



**TRAINME3**

TVET lecturer training in mechatronics, energy & water management, renewable energies



Überbetriebliches  
Bildungszentrum  
in Ostbayern



University of Stuttgart  
Germany



higher education  
& training

Department:  
Higher Education and Training  
REPUBLIC OF SOUTH AFRICA

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Women and Youth

# UNIT V

## Academic Language

Course Presentation

TRAINME 3

MODULAR TRAINING AND FURTHER EDUCATION  
OF SOUTH AFRICAN TVET LECTURERS

IN THE FIELDS OF MECHATRONICS, ENERGY AND WATER  
MANAGEMENT AND RENEWABLE ENERGIES



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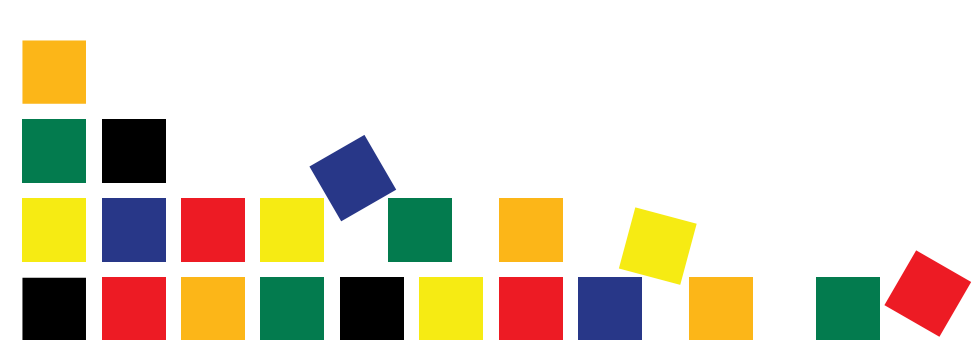
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# CONTENT

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- Task B: *Building Technical Collocations*
- Task C: *Writing Professional Instructions*
- Task D: *The Logic of Technical Definitions*



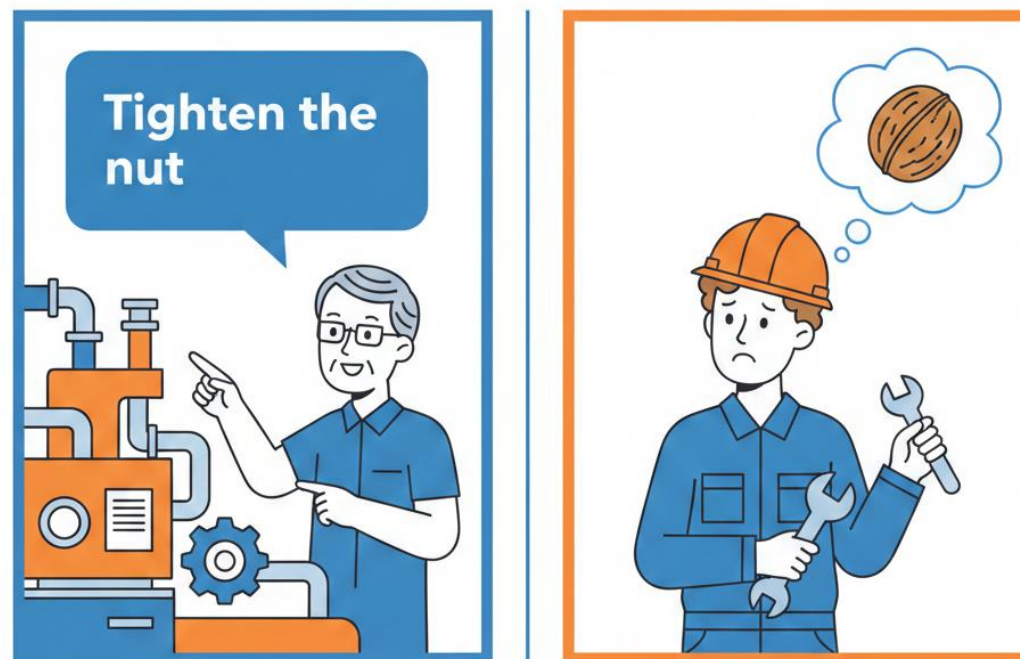
# Introduction



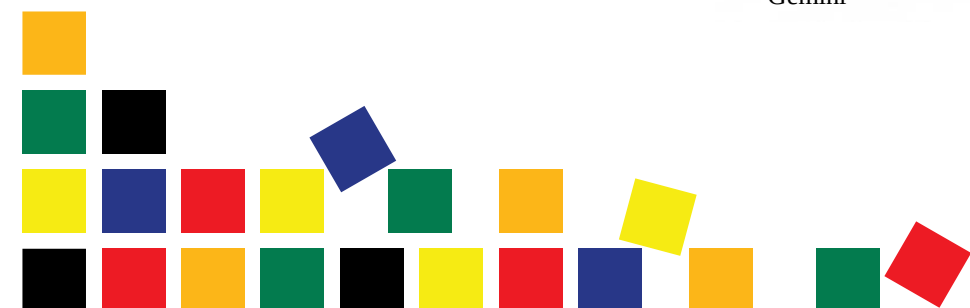
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# Diagnosis: Analyzing the Communication Gap

Why did the communication fail?

