Elearning with edtech.

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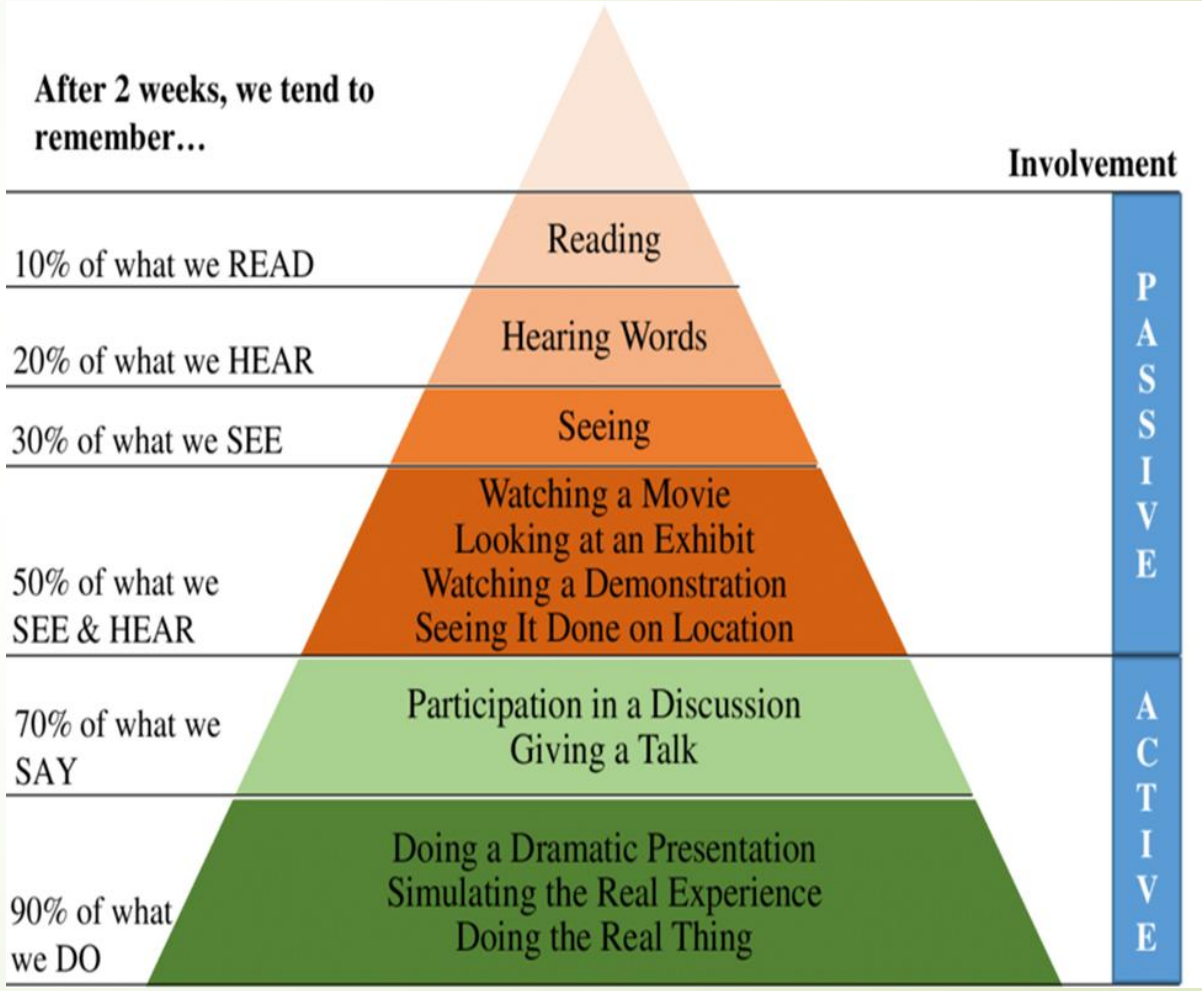
What do we know about learning?

- Active learning is better
- The “reproductive” model of teaching is no longer valid.
- If we want students to learn, they have to "do something": solve a problem, raise doubts, experiment, debate, apply, reflect, explain what happened…

This is demonstrated by the so-called "cone of learning“



What do we know about learning?

- **We learn when we are excited by something** that causes us surprise, doubt, joy… when we overcome an activity and achieve success, when we are saddened by our failures, when we get angry for not reaching our goals…

  → Shocking content?

- The **benefit of conducting a formative assessment** → continuous feedback.

- **Quality education requires more than just hardware, software, and content** → it demands significant dedication from teachers.

  Teachers need:

  - ❑ To combine technological and pedagogical skills.
  - ❑ To integrate multiple teaching methods
  - ❑ To motivate their students
  - ❑ To monitor learning progress…

- **Replicating a face-to-face class** for a remote audience **is ineffective**.

