Ministry of Education - Guyana

In collaboration with the OAS and ProFuturo FOUNDATION

2020. CARICOM. ICT Route: Advance Level

MODULE 3 – DESIGN OF EVALUATION RUBRICS

Training Manual for Teachers of Riverine and Hinterland Regions



MINISTRY OF EDUCATION
ELIMINATING LITERACY, MODERNIZING EDUCATION, STRENGTHENING TOLERANCE

ProFuturo
A PROGRAMME OF: Telefónica FOUNDATION "la Caixa" Foundation

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Message form the Minister of Education



Dear Teachers

Across the world, the COVID 19 pandemic (Corona Virus) continues to cause undesirable disruption to the global education systems. Guyana, as you know, was not spared. As such, we implore you to keep engaging our nation's learners and we applaud those of you who have tried and continue to try. We heard your concerns when you told us you were uncertain about how to teach using different means, that you lacked confidence, and that you felt you were not equipped. This is our first response in partnership with the **OAS** and **ProFuturo Foundation**. This training will give you the much-needed knowledge and expose you to the tools you need to deliver education differently by being innovative and by using easily available technology.

We are aware that the cost of data is of great concern to you and we have remedied that by partnering with GTT and Digicel to zero rate the ProFuturo platform domain. This means that when anyone accesses the training platform, data will not be consumed. If teachers have neither devices nor connectivity, we will arrange a suitable location and if teachers, as those in the hinterland and riverine areas, cannot access either, even with our help, we have arranged for part of the program to be done through these printed modules because we know that it is only a matter of time before you are able to access connectivity and devices. We will never leave you behind.

I encourage you to take this training offer with vigour so that you can be better prepared to do what you love: influence by teaching the next generations.

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KEY TERMS

Please familiarize with the following terms and meaning.

1. **Analytical assessment matrix**

   Evaluates the complete process or product.

2. **Comprehensive assessment matrix**

   Evaluates the entire process carried out by the student. Is used when the important thing is the end product of the process and not the process itself.

3. **Evaluation of competences**

   Competency-based evaluation aims to determine the level of development achieved according to the ability to select and apply a solution to learning in different contexts.

4. **Evaluation rubrics or assessment matrix**

   Evaluation tool that enables the teacher to find out how the student is learning. It is composed of a series of specific and fundamental criteria to assess learning, knowledge and/or competencies achieved by the student when performing a specific task.

5. **Learning matrix for the digital age (Starkey, 2011)**

   Learning by doing, thinking about connections, thinking about concepts, critiquing and evaluating, creating and sharing knowledge. The matrix combines observation categories in the use of ICTs with aspects of learning.

Unit 1

Design of evaluation rubrics



Starting point

The methodologies and forms of education have changed, and the evaluation process has to change with them. They have to evolve and **adapt** to the new tendencies, particularly the **use of ICT** in education.





Objectives

- To know and understand **competence-based evaluation.**
- To analyse the evaluation **matrix** created by **Louise Starkey** and the six learning aspects typical in the **digital society.**
- To understand and learn about the **use of rubrics,** their advantages and their preparation.
- To **design evaluation rubrics** for an activity.