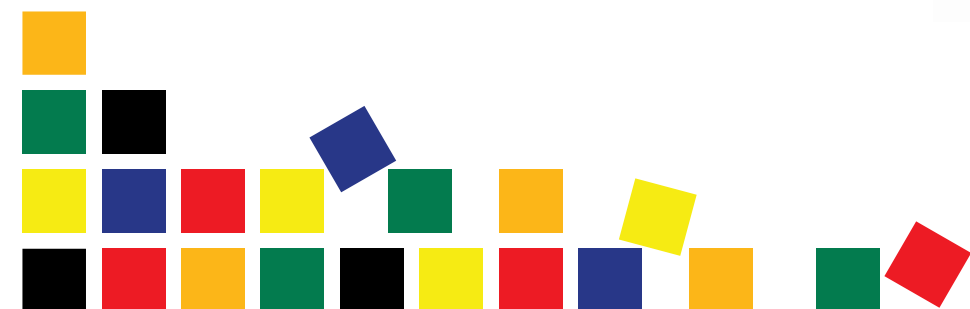


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# Experience: Reflecting on Practical Experience

Do you know the situation from your own workshop classes?

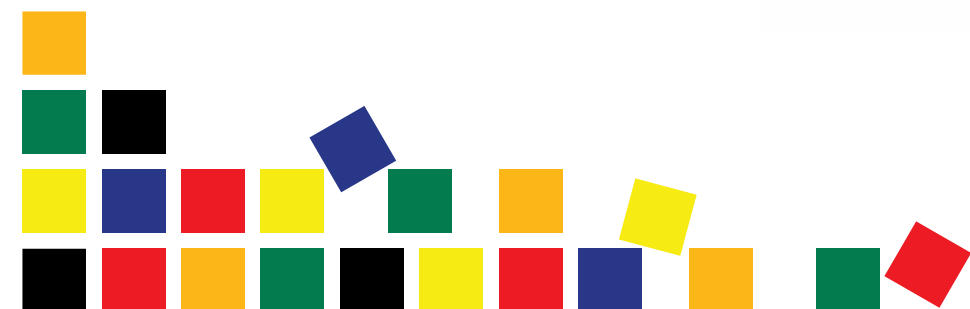


# Impact: Assessing the Consequences

How does “language failure” affect safety and efficiency?



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# Decoding the Manager

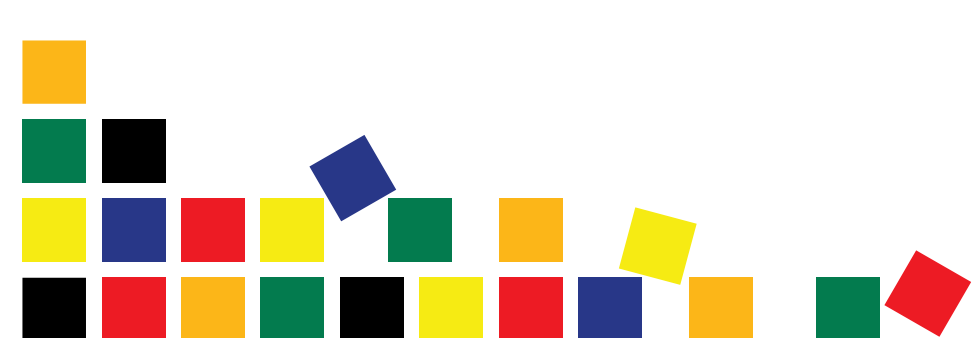
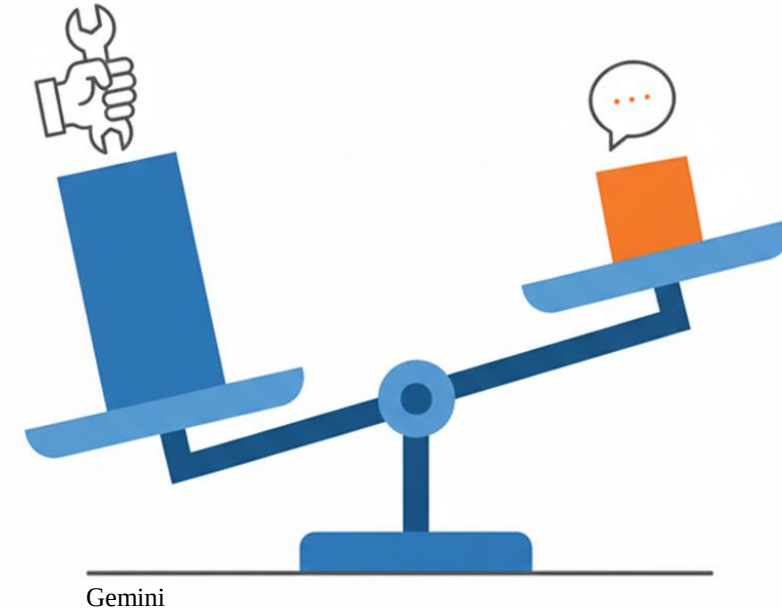
## Abstract Terms vs. Concrete Actions