- **Simply "transferring" the same in-person format** to an online **format is ineffective**, as the planning, methods, and timing are not the same.

Teaching methodology

- It should be based on the design of learning tasks and continuous assessment
- It should be student-centered and,
- In the case of online teaching, it must promote self-directed learning and self-organization.

To My subject:

- **Do I have a clear understanding of what I want my students to learn?**
- **Is there consistency between the learning outcomes of my subject and the activities I assign to my students?**
- **Is there consistency between what I ask my students in exams and the activities they complete throughout the course?**
- **Do I know what aspects I need to change?**

Pedagogical Model of Online Training

- **"Negative" factors of online training is the dropout rate**, which is higher than in face-to-face teaching.

  ➡ It is important to anticipate and avoid certain situations that may lead students to fail to successfully complete the training activity.

- **Online training programs must be carefully planned** and based on the following pedagogical principles:
  - **Student-centered** learning.
  - **Collaborative learning** (it is important to design learning activities that allow students to reflect, discuss—forums—and reach group conclusions).
  - **Stimulating and maintaining student motivation** through different strategies (building on prior knowledge, quality of the developed materials, providing rapid feedback, designing meaningful activities, providing a learning guide, etc.).
  - **A practical approach** (a balance between activities aimed at reading and consulting documentation and applied practical work activities).
  - **Providing direct content** free from superfluous or unnecessary information.
  - **Continuous assessment** throughout the entire process through learning activities themselves or through the design of specific assessment tests.

Ten strategies that research shows to be the most effective in the work of teachers (Shaun Killian):

1. **Be clear** about **what you want your students to learn**.
2. **Tell your students what they need to know** and show them what they need to be able to do
3. **Use questions to check** that your students have understood.
4. **Summarize** new information graphically
5. Provide **opportunities for students to practice** in a variety of ways
6. Provide **feedback** to your students so that they can improve their learning
7. Give each student **time to succeed**
8. Enables students to **work together** productively
9. **Teaches strategies** alongside content
10. Encourages **metacognition**

Instructor functions:

PLANNING THE TRAINING ACTIVITY

- Defining **learning outcomes.**

  Is a statement describing what the student must be able to do upon completion. It must be **observable**, **measurable**, **concise**, and **aligned with competencies**. Bloom's Taxonomy should guide complexity.

- Developing/selecting educational **materials.**
- Selecting **teaching methodology**.
- Designing **learning and assessment activities.**

Previously_ Materials to develop:

- **Learning Guide:** Designed **to guide the student through the course**. Its purpose is to help learners understand what they will study, why it matters, and how they can progress effectively. It will include:
  - **Course description**, offering a clear overview of what the subject is about.
  - **Learning outcomes**, so students know what they will be able to do by the end of the course.
  - **Course structure**, explaining the modules and topics, and suggesting a learning sequence that supports gradual, meaningful understanding.
  - **Assessment criteria**, so students know how their learning will be evaluated and what is expected of them.

First step…

You need to explain your students why they are taking the course, what they will achieve, why it is important, how it will be useful to them, etc.

"Sell your subject and methodology".

Ask yourself:

a) What is my subject about and why is it important?

