



LEARNING AND RESEARCH METHODOLOGY

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THE MAIN AIM OF THIS COURSE

- ***Learning and Research Methodology* (formerly *Learning and Research Skills Development*) is an interactive course on strengthening learning and research skills** for students who have begun a course of study at the university in the English-speaking programme
- **This subject contains practical advice on reading, listening, notetaking and writing for undergraduate students** → the course material is not a dry textbook (course book), but includes *tips, check points, tasks and interactive exercises* to make students think, and to make them discover learning and research styles

APPLIED TEACHING METHODS & ACTIVITIES OF THE STUDENTS

- **Theoretical parts through presentations** → Slides available in PDF formats are provided by the lecturer
- **Practice through written exercises & discussion** → Materials in printed/electronic formats are provided by the lecturer
- **This course requires presence and active participation in class**
 - *Distance learning* will be guaranteed for international students until everyone arrives and is allowed to join the class
 - *Physical presence* is compulsory for everyone who is allowed to get into the faculty's building

ASSESSMENT AND GRADING

- **Terms of subject acceptance (in order to get the signature):** active participation during the lessons
 - The maximum number of absence is *three*
- **Terms of the mark acceptance:** 1 (fail) – excellent (5) based on the *written test, single tasks and interactive exercises* given out by the lecturer during the semester
 - Tasks will be sent out in e-mail form before classes
 - Written test is based on multiple choice questions

PART I.

LEARNING SKILLS DEVELOPMENT

- Main points of Part I:

- *1.1. Identifying Learning Styles*

- *1.2. Strengthening Reading Skills*

- *1.3. Developing Listening & Taking Lecture Notes Skills*

PART I.1. IDENTIFYING LEARNING STYLES

- Main points of this part:
 - *Learning Modalities & Learning Style Preferences: Characteristics & Essential Strategies*
 - *The Strategic Learner & Multisensory Strategies*
 - *The Brain Dominance Theory: Linear (Left-Brain) vs. Global (Right-Brain) Learners*

COGNITIVE LEARNING STYLES, LEARNING MODALITIES

- **Learning is an individualized process** → different educational and background experiences, personality traits, levels of motivation etc. affect the way you learn
- **'Cognitive learning styles', iow. 'learning modalities' refers to the general way people prefer to have information presented** in order to think, reason, problem-solve, process, learn and remember
- **Understanding your cognitive learning styles, iow. recognizing your *learning style preference* helps you select learning strategies**

COGNITIVE LEARNING STYLES, LEARNING MODALITIES

- **Three commonly recognized learning modalities are visual, auditory and kinesthetic** → most people have a learning style preference, which is a tendency to use one modality
- **Your learning style preference started in your childhood**
 - If you are a *visual learner*, you may have been fascinated by books, pictures, colours, shapes and animations
 - If you are an *auditory learner*, you may have been perceived as a nonstop talker who asked questions, sang, or recited rhymes
 - If you are a *kinesthetic learner*, you were likely were a bundle of energy who ran, jumped, rolled around, or took things apart

LEARNING STYLE PREFERENCES

- Understanding your learning style preference helps you select effective learning strategies that will boost your memory and your ability to recall information
- When you use your *strongest modality* to take in and process information, learning can occur more effectively → recalling information at a later time may occur more smoothly
- When you use *more than one modality*, you create a stronger impression of the information of your memory → recalling information often occurs more rapidly

VISUAL LEARNER: CHARACTERISTICS

- **Visual learners prefer to process and learn information in visual forms** → they learn best by *seeing* and *visualizing* information
 - Can easily understand and recall information in the form of numbers, words, phrases, sentences, or information presented in pictures, charts and diagrams
 - Have strong visual-spatial skills that involve sizes, shapes, textures, angles and dimensions
 - Have "good eyes" for colours, design and visual balance
 - Pay close attention to 'body language' (e.g. facial expressions)
 - Have a keen awareness of aesthetics and beauty

VISUAL LEARNER: ESSENTIAL STRATEGIES

Essential Strategies for Visual Learners	
Strategies	Explanations
Highlight important information.	When you read, use colored highlighter pens to highlight important facts, definitions, formulas, and steps. Colors often stand out better and create stronger visual images in your memory.
Create movies in your mind.	Use your visual memory as a television screen with the information that you read or hear moving across the screen "as a movie" with cameras rolling.
Visualize graphic materials and short sections of printed information.	Examine and visually memorize pictures, charts, graphs, or small sections of printed information. Practice looking away and visualizing the information. Then look back at the material to check your accuracy.
Create visual study tools.	Create visual mappings, hierarchies, and comparison charts with several levels of detail to represent information that you are studying. Use colors and pictures.
Expand chapter mappings.	Add details, colors, shapes, or pictures next to each heading that appears in the chapter mappings. Practice visualizing and reciting the information.

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition. Houghton Mifflin Company, Boston, New York. p. 10.

VISUAL LEARNER: ESSENTIAL STRATEGIES

Essential Strategies for Visual Learners	
Strategies	Explanations
Use colors and pictures.	Enhance your notes, flashcards, or any other study tools by adding colors and pictures so that the information stands out more clearly in your memory.
Copy information in your own handwriting.	Copy printed text. Creating a visual memory of information you personally write tends to be easier than visualizing printed text. Practice looking away, visualizing, and checking your accuracy.
Create a visual memory of answers.	Write questions in the margins of your textbook. Highlight words and phrases in the text that answer your question. Cover the text. Read the questions and visualize the highlighted answers.
Use your keen observational skills.	Pay attention to physical details of objects and people. Interpret other people's body language for signs that reveal their attitudes, feelings, or important points they present as they speak.
Carry a pen and notepad with you.	Visual learners often want to write down information or directions, so be ready.

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition. Houghton Mifflin Company, Boston, New York. p. 10.

AUDIORY LEARNER: CHARACTERISTICS

- **Auditory learners prefer to process and learn information in verbal forms** → they learn best by *listening, talking, discussing (debating)*
 - Can easily understand and recall information heard in conversations and lectures
 - Have strong oral communication skills, language skills, well-developed vocabularies and an appreciation of words
 - Have "finely tuned ears" for foreign language and music
 - Pay close attention to tones and rhythms
 - Have a keen awareness of memories

AUDITORY LEARNER: ESSENTIAL STRATEGIES

Essential Strategies for Auditory Learners	
Strategies	Explanations
Participate in discussions.	Engage in group activities. Express your ideas, paraphrase speakers, and summarize lectures, conversations, or discussions.
Read out loud (verbalize).	Reading out loud (verbalizing), with a normal voice or with exaggerated expression uses the natural rhythm and patterns of language to automatically group information into units of meaning. Reading out loud activates auditory channels and clarifies meanings.
Ask questions.	Asking questions shows your interest and provides an opportunity to interact with the speaker. Answers clarify information and are often easier to recall later.
Work with others.	Use your verbal skills by working with a study buddy, participating in a study group, or working with tutors.
Recite frequently.	Reciting involves stating information out loud, without referring to printed materials, and speaking in complete sentences. Reciting provides immediate feedback about your level of understanding. Practice reciting your notes and answers to questions.