Contents outline

Evaluation competencies

Louise Starkey Matrix

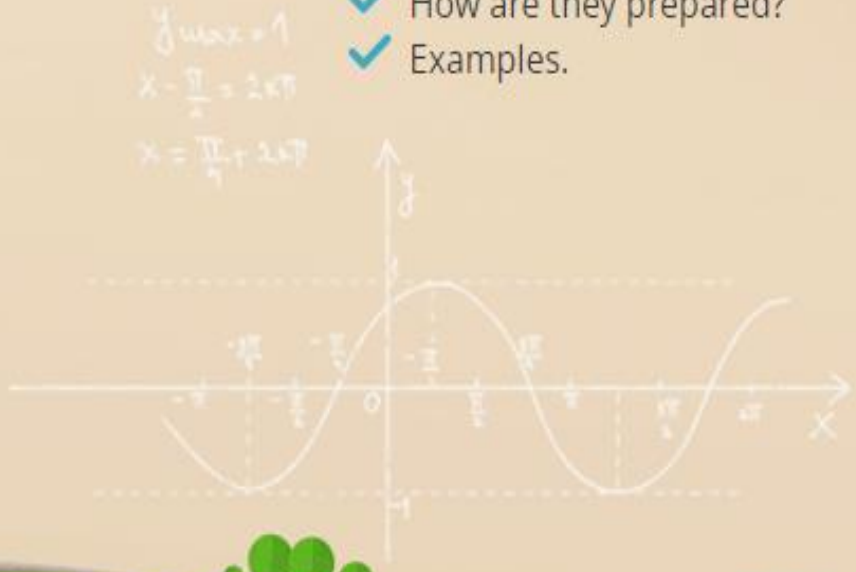
- Six aspects of learning typical of the digital society.

Evaluation rubrics

- What are they?
- What are they for?

Advantages:

- Types.
- How are they prepared?
- Examples.



Unit 2

Evaluation



What is it?

The evaluation should be understood as an **ongoing and personalised process,** to regulate the teaching-learning process and **identify** the student's difficulties so that we can help them **overcome them.**