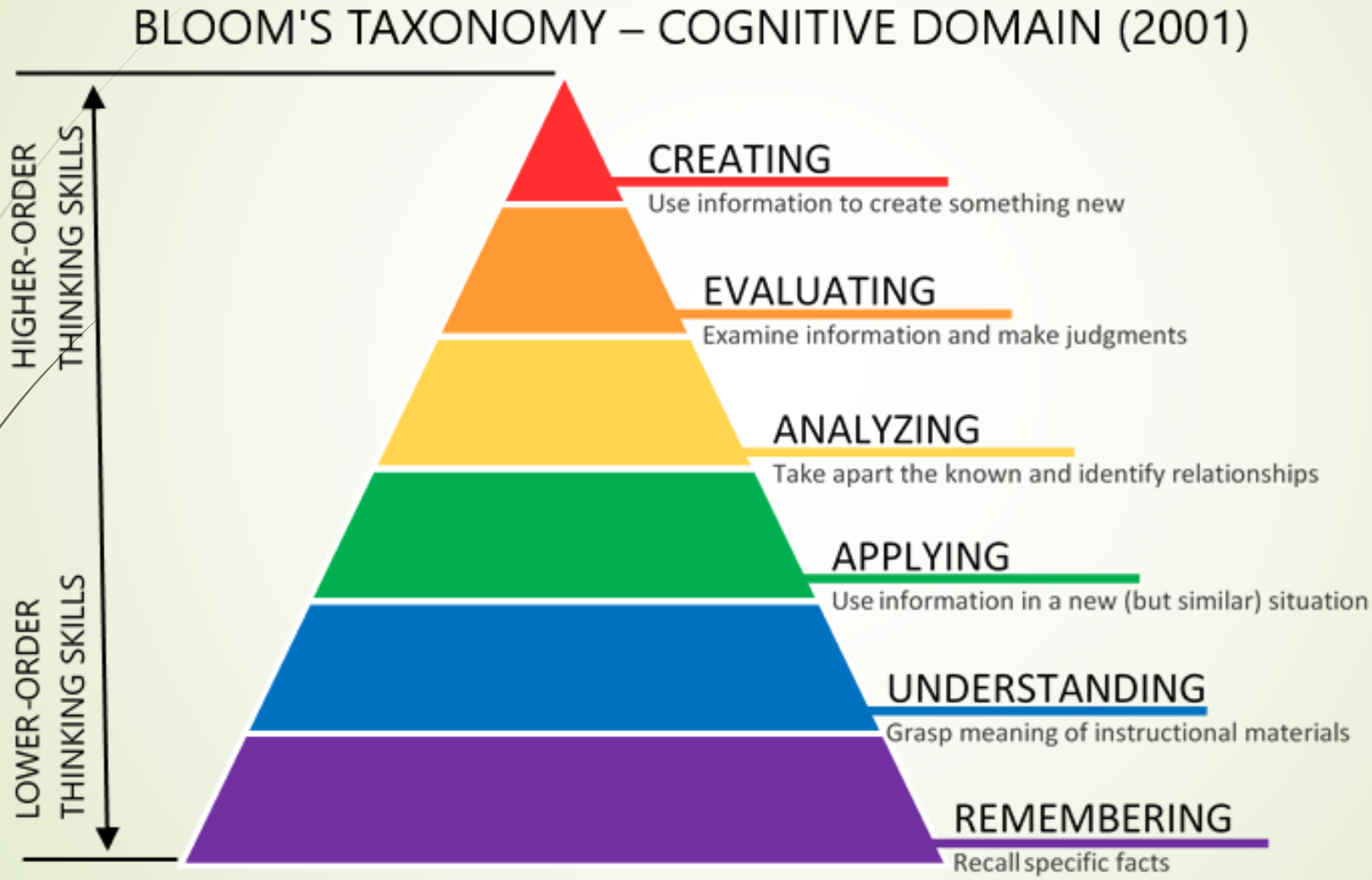
b) How will it help students professionally?

c) Why are we going to use this methodology?:

- What am I going to do as a teacher?
- What do I expect you to do as a student?

ACTIVITY 1

PHASE 1: LEARNING OUTCOMES



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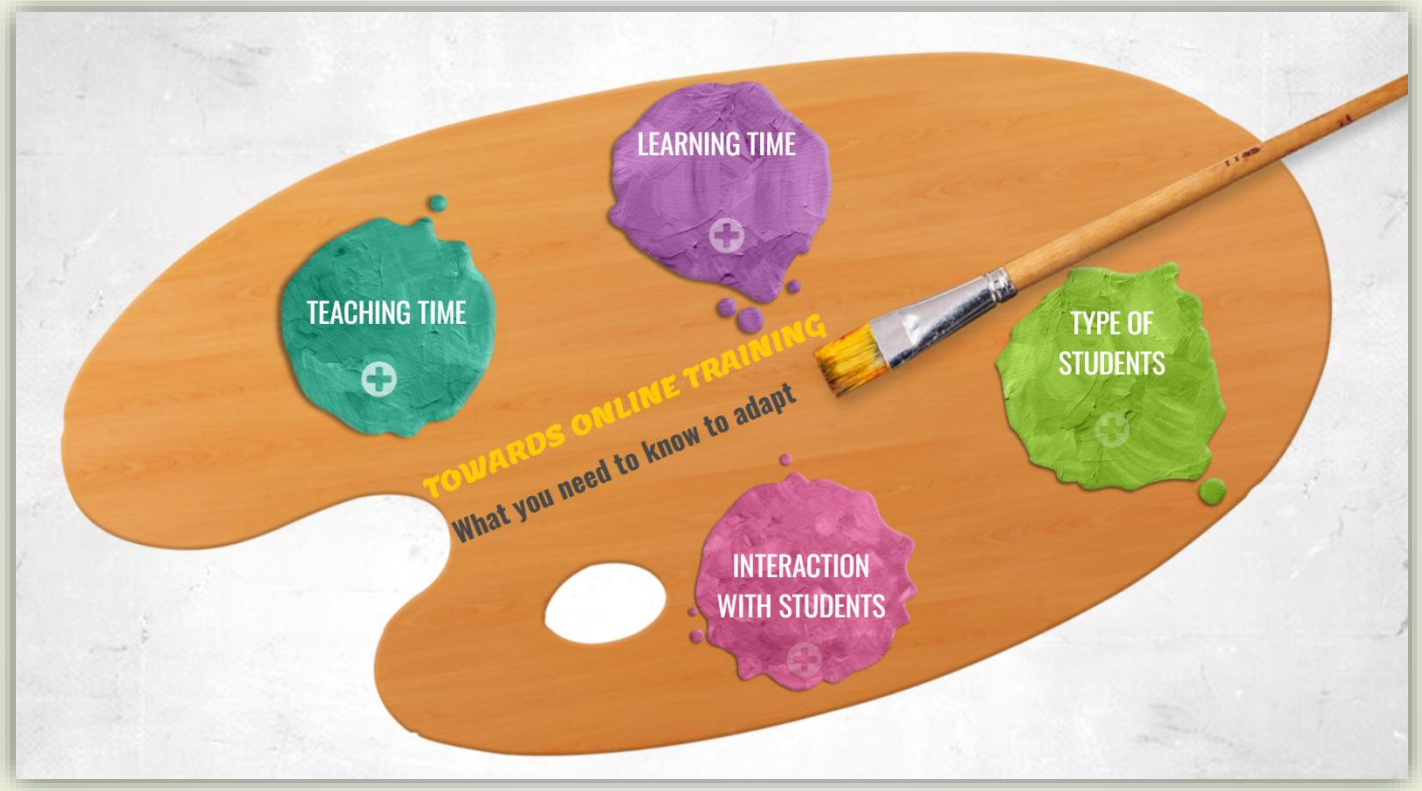
Taxonomies of Learning: Bloom's Taxonomy