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition. Houghton Mifflin Company, Boston, New York. p. 12.

AUDITORY LEARNER: ESSENTIAL STRATEGIES

Essential Strategies for Auditory Learners	
Strategies	Explanations
Tape lectures.	For lectures in difficult classes, request permission to tape the lectures. Continue to take notes, but back up your notes with the tapes. After class, review only the sections of the tapes that cover the confusing or difficult information.
Make your own study tapes.	Read or recite main ideas, facts, and important details into a tape recorder. Studying tapes with your own voice may strengthen auditory memory and recall.
Explain information.	Explain information you are learning to another person or even to an imaginary person. You receive immediate feedback that shows what you know and what you do not yet understand clearly.
Create rhymes, jingles, or songs.	Use your language and musical abilities to create easy-to-remember tunes.
Use technology.	Check your learning labs, library, and Internet resources for audio or video-audio materials to reinforce learning. Use voice-activated technology that is available on computers and personal products.

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition.
Houghton Mifflin Company, Boston, New York. p. 12.

KINESTHETIC LEARNER: CHARACTERISTICS

- **Kinesthetic learners prefer to process and learn information through movements** → they learn best by *body (muscle) movements* and *hands-on experiences*
 - Can easily understand and recall information if he/she has the opportunity to feel, handle, use or experiment with concrete objects as body (muscles) hold memory
 - Work well in activities that involve movements or performance (e.g. athletes, actors, dancers)
 - Work well with their hands in areas such as repair work or art
 - Are well coordinated with strong sense of timing

KINESTHETIC LEARNER: ESSENTIAL STRATEGIES

Essential Strategies for Kinesthetic Learners	
Strategies	Explanations
Use hands-on learning.	Handle objects, tools, or machinery that you are studying. For processes such as computer applications, repeat the hands-on learning application several times.
Create manipulatives.	Manipulatives are study tools that you can move around with your hands. For example, create flashcards that you can shuffle, spread out, sort, or categorize.
Cut apart charts or diagrams.	Copy charts or diagrams. Practice re-assembling the pieces in their correct order.
Use exaggerated movements and hand gestures when you study.	Use large muscle movement by engaging in drama, dance, pantomime, and role-playing. Use small muscle movement by moving and using hand gestures as you study.
Use your muscle memory.	Redo hands-on tasks multiple times. Your muscles retain memory of hand and body movements.

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition. Houghton Mifflin Company, Boston, New York. p. 13.

KINESTHETIC LEARNER: ESSENTIAL STRATEGIES

Essential Strategies for Kinesthetic Learners	
Strategies	Explanations
Use a computer.	Type information and create notes, tables, and charts. Keyboard strokes help create muscle memory that you can use to simulate the actions and recall information.
Walk as you recite or practice information.	Pacing or walking with study materials in hand helps some people learn without being distracted by the discomfort of sitting too long.
Stand up as you work.	Work at a chalkboard, flip chart, or large poster paper to create study tools. List, draw, practice, or write while you stand up and work on a large surface.
Use creative movement and action-based activities.	For example, if you are studying perimeters in math, tape off an area of a room and walk the perimeter.
Create action games.	Convert the information you are studying into a game, such as Twenty-One Questions, Jeopardy, or Concentration. Review the information by playing the game with another student or group.

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition.
Houghton Mifflin Company, Boston, New York. p. 13.

THE STRATEGIC LEARNER

- **Strategic learners use a variety of learning strategies** → *they 1) explore using new learning strategies, and 2) select some that utilize their strengths*
- **Using more than one learning strategies has many benefits:**
 - It adds *motivation and interest* to the learning process
 - It creates *stronger sensory paths* into your memory system
 - It helps you recognize that *there is always more than one way to process information*
 - It helps you *gain confidence* in your ability to handle information

MULTISENSORY STRATEGIES – HOW?

- TIP 1: As you experiment with the various learning modalities, strive to design strategies that combine two or all modalities
- TIP 2: Explore combinations that help you see the information in new way, say the information you are learning and do some type of movement or hands-on activity
- By incorporating multisensory strategies, you *1) create multiple ways to access and recall information, and 2) boost your memory*

MULTISENSORY STRATEGIES – HOW?

- Assume that you have a complex project for your Management class that must be done in the form of a group work
 - Discuss and recite (=talk out loud) the project with the students in that group → *auditory channel*
 - Take notes on important points and steps → *kinesthetic channel*
 - Highlight (=colour-code) key points and steps → *visual channel*
 - Verbalize (=read out loud) notes to check their clarity
- In this way, you see your colour-coded notes, say things about the project, and *do it by writing*

THE BRAIN DOMINANCE THEORY

- Research beginning in the late 1960s discovered that the human brain consists of two hemispheres (*cortices*) → each hemisphere dominates specific kinds of mental activities and learning patterns
- The research resulted in the Brain Dominance Theory → it is a cognitive model that identifies specific functions of the left and the right hemispheres of the brain
 - This theory suggest that people tend to have a *preference for initially processing information through one side of the brain*
 - Once processing information starts, *the information is then shared with the other side of the brain for total processing*

THE BRAIN DOMINANCE THEORY

Left Hemisphere

*Linear or
Left-Brain Learners*

Logic

Structured

Sequences

Lists

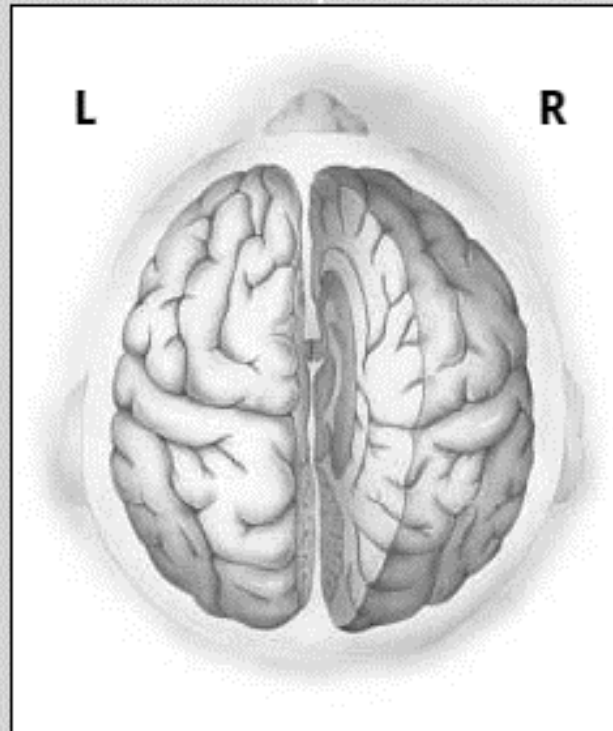
Specific details

Verbal language

Words and numbers

Analytical

Predictable



Right Hemisphere

*Global or
Right-Brain Learners*

Generalized

Spatial

Colors

Visualization

Imagination/Creativity

Pictures, Graphs, Charts

Intuition

Interactive

Rhythm

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition.
Houghton Mifflin Company, Boston, New York. p. 17.