| The Manager said                                                      | The Meaning                                                                                                    | Example                                                                                 |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>One-on-One Approach</li> </ul> | An activity involves two people talking directly, usually with one teaching or giving information to the other | <i>Each employee has a one-on-one review with his or her boss</i>                       |
| <ul style="list-style-type: none"> <li>Repositioning</li> </ul>       | The process of changing the way that people think of a product, a service or a company                         | <i>We are beginning to feel the benefits of the repositioning strategy we have done</i> |
| <ul style="list-style-type: none"> <li>Change</li> </ul>              | The result of something becoming different                                                                     | <i>The new management will make fundamental changes</i>                                 |

# The Double Challenge

Why is Technical English hard?

- **The Reality:** Students often possess high practical skills but lack the language to express them
- **The Consequence:** This leads to a “Performance Gap”. The students fail not because of the *subject*, but because of the *language*
- **The Goal:** We must teach content **and** language simultaneously



# Not all English is the same

## BICS vs. CALP

### Basic Interpersonal Communication Skills (BICS)

- „Playground Language“ / Everyday Chat
- Context-rich (gestures/faces)
- Learned quickly (1-2 years)
- Example: “Put that thing over there”

### Cognitive Academic Language Proficiency (CALP)

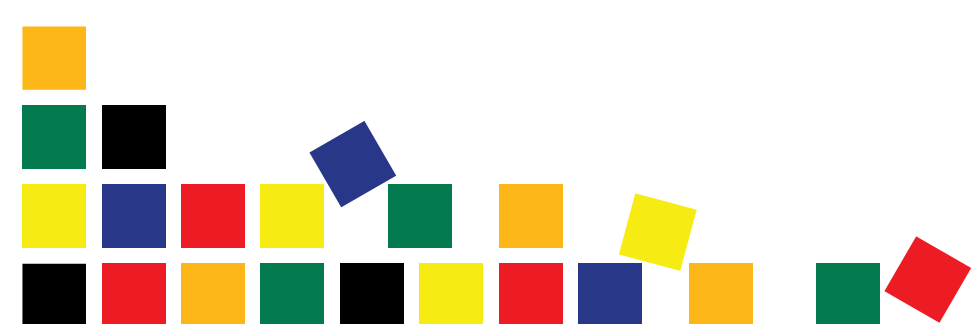
- “Workshop Language” / Technical Precision
- Context-reduced (textbooks, manuals)
- Takes longer (5-7 years)
- Example: ”Install the valve on the intake pipe”

**Conclusion:** Your students are often *fluent* in BICS, but *struggle* with CALP.  
Our goal is to teach CALP

# Characteristics of Technical Language

What makes Technical Language special?

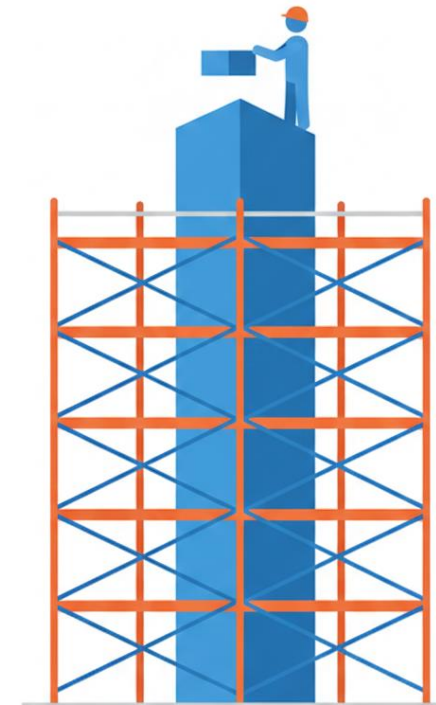
1. **Precision:** One Word = one specific meaning  
(e.g., *nut is not a food, but a fastener*)
2. **Economy:** Short, concise sentences. No “fluff”
3. **Anonymization (Passiv Voice):** Focus on the action, not the person  
(e.g., “*The valve is opened*” vs. “*I open the valve*”)
4. **Nominalization:** Turning verbs into nouns (“*Measurement*” instead of “*Measuring*”)