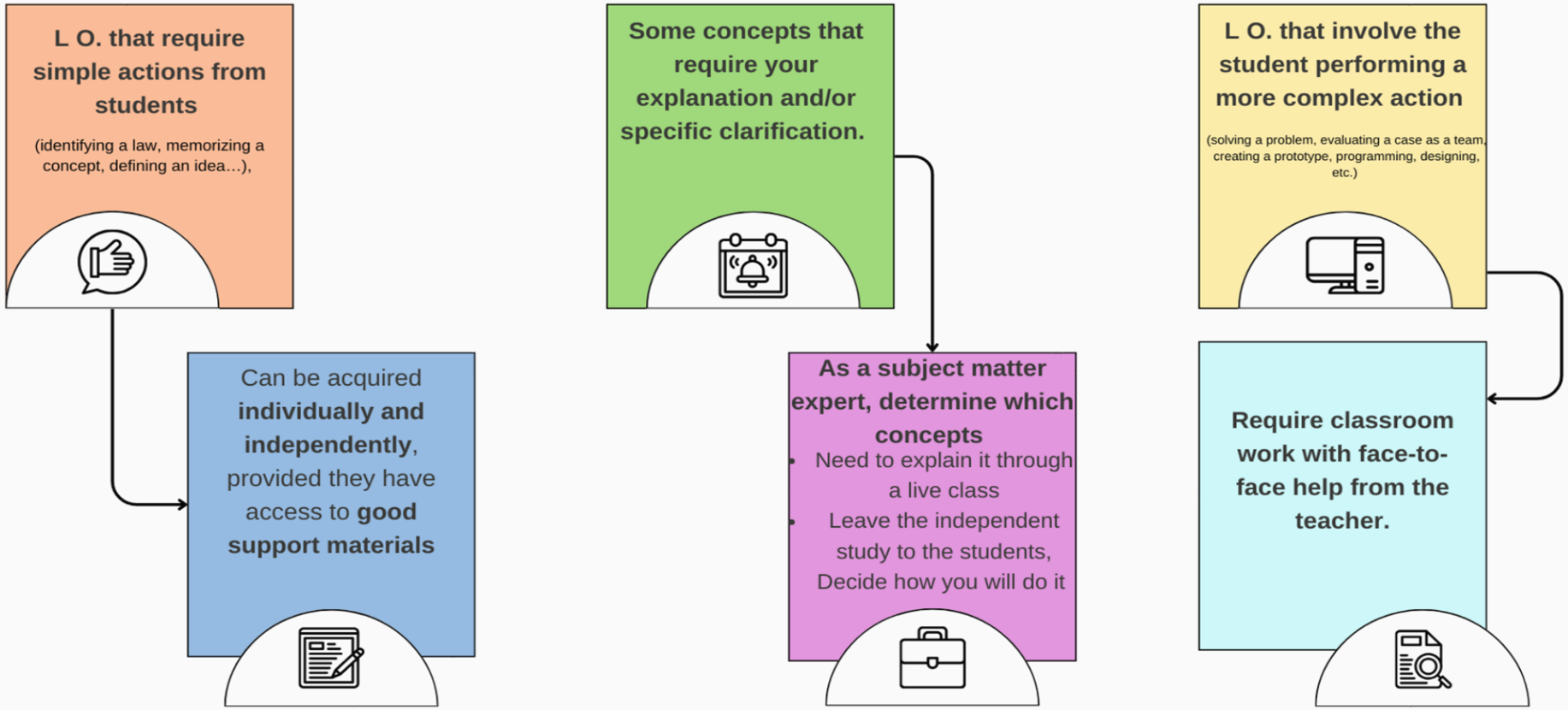
Level	Characteristic	Verbs for assignments
Remember	Exhibit memory of previously learned material by recalling facts, concepts, and answers	Cite Define Find Highlight Label List Locate Name Recall Recognize Reproduce Retrieve Search
Understand	Demonstrate an understanding of the facts by explaining ideas or concepts	Annotate Convert Demonstrate Describe Discuss Explain Extend Identify Interpret Outline Paraphrase Predict Research Review Summarize
Apply	Use existing knowledge to solve new problems or apply acquired knowledge in new situations	Apply Articulate Calculate Change Choose Complete Dramatize Execute Illustrate Interpret Operate Practice Relate Share Show Teach Use
Analyze	Examine and break information into parts to explore relationships	Analyze Categorize Classify Compare Conclude Contrast Correlate Deconstruct Deduce Differentiate Distinguish Edit Investigate Reverse engineer Select Separate Solve
Evaluate	Defend opinions and decisions; justify a course of action by making judgements about information	Argue Assess Collaborate Criticize Critique Debate Decide Defend Estimate Evaluate Hypothesize Judge Justify Measure Moderate Predict Recommend Reflect Test Verify
Create	Generate new ideas and products or compile information in a new way	Assemble Compile Compose Construct Create Design Develop Draft Formulate Invent Model Plan Produce Propose Publish Repurpose Upload Write