LEFT-BRAIN (LINEAR) LEARNERS

- A left-brain or linear learner has the following characteristics:
 - They prefer information that provides them with *specific details, clearly defined steps and logical arguments*
 - Their initial focus is on the details followed by understanding the "big picture" these details form
 - They prefer information presented in *straightforward, structured and clear manner*
 - They prefer learning situations in which concepts, terminology, facts, applications and conclusions are clearly presented
 - They tend to do well in *science, mathematics and computer technology*

RIGHT-BRAIN (GLOBAL) LEARNERS

- A right-brain or global learner has the following characteristics:
 - They prefer information in the form of *pictures, charts, diagrams* and *colourful visual stimuli*
 - Their initial focus is on the "big picture", and then focus their attention on the details
 - They enjoy learning details through *discovery, experiment, exploration, discussion or brainstorming in creative ways*
 - They prefer learning situations that involve learning communities, discussions and group activities
 - They tend to do well in *literature, poetry, creative writing and performing arts*

PART 1.2. STRENGTHENING READING SKILLS

- Main points of this part:

- *The Reading Process: Levels of Reading & Reading Guidelines*
- *Reading Goals & Action, Reading Strategies*
- *Surveying Reading Materials*
- *Identifying and Using Paragraph Elements*

THE READING PROCESS

- Reading is an active process of inputting information, encoding meaning and creating associations
- A common mistake is rushing through information while reading → if you rush the process, you may not take enough time to *1) check understanding; 2) consciously make associations, or 3) allow information to integrate*
- It frequently occurs that you find the need to reread the information several times before the information makes sense to you

LEVELS OF READING

- Levels of reading represent different reading skills and reading goals for kinds of reading material:
 1. *Recreational reading* is the process of reading for pleasure (iow. to be entertained) or staying updated on current events
 2. *Overview reading* is the process of surveying reading materials without interruption in order to form a "big picture" or create a schema for the topic
 3. *Thorough reading* is the process of reading slowly and systematically in order to process information
 4. *Comparative reading* is the process of contrasting, comparing and analysing for similarities and differences in points of view

LEVELS OF READING

Recreational reading	Overview reading
<ul style="list-style-type: none">▪ Use to read newspapers, magazines, short stories, poetry or fiction▪ Read to be entertained, read for pleasure, read to stay updated on current events	<ul style="list-style-type: none">▪ Use for new material of difficult material (e.g. textbook, chapter, essay, test)▪ Read through material without uninterrupted and without stalling to become familiar with the topic
Thorough reading	Comparative reading
<ul style="list-style-type: none">▪ Use for textbook and course-related materials to adjust to levels of difficulty▪ Read to allow your brain time to acquire and process information, and to identify and understand important information	<ul style="list-style-type: none">▪ Use for two or more books, articles, excerpts on the same subject▪ Read for organizing, comparing, contrasting points of view, and for analysing interpretations, models, approaches and implications

READING GUIDELINES

Level of Difficulty	Kinds of Textbooks or Reading Materials	Reading Length
Easy	<ul style="list-style-type: none"> ■ Textbooks for career guidance, personal growth, developmental writing, personal health, literature, composition, or public speaking ■ Fiction such as short stories, plays, or poetry 	<p>Stop at the end of each <i>page</i> to think about the information, create a visual image of the material, associate it with other information, formulate questions, or take notes.</p>
Average	<ul style="list-style-type: none"> ■ Textbooks for history, sociology, economics, psychology, business, anthropology or political science ■ Study guides or procedure manuals 	<p>Stop at the end of each <i>paragraph</i> to think about the information, create a visual image of the material, create associations, formulate questions, identify main ideas and important details, define terminology, or use some form of notetaking.</p>
Difficult	<ul style="list-style-type: none"> ■ Textbooks for math, geology, computer science, chemistry, physics, anatomy and physiology, and other sciences ■ Research journals, research studies, or professional articles 	<p>Stop at the end of each <i>sentence or group of sentences</i> to check your understanding, think about the information, create associations, formulate questions, define terminology, use some form of notetaking, or possibly work an example or practice the skill.</p>

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition. Houghton Mifflin Company, Boston, New York. p. 187.

READING GOALS AND ACTIONS

- Creating reading goals reflects your intention, your purpose and your desired outcomes → goal-oriented behaviour responds to a plan of actions
- **GOAL 1: Getting an overview of the structure, content, length → ACTION 1: Survey the literature before reading it thoroughly**
- **GOAL 2: Understanding the main ideas and details of each paragraph before continuing to read new paragraphs → ACTION 2: Underline or highlight main idea sentences and keywords**

READING GOALS AND ACTIONS

- **GOAL 3: Identifying and understanding terminology and definitions**
→ ACTION 3: Circle terms and keywords in definitions, create definition cards or vocabulary sheets
- **GOAL 4: Identifying and understanding relationships, such as cause-effect, comparison, or chronological sequences** → ACTION 4: Make notes in the margin, convert paragraphs into visual notes
- **GOAL 5: Reviewing the important information in the literature** → ACTION 5: Create study tools to use in the practice

READING STRATEGIES

Essential Strategies for Reading Textbooks

- **Begin with an attitude to learn.** Approaching a reading assignment with a positive, inquisitive, receptive attitude sends signals to working memory that this information is important.
- **Create reading goals for different reading stages and kinds of information.** Know your intention and what you want to accomplish before you begin any type of reading.
- **Be patient and do not rush the reading process.** Reading is an intake and an encoding process that requires time for your mind to mull over, absorb, process, and integrate the new information. Attempting to read quickly often results in rapid decay or fading of information without ever processing it.
- **Relate new information to existing schemas in your long-term memory.** Thinking about associations and linking different chunks of information lead to greater comprehension. Ask questions such as *What do I already know about this topic? How is it like and different from previous learning or what I have experienced? What are the important points and details?*
- **Recognize different levels of information as you read.** Strive to become an analytical reader who can recognize major themes, large concepts (schemas), main ideas, and important supporting details.
- **Learn terminology and definitions.** Understanding terminology lays the foundation for more complex learning and provides you with tools to communicate subject matter effectively to others.
- **Use spaced practice or spaced studying.** Spreading the reading process and activities over several different time periods actually cuts down total learning time. Avoid *marathon studying*, or in this case, *marathon reading*, which can overload your working memory.
- **Use elaborative rehearsal and active learning techniques as you read.** Actions that engage you in the reading and learning process help you maintain attention and concentration, encode information in new ways, and make stronger impressions of the information for memory.
- **Include some form of feedback as you study.** Use self-quizzing, reciting, and Look-Away Techniques to check the thoroughness and accuracy of your comprehension and memory.