Summative evaluation



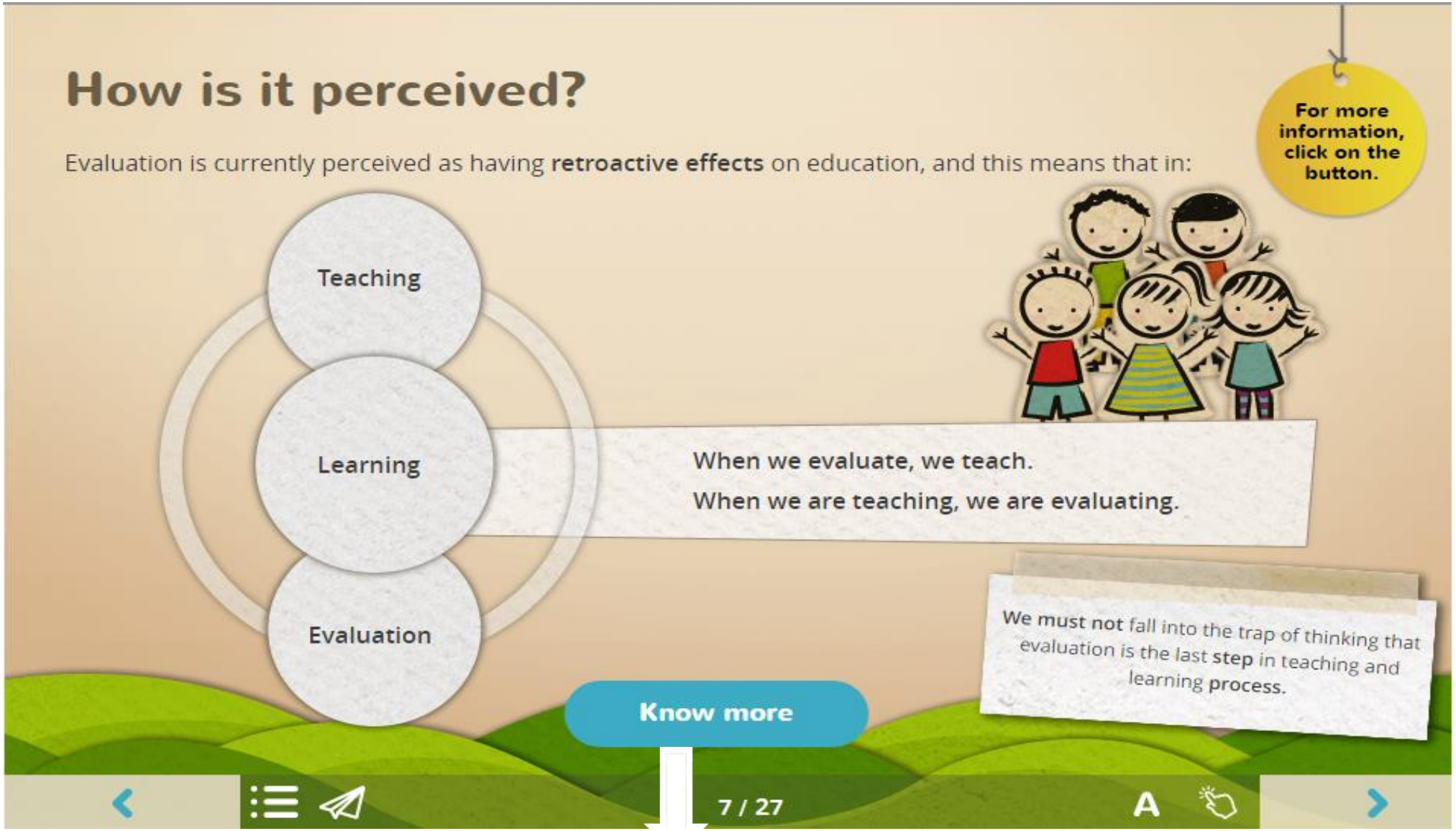
have evolved into

Diagnostic evaluation

Formative evaluation



The evaluation enables us to **assess the changes and results** that occur in students as a result of the **teaching-learning** processes.



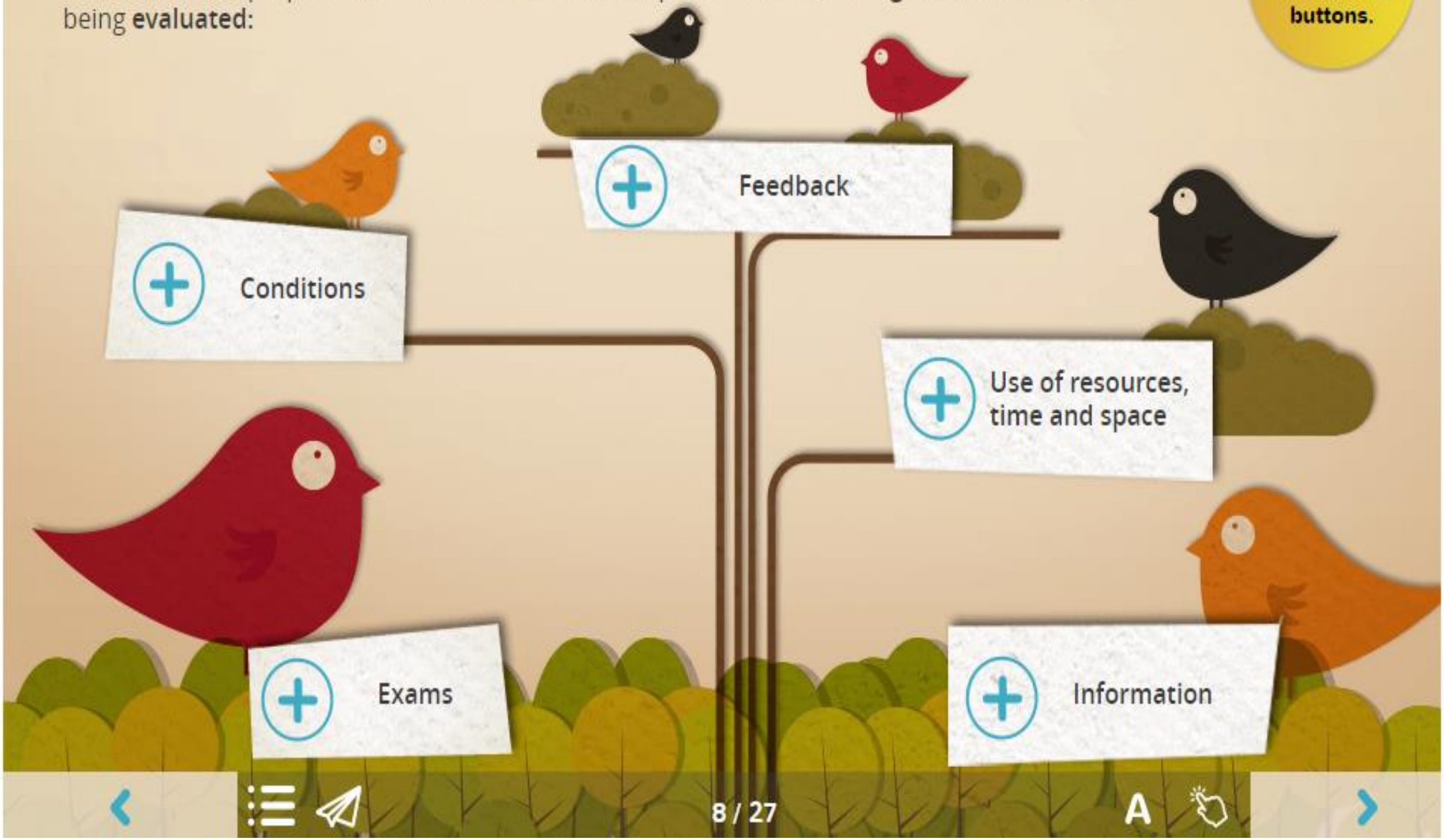
WHAT IS EVALUATION?