From Bloom taxonomy… to my online course



You need to know:

We can start by classifying the learning outcomes of our subject according to their complexity, and once classified, we will take into account that...:



You need distribute the different learning outcomes of your subject throughout its duration, to clearly determine how many class sessions you will need for each one (take into account the learning times in online modality).

ACTIVITY 2

PHASE 2: Educational materials

Materials development

Structure:

Design a balanced experience

Ensure that the workload and activities align realistically with the course credits/hours.

Provide SUPPLEMENTARY MATERIALS that the student can use when needed

Writing and Presentation:

Clear and direct language (2nd person or 1rst plural person: sense of guidance and shared learning)

Images, diagrams, and visual aids to support comprehension and avoid overly long text blocks

Videos, media recordings, screencasts, and other multimedia elements to diversify the learning experience and keep students engaged

Reinforcement questions, self-assessment activities, and short checks for understanding to help students monitor their progress.

Educational materials:

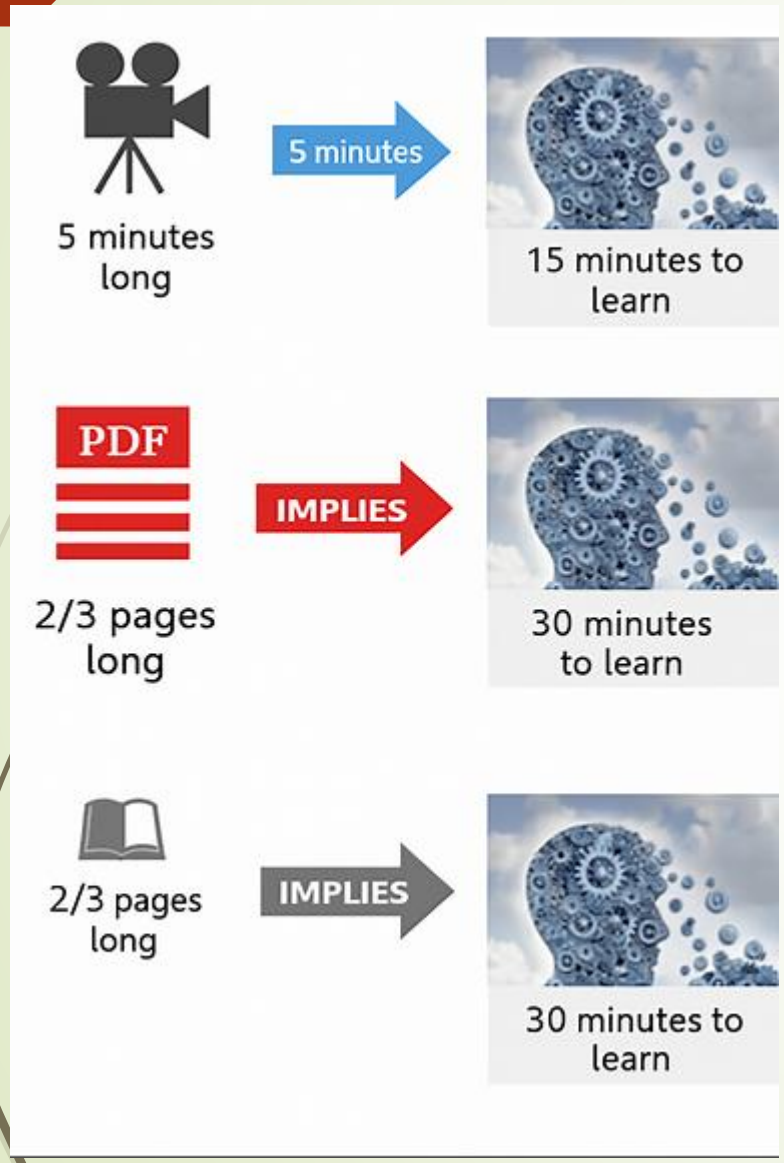
"Materials to develop the teaching-learning process and are for student use"