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition. Houghton Mifflin Company, Boston, New York. p. 190.

SURVEYING READING MATERIALS

- **Surveying is a process of previewing or skimming information to get an overview** → it is an effective part of the reading process because surveying...
 - ... enhances motivation and interest in the material
 - ... breaks inertia (inactivity) and eases anxiety (fear) about starting to read
 - ... boosts confidence in ability to master new material
 - ... provides a general idea about the length and difficulty level of the material
 - ... helps manage reading and studying time efficiently

SURVEYING A TEXTBOOK

- **Surveying a textbook informs you about the book's philosophy, organization and features** → this process usually requires *less than 30 minutes* of your time
- **Parts of a textbook to survey:**
 - *Front matter:* title page, copyright page, table of contents (structure of chapter headings and subheadings), introductory materials (preface, introduction, foreword)
 - *Back matter:* appendix (supplementary readings, answer keys to tests, large tables and maps), glossary (mini-dictionary for specific terminology), references/bibliography, index

SURVEYING A TEXTBOOK CHAPTER, AN ARTICLE OR AN ESSAY

- Surveying a chapter, an article or an essay is a *warm-up activity* before thorough reading that help you focus your mind and create interest
- Use the following steps to survey these kinds of reading material:
 - *Think about the title:* What does the title mean to you? What understanding or options do you already have about the subject?
 - *Identify the author:* Is there a footnote about the author's affiliations or personal information? Is the author a member of a group of thinkers, or a school of thought?

SURVEYING A TEXTBOOK CHAPTER, AN ARTICLE OR AN ESSAY

- Use the following steps to survey these kinds of reading material:
 - *Move through the chapter/article/essay by glancing over the headings and subheadings to see the "skeleton" structure of it*
 - *Read paragraphs that state the objectives for the material: What is the author's purpose? What did he intend to say? What is the main point of the material?*
 - *Examine visual materials, such as charts, graphs, diagrams, pictures and photographs*
 - *Skim through side/marginal notes (mainly in course book chapters) as these provide you with background details and emphasize important points to learn*

IDENTIFYING AND USING PARAGRAPH ELEMENTS

- **Thorough reading involves reading one paragraph at a time; stopping to understand, examine and analyse, and "digest" the information in the paragraph → *processing text information cannot be rushed***
- **Understanding the paragraph is more easily when you can identify the following elements and see their relationships to each other:**
 - *The subject* = the topic of the paragraph
 - *The author's point* = the main idea of the paragraph
 - *The important details of the paragraph that support the main idea*

EXERCISE: IDENTIFYING AND USING PARAGRAPH ELEMENTS

” Economists use the *scientific approach* to understand economic life. This involves observing economic affairs and drawing upon statistics and the historical record. For complex phenomena like the impacts of budget deficits or the causes of inflation, historical research has provided a rich mine of insights.

Often, economics relies upon analyses and theories. **Theoretical approaches allow economists to make broad generalizations**, such as those concerning the advantages of international trade and specialization or the disadvantages of tariffs and quotas.

In addition, economists have developed a specialized technique known as *econometrics*, which **applies the tools of statistics to economic problems**. Using econometrics, economists can sift through mountains of data to extract simple relationships. ”

Source: Samuelson, P. A. – Nordhaus, D. W. (2010): *Economics*. 19th Edition. McGraw-Hill/Irvin. p. 5.

PART 1.3. DEVELOPING LISTENING & TAKING LECTURE NOTES SKILLS

- Main points of this part:
 - *The Listening Process: Kinds of Listening & Essential Strategies*
 - *Factors Influencing Effective Listening*
 - *Notetaking Strategies: Making Quality Notes & Clues to Organize Information*

THE LISTENING PROCESS

- Of the four verbal communication skills (listening, speaking, reading and writing), **listening skills are usually the weakest**
- **Listening is not hearing** → hearing does not automatically assure that you are listening, because listening requires more than taking in sounds and being aware that words are being spoken
- **Listening is a mental process and effort** → *it requires concentration and holding stimuli in working memory long enough to attach meaning to the words and interpret the speaker's message*

KINDS OF LISTENING

- Understanding the listening goal each time you approach a listening situation can help you select appropriate strategies to strengthen your listening skills:
 1. *Active listening*: understanding + learning new information
 2. *Critical listening*: understanding + examining/analyzing the speaker's message
 3. *Empathic listening*: understanding + relating to the speaker's feelings and emotions
 4. *Appreciate listening*: enjoying and acknowledging the speaker on his/her message

KINDS OF LISTENING: CRITICAL LISTENING

- **Critical listening moves beyond active listening** → it is a higher, more complex form of listening that involves critical thinking skills to examine, analyze, and critique the proof of evidence that is presented to support a specific point of view
- **Critical listening is difficult to do without pre-existing background knowledge and familiarity with the topic**
- **Critical thinking requires separating emotions and opinions from logic and rationality**

KINDS OF LISTENING: EMPATHIC LISTENING

- Empathic listening is about to relate to other person's feelings, emotions and thoughts related to a specific topic or a situation
- In many empathic listening situations, the speaker wants someone to listen and understand → he or she does not necessarily want to be consoled or given advice
- Empathic listeners pay attention to people's verbal and non-verbal clues on order to identify the emotion (e.g. anger, frustration, disappointment, resentment, excitement, enthusiasm, self-pride)

KINDS OF LISTENING: APPRECIATIVE LISTENING

- **Appreciative listening is the process of listening to a speaker for the purpose of enjoying and acknowledging the speaker and the message in positive ways**
 - Laughing at someone's humorous anecdotes
 - Listening to an actor practice a scene from an upcoming play
 - Listening to someone describe a vacation to an exotic location
- **The listener can demonstrate his or her appreciation through nods of agreement, such as eye contact, compliments, expressions of gratitude, and, when appropriate, applause**

ACTIVE LISTENING: ESSENTIAL STRATEGIES

- **Create a clear listening goal.** Enter the classroom with an *intention* to listen to learn. Exhibit a positive attitude toward the subject, the speaker, and the experience. Strive to follow the speaker's chain of thoughts, sequence of details, relationships, examples, and logic.
- **Use concentration strategies.** Free up working memory space by eliminating as many external and internal distractors as possible, including disruptive thoughts. Make a concerted effort to maintain undivided attention.
- **Familiarize yourself with the topic *before* class.** Become familiar with the terminology, main concepts, and key details by previewing the chapter that will be discussed in class; read the chapter if time permits. Instead of hearing information for the first time, you will have already activated or started new schemas in your long-term memory for the information.