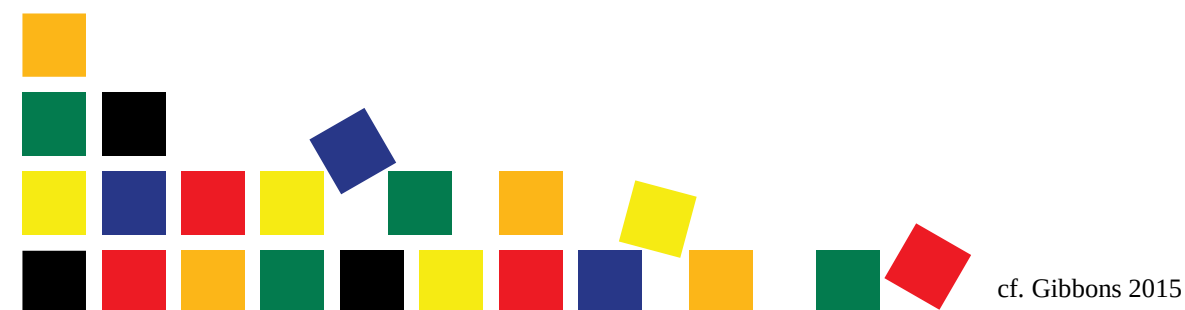
# The Methodology - Scaffolding

How do we teach Technical Language?

- **Definition:** Providing temporary **support structures** to help students reach a higher level of competence
- **The Principle:** "High Challenge, High Support"
- **Examples of Scaffolds**
  - Word Lists (Technical Terms)
  - Sentence Starters ("First, you have to...")
  - Visuals & Diagrams
  - .....



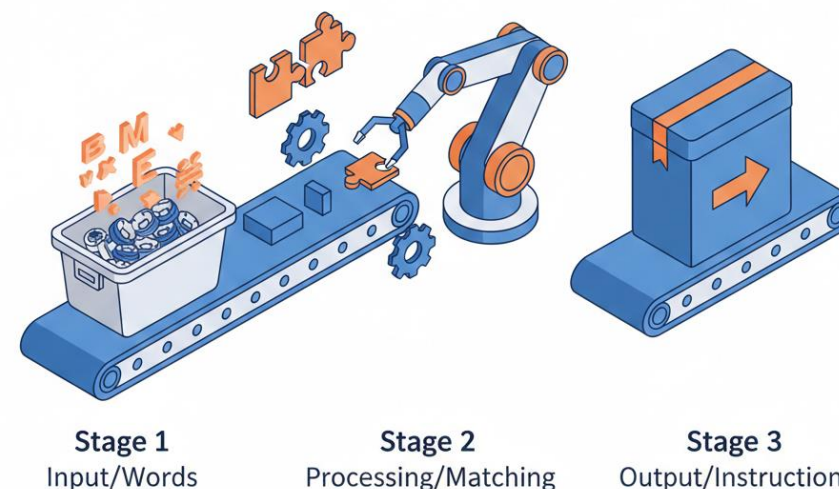
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# The Workbook Approach (Sequencing)

## The Logic of the Workbook

- **Step 1: Input (Reception)**  
Identify verbs in a text (Make them notice)
- **Step 2: Processing**  
Match verbs with objects (Build Collocations)
- **Step 3: Output (Production)**  
Write instructions using sentence Starters



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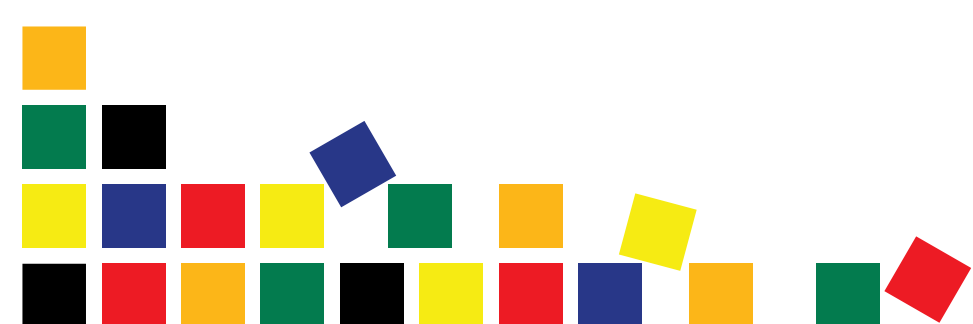
# Your Role Today