- Content need to:
  - Respond to and be useful for learning specific content and achieving specific results.
    - Does the material I am developing provide information and/or propose activities that help to understand the concept?
  - Provide elements that facilitate the student's learning process.
    - Does the material help the student to formulate doubts and questions? Does it foster an intellectually active attitude on the part of the student?

Quality materials:

- Capture student's attention and motivate them to study.
- Keep student interested throughout the content.
- Promote understanding and retention of the content.
- Facilitate the transfer of learning.

Time setting



- **Recommendation**: Each topic will last one week and require 8 hours of student work.
- **Scheduling**: guidelines regarding the student's workload for learning through an online platform.
- To **ensure that students read and view the learning materials**, it is necessary to associate them with a learning activity: participation in forums, questions in contents, assignments…

Course Content:

PEDAGOGICAL RECOMMENDATIONS:

- Interactive multimedia content.
- Hyperlinked structure.
- Integrated activities.
- Logical organization.

TECHNICAL RECOMMENDATIONS:

- Serif fonts.
- Line spacing 1.5.
- Left-aligned text.
- Limited use of bold and italics.
- Avoid underlining and excessive capitalisation.


1
2
3
4
5
Steps to create content
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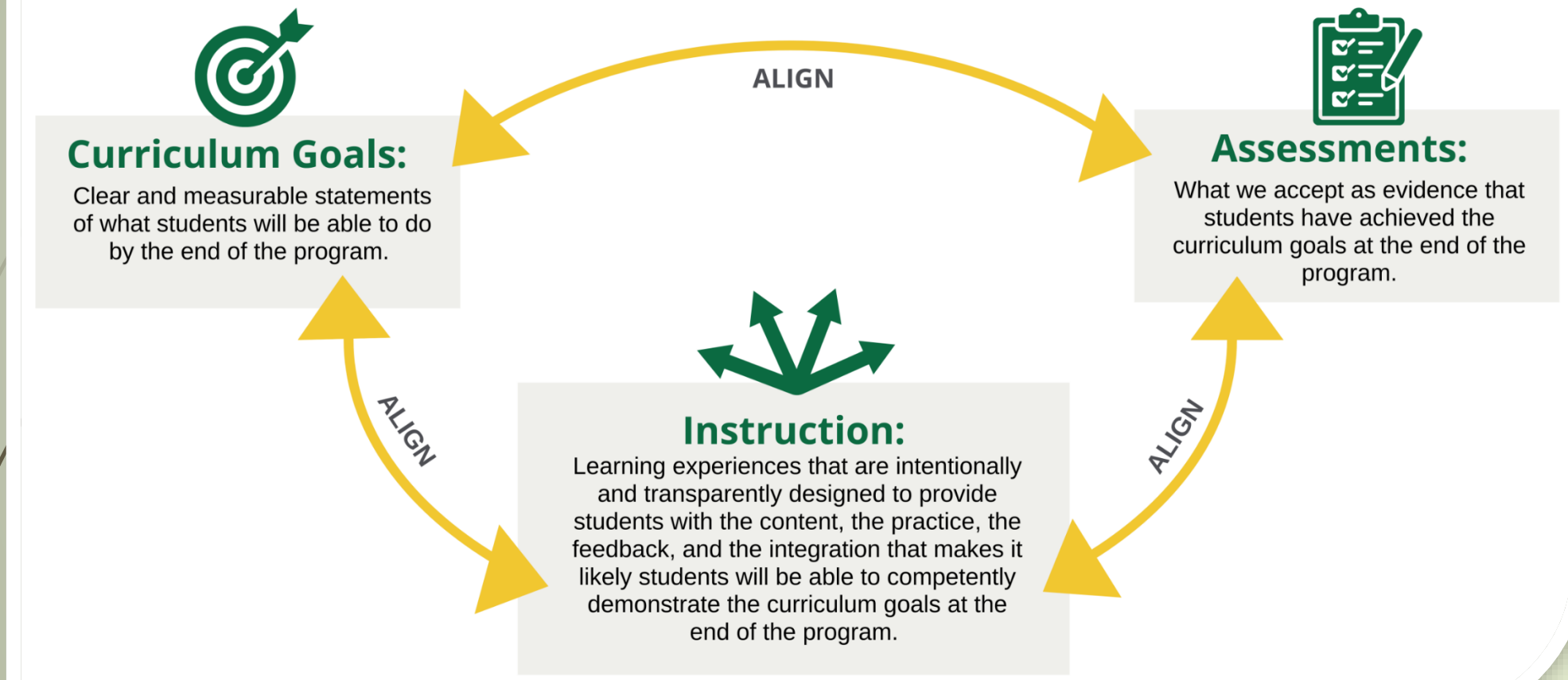
PHASE 3: LEARNING AND ASSESSMENT ACTIVITIES