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition.
Houghton Mifflin Company, Boston, New York. p. 291.

ACTIVE LISTENING: ESSENTIAL STRATEGIES

- **Keep an open mind.** Avoid prejudging information or the speaker. Set personal opinions aside so you can hear the speaker's message as it is presented.
- **Activate your visual skills.** Try to visualize information as it is presented. Turn on the "movie in your mind" to create a visual association with the verbal information.
- **Express an interest in the topic.** When appropriate, ask questions about points of interest or points that are confusing or unclear. Ask clarifying questions and paraphrase what you hear to check the accuracy of your understanding.
- **Participate in the learning process.** Be willing to respond to questions posed directly to you by the speaker. Volunteer to answer questions or to participate in verbal directions to do an activity or work a process.

Source: Wong, L. (2009): *Essential Study Skills*. 6th Edition.
Houghton Mifflin Company, Boston, New York. p. 291.

INFLUENCING FACTORS

- **Good listening is similar to concentration** → it requires a conscious effort on your part to keep your mind focused on the speaker
 - A person may begin listening to a speaker with complete intention of "staying tuned in", but then *shifts suddenly to other thoughts, or starts daydreaming*
- **Good listening involves more than good intentions** → there are several barriers that can contribute to poor listening skills
 - *Poor listening habits* may be the result of the lack of training or instruction how to be a good listener

INFLUENCING FACTORS

- Variables that influence your ability to listen effectively can be grouped into five factors:
 1. *Your attitude*: positive attitude enhances listening (e.g. general interest level, attitude towards the subject and the speaker)
 2. *The topic*: familiarity enhances listening (e.g. your familiarity with words and terminology, your personal background and previous experiences)
 3. *The speaker's quality*: positive speaker qualities enhance listening (e.g. speaker's tone of voice, speech pattern, organization of his/her presentation, clarity in explaining)

INFLUENCING FACTORS

- Variables that influence your ability to listen effectively can be grouped into five factors:
 4. *External distractors*: the ability to block out distractors enhances listening (e.g. noise and movement in the listening environment, interruptions by others)
 5. *The actual personal state*: positive physical and emotional state enhance listening (e.g. comfort, proximity to speaker/seating location, length of time required to remain seated, personal emotional state at the time)

INFLUENCING FACTORS

- The way that you approach listening situations will be influenced not only by the five factors, but also by your own learning style preferences
 - *Linear learners (left-brain learners) often are linear listeners*
→ they tend to listen for logical, sequential information, and focus on details that support a main point
 - *Global learners (right-brain learners) often are global listeners*
→ they tend to focus on the overall picture supported by examples, discussion and group interaction

NOTETAKING STRATEGIES: MAKING QUALITY NOTES

- **Quality notes are useful as they show many things** → good notes show *1) the structure; 2) the important information (main ideas), and 3) sufficient details to support main ideas*
 - If your notes are *too brief and lack details*, they will not be very helpful when you need to study the information
- **The characteristics of quality notes are based on your ability of listening** → you should listen for *keywords, terminology and definitions, supporting details (ordinals, dates, names, facts, statistics, examples), verbal and non-verbal clues, and visual clues*

NOTETAKING STRATEGIES: CLUES TO ORGANIZE INFORMATION

- **Listen for keywords** → some examples: *advantages, benefits, causes, characteristics, conclusions, disadvantages, effects, factors, findings, functions, kinds of, methods, parts, principles, purposes, reasons, rules, stages, steps, solutions, techniques, types of ...*
- **Listen for terminology and definitions** → some examples: *"X means...", "X is called ...", "X is defined ...", "The definition of X is ..."*
 - TIP: when you hear these phrases, use the abbreviation DEF to signal that you are writing a definition

NOTETAKING STRATEGIES: CLUES TO ORGANIZE INFORMATION

- **Listen for ordinals (number words, placeholder words)**
 - TIP: when you hear 'first', make that point number 1 in your notes, and continue to listen to further placeholder words, such as 'second', 'next', 'also', 'in addition', 'another', 'last', 'finally'
- **Listen for dates, names, facts, statistics and examples** → these details develop and support the main idea
 - TIP: pay attention to examples and anecdotes as they serve as memory triggers; therefore, create associations; however your notes have to show the basic idea of the example

NOTETAKING STRATEGIES: CLUES TO ORGANIZE INFORMATION

- Listen for verbal and non-verbal clues → some examples: *"This is important."*, *"You need to know/understand this."*, *"This will be on the next test."*, *"As I have said ..."* (important ideas are repeated), *"Be sure you copy this information."*, *"Be sure you read carefully ..."*, *"I can't emphasize enough the importance of ..."*
 - TIP: Listen to the speaker patterns carefully: his/her intonation, tone of voice, volume of voice
 - TIP: Watch the speaker's body stance, hand gestures, facial expressions as important information is also communicated through 'body language'

PART II. RESEARCH SKILLS DEVELOPMENT

- Main points of Part II:
 - *II.1. Developing Writing Skills*
 - *II.2. Working With Sources*
 - *II.3. Developing The Argument*

II.1. DEVELOPING WRITING SKILLS

- Main points of this part:

- *The Reason for Improving Your Writing*
- *The BAWE (British American Written English) Genre Families*
- *Planning Your Writing: Addressing Your Topic*

THE REASON FOR IMPROVING YOUR WRITING

- **Writing well is a skill that develops over time** → improving your writing is a process that you will continue throughout your life
- **Practice is the best teacher** → *1) the more you write, the more you develop as a writer, and 2) the finesse of your writing (= your style) can only be improved by reading literature*
- **However, writing alone is insufficient** → writing well requires *1) an understanding of critical thinking; 2) a skill at formulating arguments; 3) an understanding of essay structure; and 4) an awareness of the pitfalls awaiting careless writers*

THE REASON FOR IMPROVING YOUR WRITING

- Writing for an audience, esp. for an academic audience, **requires** you to reflect other writing and think critically about a topic, as well as to formulate arguments and consider counterarguments
- Writing = technical skills built on a way of thinking → you need to 1) *organise your thoughts into large or small sections of text*, and 2) *learn particular terminology* (not just the words, but also their correct application in your field)
- Non-native English speakers have to learn grammatical **idiosyncrasies** (iow. habit, characteristic) as well as **stylistic standards**