## Workshop Mode

We will switch perspectives

- 1. Simulation:** You act as students. Try the exercises and feel the “Scaffolding”
- 2. Reflection:** You act as instructors. Discuss: Does this work for my trade? How can I adapt it?

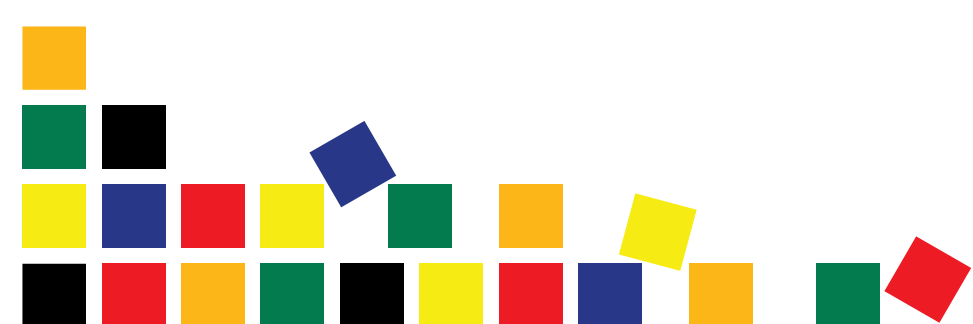
Let's start with the first exercise



# Task A: Identifying Key Technical Verbs

## Instructor's Guide: Input before Output

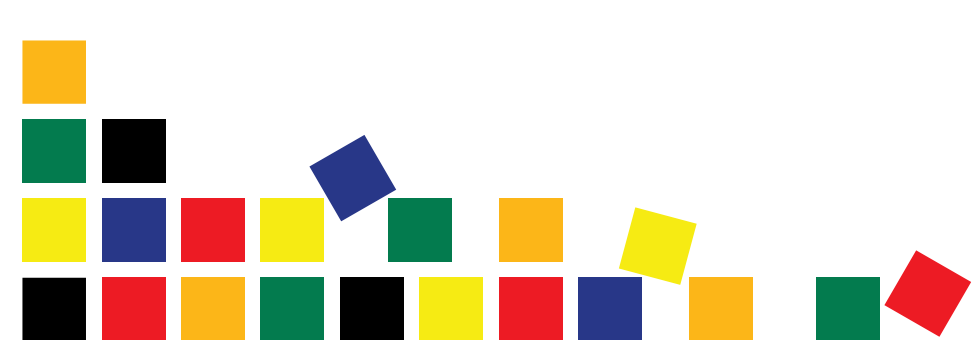
- **The Challenge:** Students often struggle to write technical reports for example because they lack the specific vocabulary in context. They might know the word "valve", but not how it behaves in a sentence.
- **The Method** (*Sequencing*): This exercise focuses strictly on reception. We don't ask students to write (or speak) **yet**. We ask them first to identify and underline.
- **The Goal:** To build “Language Awareness” and notice how verbs function in technical sentences.
- **The Theory:** Learning to move from Receptive (*Reading/Listening*) to Productive (*Writing/Speaking*)



# Task A: Spotting Technical Actions

## Discussion and Reflection

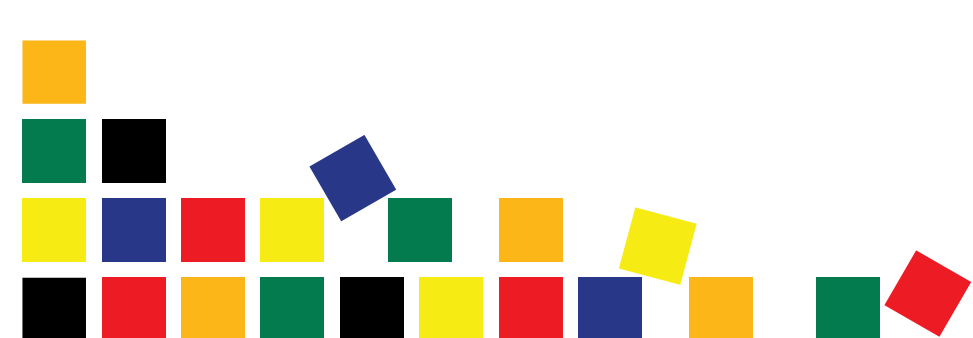
- **Why start with verbs?**
- **Reflect on your own classes:** Do your students sometimes use everyday verbs (e.g., "make" or "do") instead of precise technical verbs?
- **Application:** How could this spot exercise (identifying words before writing) help them overcome this habit?