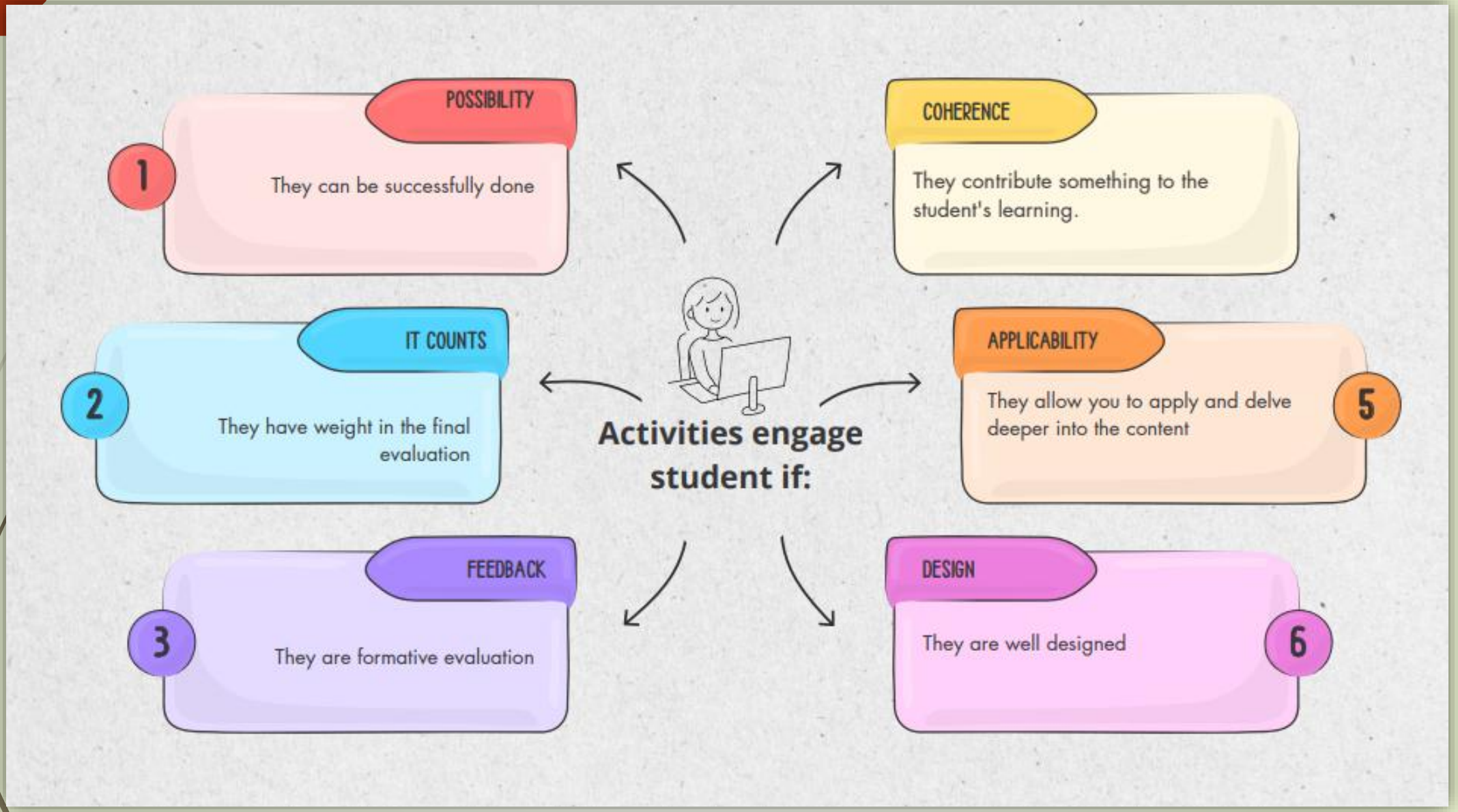
CURRICULAR ALIGNMENT



Activities should:

- Progress in complexity.
- Be practical.
- Encourage collaboration.
- Balance individual and group work.

Assessment must be qualitative and formative, providing timely feedback and opportunities for resubmission.