BAWE GENRE FAMILIES

Social purposes	Genre family	Examples of genres
Demonstrating knowledge and understanding	Exercise	<i>calculations; data analysis; calculations + short answers; short answers; statistics exercise</i>
	Explanation	<i>legislation overview; instrument description; methodology explanation; site/ environment report; species / breed description; account of a natural phenomenon</i>
Developing powers of independent reasoning	Critique	<i>academic paper review; interpretation of results; legislation evaluation; policy evaluation; programme evaluation; project evaluation; review of a book/ film/ play/ website</i>
	Essay	<i>challenge; commentary; consequential; discussion; exposition; factorial</i>
Building research skills	Literature Survey	<i>annotated bibliography; anthology; literature review ; review article</i>
	Methodology Recount	<i>data analysis report; experimental report; field report; forensic report; lab report; materials selection report</i>
	Research Report	<i>research article; research project; topic-based dissertation</i>
Preparing for professional practice	Case Study	<i>business start-up; company report; organisation analysis; patient report</i>
	Design Specification	<i>building design; game design; product design; website design</i>
	Problem Question	<i>law problem question; logistics simulation; business scenario</i>
	Proposal	<i>book proposal; building proposal; business plan; catering plan; marketing plan; policy proposal; research proposal</i>
Writing for oneself and others	Empathy Writing	<i>expert advice to industry; expert advice to lay person; information leaflet; job application; letter; newspaper article</i>
	Narrative Recount	<i>accident report; account of literature or website search; biography; creative writing; short story; plot synopsis; reflective recount</i>

Source: Nesi, H.–Gardner, S. (2018):The BAWE corpus and genre families classification of assessed student writing. *Assessing Writing*. 38. p. 53. <https://doi.org/10.1016/j.asw.2018.06.005>

PLANNING YOUR WRITING: ADDRESSING YOUR TOPIC

- Whether for a home assignment (class essay), a diploma piece at MA level or a thesis at BA level, **writing begins with a questions or topic proposed by the author(s)**, iow. a writing can fail from the outset if it does not properly address the question or topic at hand
- **STEP 1: Identify your keywords** → these are *the most important content words* concerning the question or topic
- **STEP 2: Identify the goal(s)** → you have to know *what you are to do* in light of the question or topic

PLANNING YOUR WRITING: ADDRESSING YOUR TOPIC

- **Keywords need to be defined rigorously** → defining your terms 1) *ensures that you will be clearly understood*; 2) *shows the depth of your understanding of the topic*; and 3) *helps you formulate your argument*
- **Goals, that include at least one operational verb that determine what to do, need to be spotted** → you may *analyse, classify, compare, contrast, critique, define, describe, distinguish, evaluate, explain, explore, illustrate, justify, restate, summarize, or formulate a hypothesis, apply a theory* etc.

II.2. WORKING WITH SOURCES

- Main points of this part:

- *Evaluation of Sources*
- *The Role and Types of Citations*
- *Plagiarism*
- *Quoting vs. Summarizing vs. Paraphrasing*

WORKING WITH SOURCES

- In order to fulfil the goal you have given, you need to engage with the writing of academics → this means that you have to *1) read books and articles; 2) show that you understand what they are saying; 3) reflect on what they are saying, and 4) show connections between those books and articles, and find similarities and differences*
- **How do you decide what sources to read?** In today's information age, there is a huge number of possible sources, but you have to determine what information is valuable and what information is not
- **Therefore, you need to evaluate sources to support your position**

EVALUATION OF SOURCES – HOW?

- **The evaluation of sources is not an easy task** → here are a few tips to remember when evaluating sources of evidence
- **TIP: Peer-reviewed journals and books published by academic publishers are always valid sources**
 - You can assume that *the author(s) of such publications are serious scholars who checked their facts*
 - However, it is possible that they missed some further relevant facts, or misinterpreted the data that they present; therefore, *there is always room for further discussion*
 - *Disagreeing with scholars is possible, indeed, desirable, since that is how science progresses*

EVALUATION OF SOURCES – HOW?

- **TIP: You are expected to refer to recent sources rather than very old ones**
 - Old sources are not necessarily wrong, but they may have been superseded (iow. out of date)
 - You may find that a number of articles you read all cite the same original sources → in this case you should do likewise
- **TIP: Always ask yourself if you are reading opinions or facts**
 - A *fact* is something that no one can disagree with, iow. a fact can be accepted as a truth
 - An *opinion* is a personal interpretation of facts; moreover, an *anecdote* is an incident based on other people's experience

GENERAL TIPS WHEN WORKING WITH SOURCES

- When you have found a useful source, you need to read it and reflect on what you read
- As you read, you are recommended to take notes → your notes should include *quotations, summaries and paraphrases* of the content of you read
- As you reflect on what you read, you should always jot down your own reflections on the material → your notes will be useful later on, when you form your *own argument*

GENERAL TIPS WHEN WORKING WITH SOURCES

- You usually find that writers disagree with other writers on some points → there are *debates* and *discussions* in science
- If an opinion is supported by facts, and explained thoroughly, then it becomes an argument → these serve as a good basis for *citations*
- You should consider the evidence of arguments presented by each author, and compare them → you may find that *some arguments are "stronger" than others, but a citation cannot be "stronger" than another*

THE ROLE OF CITATIONS

- Whenever you include any information and ideas that have come from other sources or been published before, you must cite the **original source** → this means that *you must always acknowledge the original author* of anything that you write
- **Why is it important?**
 - Citations mark the source of substantive information
 - Citations prove the author's logical reasoning and knowledge of literatures
 - The person reading the essay must be able to follow up and check on the information him-/herself

TYPES OF CITATIONS

- **How do you cite sources in a proper way?** There are many styles for citing sources as different publishers have different conventions
- **The most widespread method is the inter-textual (in-text. or in-line) citation** → *author-year formula*, such as the *Harvard* or *APA* (*American Psychological Association*) *referencing system* (variant of Harvard style)
- **Sometimes you are required to use footnotes or endnotes** → known as *Footnote/Bibliography* or *Endnote/Bibliography method*
 - *Footnotes* appear at the bottom of a page
 - *Endnotes* appear at the end of main text, but before references

HARVARD/APA REFERENCING

- **The Harvard/APA style requires two elements** → 1) *inter-textual citations throughout your work*, and 2) *a list of references at the end*
- **In-text citations include three pieces of information about a source within the text of your work** → 1) *the family name of the author(s)* 2) *the year of publication*, and 3) *the page number* (when the information is located on a particular page or when directly quoted)
- **The list of references** at the end of your text is a list of all the sources you have used during your work

FOOTNOTE/BIBLIOGRAPHY METHOD

- The Footnote/Bibliography method requires two elements → 1) *footnotes throughout your work*, and 2) *a bibliography or list of references at the end*
- You indicate a footnote by putting a small number above the line of type directly following the source material → this number is called a *note identifier*
 - *It sits slightly above the line of text, it looks like this.*¹
- The advantage of footnoting is that the reader can simply cast their eyes down the page to discover the source of a reference which interests them