# Task B: Building Technical Collocations

## Instructor's Guide: From Words to Functional Blocks

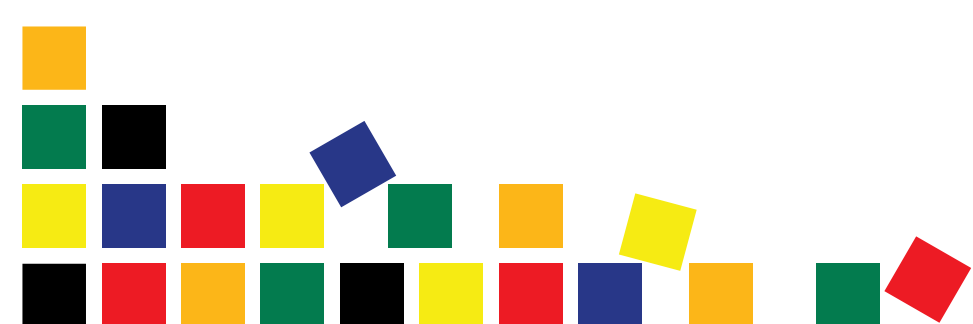
- **The Concept:** Technical language relies on fixed combinations. **Example:** We don't say "make a bolt tight", we say "tighten a bolt". These pairs are called *Collocations*.
- **The Method**
  - **Re-Cycling:** We intentionally reuse some of the words from Task A in a controlled matching exercise. Multiple encounters help to store words in the long-term memory
  - **Transfer:** Once the pattern (Verb + Object) is understood, students apply it to their own specific trade.



# Task B: Building Technical Collocations

## Discussion and Reflection

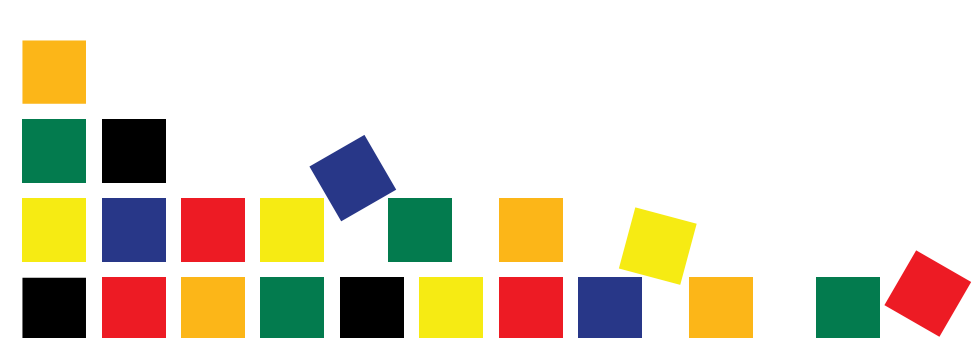
- **Share your results:** Which specific collocations (verb-object combinations) did you create for your TVET field in the second part?
- **Reflect on your learners:** How does learning these fixed combinations as a single unit help your students to remember technical vocabulary more effectively?



# Task C: Writing Professional Instructions

## Instructor's Guide: Overcoming the “Blank Page”

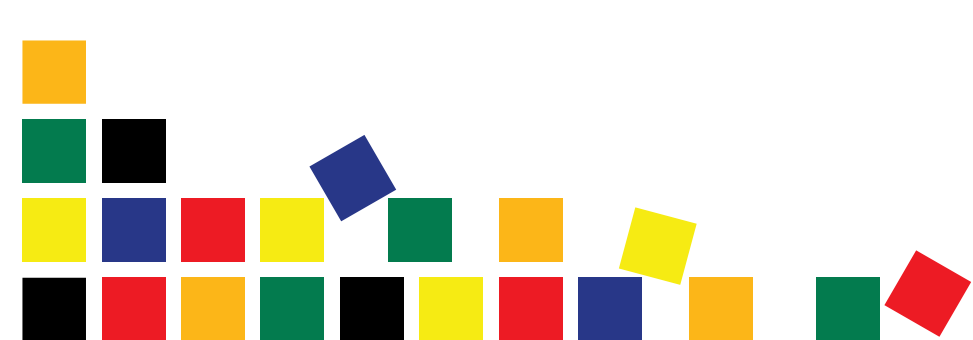
- **The Challenge** („*Horror Vacui* “): Moving from matching words to write full sentences is the hardest step. Many students experience the fear of the empty page because they lack the grammatical structure to start
- **The Method** (*Micro Scaffolding*): We provide “*Sentence Starters*”
- **The Theory** (*Reduce Cognitive Load*): This technique lowers the cognitive load. The student can focus entirely on the technical content (the verb + object) because the grammar is already done