POSSIBILITY
1
They can be successfully done
COHERENCE
They contribute something to the student's learning.
IT COUNTS
2
They have weight in the final evaluation
Activities engage student if:
APPLICABILITY
They allow you to apply and delve deeper into the content
5
FEEDBACK
3
They are formative evaluation
DESIGN
They are well designed
6

Gamification tool:

Integrate game-like elements (points, badges, leaderboards, challenges) into non-game contexts like education, corporate training, or marketing to boost engagement, motivation, and learning be practical.

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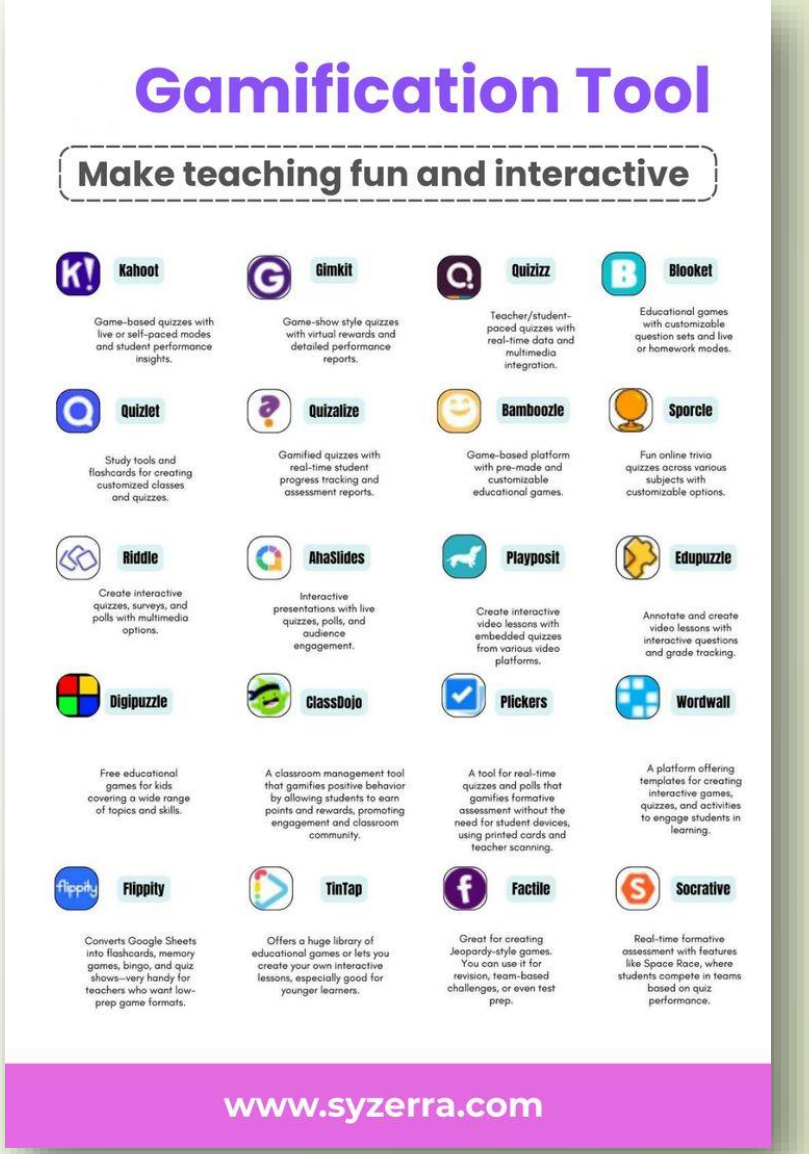

PHASE 3: Course Delivery

Instructions During the Course Delivery

- On the **first day** of the course, the instructor will post a **welcome announcement** (sending a notification via email) containing:

  a) Welcome to the course.

  b) Instructor's name and contact details.

  c) Course operation/schedule: how to contact the instructor for questions or issues; how the course is structured (number of units, activities to be completed by students, etc.).

  d) Tutorial sessions: when they will take place and via which medium (chat, forum, email, videoconference, etc.).

NOTE: We will send the student the learning guide, which contains more detailed information.

Instructions During the Course Delivery

- **Correct the activities** submitted by students and enter the grade on the platform: The instructor commits to grading tasks/exams **and providing feedback** to students within a maximum of 1 week.
- Track students' progress through **tutoring sessions**, grading of learning activities, course participation (forum, chat, etc.), and the LMS statistics tool.

NOTE: In online training, it is recommended to hold, at a minimum, one 30-minute to 1-hour tutoring session for every 10 hours of the course.

- **Resolve questions** related to course operations as well as content-related issues (48–72 hours).
- **Motivate students** through positive reinforcement.
- Use a **non-authoritarian communication style**.
- **Engage the course** by posting announcements, news relevant to the course content, follow-up emails, and motivation for students.

Instructions After Course Delivery

Once the course is completed, it is time to:

- **Evaluate the learning achieved** by each student.
- **Review the overall course operation**: what worked and what didn't, most and least viewed resources, most and least completed activities, etc. (You can use the STATISTICS tool to help with this review).