LATIN ABBRIVIATIONS IN CITATIONS: IN GENERAL

- **p.** (pagina) = **page** and **pp.** = **page-to-page** → references are more correct when referring to page number(s). Exact wording always requires the exact source designation at the end of the quotation
- **et al.** (et aliī) = **and others** → use it to complete a list, especially of people as authors of a published work with more than two authors
- **cf.** (confer/conferatur) = **compare** → use it to refer the reader to other material to make a comparison with the topic being discussed
- **s.a.** (sine anno) = **without year** → use it if the year is not known (e.g. due to the negligence of the publisher), or the year is unknown

LATIN ABBRIVIATIONS IN CITATIONS: FOOTNOTE METHOD

- **loc. cit.** (loco citato) = **in the place previously cited** → use it when two references in a row are from the same source, and the page is the same as well → loc. cit. stands alone, it is never followed by anything
- **ibid.** (ibīdem) = **same as last entry** → use it when two references in a row are from the same source, but pages are different
- **op. cit.** (opus citatum) = **in the work previously cited** → use it when you have already given full details of that source in an earlier note, but it is not the previous note → after op. cit. you need to provide information, e.g. the author's name and page to make the source clear

TO CITE OR NOT TO CITE?

- There is no need to refer to information that have been proven or quoted multiple times in the public domain or in scientific knowledge
- Authors do not refer well-known facts → e.g. *the capital of Hungary is Budapest* or *the population of Europe shows a decreasing tendency* are not referable facts
- However, reference has to be made to the fact that is based on more recent data or result → e.g. it would turn out that the population of Europe has started to grow

TO CITE OR NOT TO CITE?

- In the case of citations from literary, historical personalities, (especially mottoes), the exact reference (author, date or page number) can be left out, as they are not always known for their exact place of appearance
 - *Only author:* E.g.1. "Science without religion is lame, religion without science is blind." (Albert Einstein)
 - *Only title:* E.g.2. "'The question is', said Alice, 'whether you can make words mean so many different things'." (Through the Looking Glass)
 - *None:* E.g.3. "Teach a man to fish and you feed him for a lifetime" (Old Chinese proverb)

PLAGIARISM

- **In modern universities, plagiarism is considered an act of academic and intellectual dishonesty** → universities use advanced systems for detecting plagiarism, and penalize or even expel students who commit plagiarism
- **Plagiarism: the act of presenting another's work or idea as your own original work or idea, or failing to acknowledge the source**
- **Plagiarism includes many acts** → *1) copying someone's entire essay, or portions of someone's else's essay; 2) copying, summarizing and paraphrasing any part of someone else's writing without providing a proper citation, and 3) copying parts of your own previous essays (known as self-plagiarism)*

PLAGIARISM

- **Avoiding plagiarism is easy** → just remember that whenever you include someone else's idea, *you must acknowledge whose idea it is and where it came from*
- **Using a proper citation is the way you acknowledge ideas**
- **TIP: Keep a track of all your sources and quotes as you develop your work**
 - If you have a quote, but you have forgotten the original source, do not include the quote
 - You can use *Google and other search engines* to help track down the original source

SUMMARIZING, PARAPHRASING, QUOTING – WHEN TO USE?

- **Quoting (iow. exact wording):** the original text is powerful and elegant, so it leaves a strong impression on the reader
- **Paraphrasing:** 1) you want to use all the ideas of the original text, iow. you want to present the same amount of information as the original; 2) the original text is up to three sentences long
- **Summarizing:** 1) you want to use only the most important parts of the original text, iow. you want to present less information than the original; 2) the original text is longer than three sentences

SUMMARIZING, PARAPHRASING, QUOTING – WHAT TO DO?

Summarizing	Paraphrasing	Quoting
Change the vocabulary and the sentence structure of the original text in your own words		Do not make any changes to the vocabulary and the sentence structure
Do not use quotation marks		Put the original text between quotation marks
Choose the most important parts of the original text and rewrite them in your own words	Show your interpretation of all of the original material and rewrite it in your own words	Present the original text as it is
Make the summary significantly shorter than the original text	Keep similar length as the original text, do not add new ideas and remove any ones	

EXERCISE: PARAPHRASING

- Which is the best paraphrase of the following sentence?

Only 9% of the students who work part-time earn sufficient income to support themselves.

1. Only 9% of the students who have part-time jobs make enough money to support themselves.
2. Although many students work part-time, only 9% of them make their living from their jobs because their wages are very low.
3. Of all the students who have part-time jobs, no more than 9% make enough money to earn a living.

EXERCISE: PARAPHRASING

- **Original sentence: Only 9% of the students who work part-time earn sufficient income to support themselves.**
- 1. Only 9% of the students who have part-time jobs make enough money to support themselves. **X → Keeps the details, but sentence structure and vocabulary are too similar to the original**
- 2. Although many students work part-time, only 9% of them make their living from their jobs because their wages are very low. **X → Includes information that is not in the original text**
- 3. Of all the students who have part-time jobs, no more than 9% make enough money to earn a living. **√ → Expresses the details in the original text accurately and uses a different structure**

EXERCISE: PARAPHRASING

- Which is the best paraphrase of the following sentence?

Throughout most of the developed world, universities have seen a steady increase in the number of women enrolling in engineering courses.

1. There are increasingly more schools in most of the developed areas of the world because women are now taking the courses.
2. The percentage of women studying engineering at university has been rising steadily in a majority of developed countries.
3. In most developed countries, universities reported a consistent increase in the number of women taking engineering courses.

EXERCISE: PARAPHRASING

- **Original sentence:** Throughout most of the developed world, universities have seen a steady increase in the number of women enrolling in engineering courses.

- 1. There are increasingly more schools in most of the developed areas of the world because women are now taking the courses. X
- 2. The percentage of women studying engineering at university has been rising steadily in a majority of developed countries. ✓
- 3. In most developed countries, universities reported a consistent increase in the number of women taking engineering courses. X

HOW TO PARAPHRASE?

- Read the passage several times until you understand its meaning fully

Increases in the cost of air travel have had a negative effect on tourism in destinations such as Hawaii, which are significant distances from other countries.

- On a separate piece of paper, note down the ideas and keywords from the passage in the order they appeared in the original

Increases – cost – air travel / negative effect / tourism – destinations – Hawaii / significant distances – other countries

HOW TO PARAPHRASE?

- Avoiding the first idea, choose one of the other ideas to start the paraphrase

Increases — cost — air travel / Tourism — destinations — Hawaii

- Change original vocabulary by finding synonyms and phrases of similar meaning

Tourism → tourist industry, destinations → places + Hawaii

- Start to write the paraphrase by using the new words and word forms

The tourist industry in places like Hawaii ...

HOW TO PARAPHRASE?

