, Santa Cruz.
- Learning theories, stages and styles – Enquiry-based Learning, University of Birmingham