# Task C: Writing Professional Instructions

## Discussion and Reflection

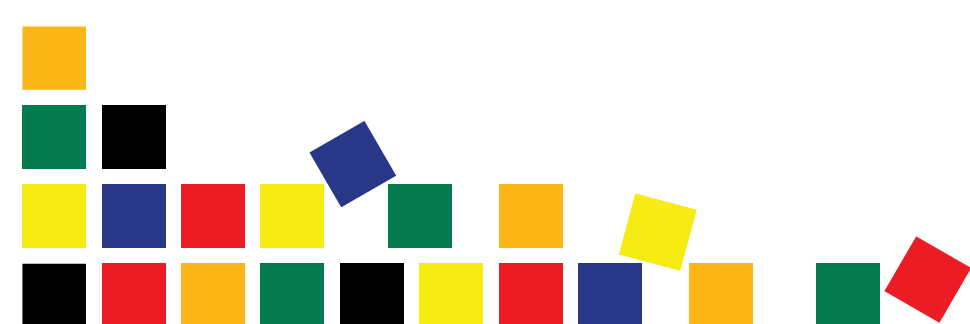
- **Share your results:** Let's hear some of your instructions. How did the combination of *Task B* and the *Sentence Starters* make the writing process easier for you?
- **Reflect on the method:** How can you use this specific step-by-step approach to support your students



# Task D: The Logic of Technical Definitions

## Instructor's Guide: From Actions to Systems

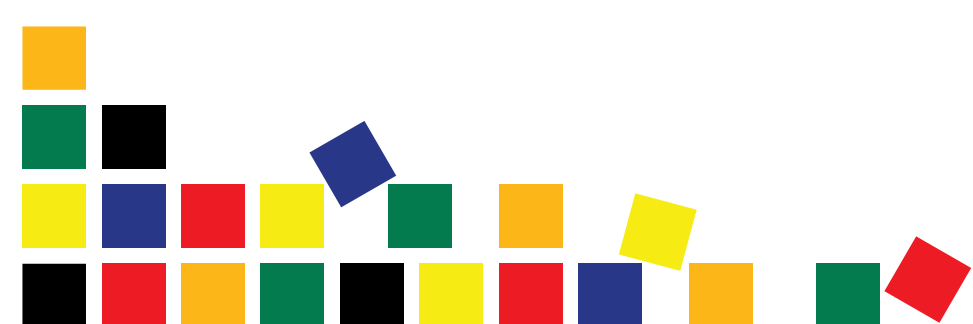
- **The Challenge:** Vague description like '*It is a thing that...*' leads to misunderstandings. Establishing a precise and shared understanding of key terms is a major challenge in engineering education.
- **The Method:** Move beyond simple translation and explore a strategy to decode complex technical terms and logic-based definitions using the “Aristotelian Definition”
- **The Goal:** To differentiate between a complex engineering definition and a learner-friendly explanation to support students with different language proficiency levels.



# Task D: The Logic of Technical Definitions

## The Method: Aristotelian Definition

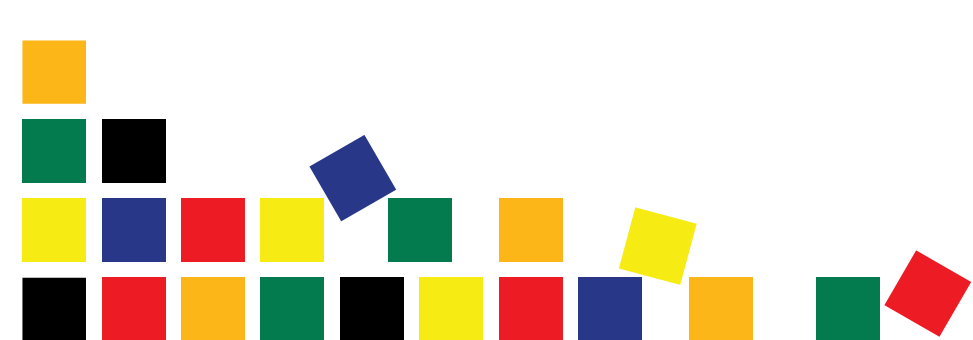
- Professional definitions follow a strict logical structure (Class + Characteristics), known as *Aristotelian Definition*
- **The Formula:** Term = **Class** (what kind of object is it?) + Specific **Characteristics** (what makes it different/unique?)
- **Example:**
  - Weak Definition (BICS): A resistor is something to stop electricity
  - Professional Definition (CALP): A resistor is an electrical component {**Class**} that limits the flow of current in a circuit {**Characteristics**}