- Continue writing the paraphrase while changing the original vocabulary, but not changing the verb tense of the original sentence

significant distances → fairly remote + other countries, negative effect → adversely affected, increases → rises, cost + air travel → airfares

- Finally, check the grammatical structure and the word order of the paraphrased sentence

The tourist industry in places like Hawaii, which is fairly remote from other countries, has been adversely affected by rises in airfares.

HOW TO PARAPHRASE?

- **The original sentence:** *A thesis statement is a necessary first step in the preparation of an essay.*
 - thesis statement / necessary - first - step / preparation - essay
 - necessary - first - step → crucial - preliminary - element
 - *A crucial preliminary element* + in
 - preparation → in preparing + essay
 - *A crucial preliminary element in preparing an essay* + is
 - thesis statement → stating your argument
- **The paraphrased sentence:** *A crucial preliminary element in preparing an essay is stating your argument.*

HOW TO PARAPHRASE?

- **The original sentence:** *Discussion of the spread of English around the world often include an assumption of a hegemonic influence of US English that will cause World English to resemble that of the US.*
 - discussion - spread - English - around the world - often / assumption - hegemonic - influence - US English / World English - resemble
 - assumption - hegemonic - influence → belief - dominant - power + US English
 - *The belief in the dominant power of US English + that*
 - resemble → come closer + World English
 - *The belief in the dominant power of US English that + comes closer to World English + verb*

HOW TO PARAPHRASE?

- **The original sentence:** *Discussion of the spread of English around the world often include an assumption of a hegemonic influence of US English that will cause World English to resemble that of the US.*
 - discussion - spread - English - around the world - often → argument - expansion - English - global - frequently
 - *The belief in the dominant power of US English that comes closer to World English + verb + argument + expansion + English + global + frequently*
- **The paraphrased sentence:** *The belief in the dominant power of US English that comes closer to World English appears frequently in the argument about the global expansion of English.*

II.3. DEVELOPING THE ARGUMENT

- Main points of this part:
 - *The Argument, Your Argument*
 - *The Debate & the Counterargument*
 - *Hedging*

THE ARGUMENT: YOUR ARGUMENT

- **No essay or coursework can consist of others' work alone** → you have to *demonstrate what you think*
- **The argument has to be based on the essay question**, iow. your argument must answer the essay question and fulfil the goal(s) set by that question
- **The argument is formulated only after you read your sources and thought about them seriously** → this means that the argument 1) *shows that you have fully engaged with the question, read thoroughly, and 2) represents your thoughts and reflections on the topic*

THE ARGUMENT: YOUR ARGUMENT

- Here are four points to bear in mind about your argument:

1. *The possibility of counterargument*: it must be *possible for someone to argue against your point* → if it is impossible to disagree with you (=metaphysical statement), then there is no need for you to write an essay

- **Metaphysical statements vs. falsifiability** (cf. Popper, K. (1959 [1935]): *The Logic of Scientific Discovery [Logik der Forschung]*. Hutchinson & Co.)

All men are mortal. → This is not falsifiable: it does not matter how old is a man, he will die some day.

All solids have a melting point. → This is not falsifiable: the melting point will always be reached at a certain temperature.

All swans are white. → The observation of a black swan falsifies the hypothesis.

THE ARGUMENT: YOUR ARGUMENT

- Here are four points to bear in mind about your argument:
 2. **Evidence:** your argument *should not simply be a matter of personal statement* → you must be able to defend your argument based on *real evidence* that you have found while conducting your research
 3. **Clarity:** the argument may contain more than one point, and it may be complex, but you *should try present it in as clear and concise a way as possible*
 4. **Expressing support:** your argument *should show some relations to other scholars' works and some reflections on their argument*

THE DEBATE AND THE COUNTERARGUMENT

- While reading different sources, you find that some authors disagree with each other on some topics → there are *debates* in science
- You must acknowledge that there are multiple side to any debate
- Participating in debates is one of the best ways to improve your critical thinking skills → *you must consider the counterarguments*, the opinions of those who disagree with you, iow. the arguments against your thesis

GENERAL TIPS WHEN ARGUING

- It is important to pay attention to the structure of another's argument, not simply their conclusions → their basic argument can be sound, but their conclusion may not be merited by their argument
- Never criticize a position because you don't like the organization or person making it (called *ad hominem* argument)
- Be ready to change your mind → sometimes, *considering counterarguments may force you to change your thesis*, and start over from the beginning (in fact, it is a strength, and reflects the effectiveness of your critical thinking against yourself)

EXERCISE: ARGUING

- For each of the following statements, consider what the arguments and counterargument might be to them:

1. *The private sector is more efficient than the public sector.*
2. *Legalizing drugs would save money and improve security.*
3. *Generations X and Y* unjustly view Generations Z and Alpha** in a negative light.*

** Gen X: 1965-80; Gen Y (Millenials): early 1980s-late 1990s*

*** Gen Z (Zoomers): late 1990s-early 2010s; Gen Alpha: early 2010s-mid 2020s*

HEDGING

- When making a point or argument in science, you must always be clear about how certain you are → always ask yourself *what you know and don't know; what you can and cannot prove*
- If you think that something is 0% or 100% certain, then you are making an error (this is the realm of *metaphysical statements*)
- If something is probable, then uncertainty must be handled by **hedging** → the act of replacing an extreme statement or statement of high certainty with probability or suggestion

HEDGING

- Whenever you would like to use the following expressions, you should stop and ask yourself: can I be sure of what I am claiming?
 - Absolute terms, such as *never, always, all, without exception* etc.
 - *Obviously, clearly* – these are very imprecise words: obvious and clear to whom, when, and in what circumstances?
 - Even if a point seems obvious and clear to you, remember that your reader may not find it so obvious
 - Instead, provide an example or two to show that your point is easily understood in light of the evidence

HEDGING

- In place of the afore-mentioned expressions, you can consider some of the following options:
 - Adverbs, such as *generally, in general, often, usually, frequently, apparently, seldom* etc.
 - Verbs such as *suggest, may/might, tend(s) to* etc.
 - Phrases such as *"it would seem ...", "there is a tendency ...", "it is possible ...", the results indicated ..."* etc.
- Don't use these options all the time → an essay where every statement is hedged may also be criticised

AUTHORIAL JUDGEMENT AND NEGATIVE EXPRESSIONS

- Another strategy for expressing uncertainty puts the author back into the picture
 - You can use expressions such as *"according to..."*, *"I think that..."*, *"I believe ..."*, *"I suggest ..."*, *"I recommend ..."* etc.

- A third way to express uncertainty is within a negative expression:
 - *"Findings were inconclusive with regard to ..."*
 - *"Results were not significantly different from ..."*
 - *"I was unable to identify a trend ..."*
 - *"The null hypothesis could not be refuted ..."*
 - etc.