# Task D: The Logic of Technical Definitions

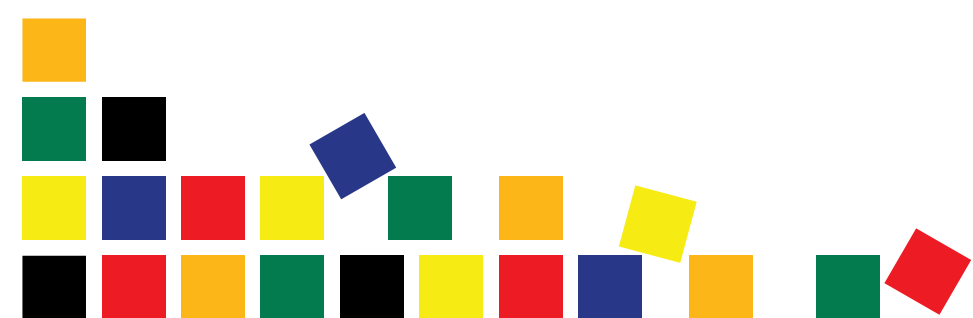
## Discussion and Reflection

- **Share your results:** Did the Class + Characteristic Formula help to structure your thoughts?
- **Reflect on your learners:** How can you use this formula to construct clear and learner-friendly explanations for your students?
- **Application:** How could developing a “glossary of key terms” for your specific vocational field ensure consistent terminology in your teaching?



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# CONTACT DETAILS

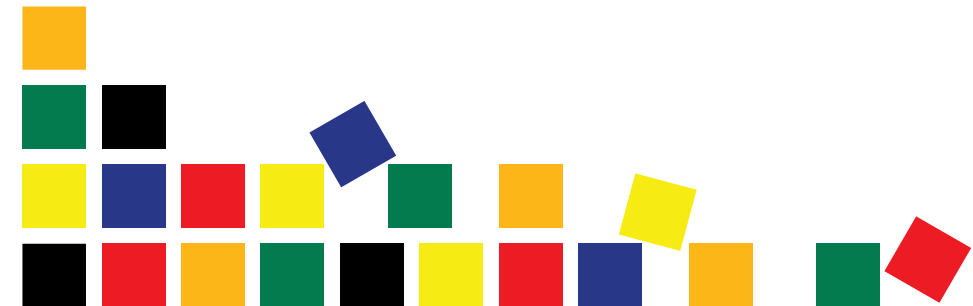
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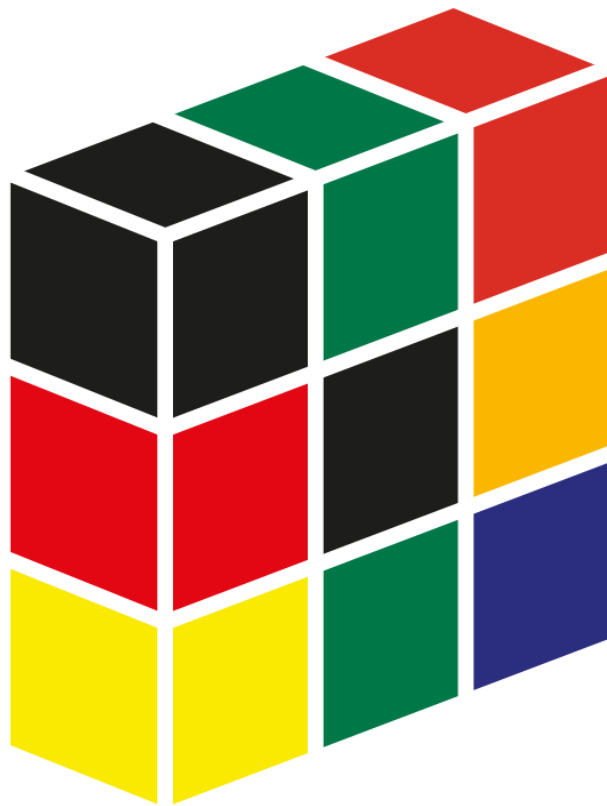
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Thank  
You





# TRAINME3

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