Up till now, evaluation was directed toward understanding what happens in the teaching-learning process, in order to improve and ensure quality in the training process.

How to evaluate...

Monereo (2009) proposed a series of **alternatives** to promote **the learning** of students who are being **evaluated**:

For more information, click on the buttons.



CONDITIONS

Limit or encourage certain conditions before or during the test. This means, that we can suggest to the students:

- **To bring their notes** to exams, provided that the notes are used as a support to **resolve the situations or problems** posed, and not as a direct solution.
- **To summarise** the **notes** they bring, making them into a conceptual map, as a limited summary, thereby encouraging **organisational skills, research, analysis and synthesis** of the information.

FEEDBACK

Give feedback to the students on their **results.** This is one of the key points of teaching, an evaluation through which they **learn** from their mistakes. In this way, students **understand the error** and, without a doubt, this is the best strategy for not making the same mistake again.

RESOURCES, TIME AND SPACE

Allow them to be **used** in a **flexible** way. In this case, **tests can be set** to be completed at home, at the library, in the classroom, in another classroom etc. These can be **various types** of tests such as an essay, solve a problem, a portfolio, etc.

INFORMATION

Introduce information into the test itself. We can **add anecdotes** or information within the **exam** itself which **serve as a reminder,** in this way the test itself is also **educational.**

EXAMS

Develop a test **together,** allowing students to put themselves in the role of the teacher, to **select the most important aspects** and be able to **pose** them in the form of **questions.**

Basic evaluation questions

Adapted summary from Moreneo (2009)

For more information, click on the buttons.

Why do we evaluate?

Who evaluates?

Who is evaluated?

What is evaluated?

Where can we evaluate?

When can we evaluate?

How do we evaluate?

So then, what does **evaluating competencies** mean? How is it done? How do you evaluate in a contextualised way?

WHY DO WE EVALUATE?

To learn **how the students learn** and provide them with ideas. Evaluation is not a mere formality to know only what students know, but it also forms a learning tool, essential for them to **learn from their mistakes.**

WHO EVALUATES?

The **teachers**, but also the **students.**

WHO IS EVALUATED?

The **student** (formative evaluation) and **teachers** (instructive evaluation).

WHAT IS EVALUATED?

The **competencies** required to face a real problem in a given context.

WHERE CAN WE EVALUATE?

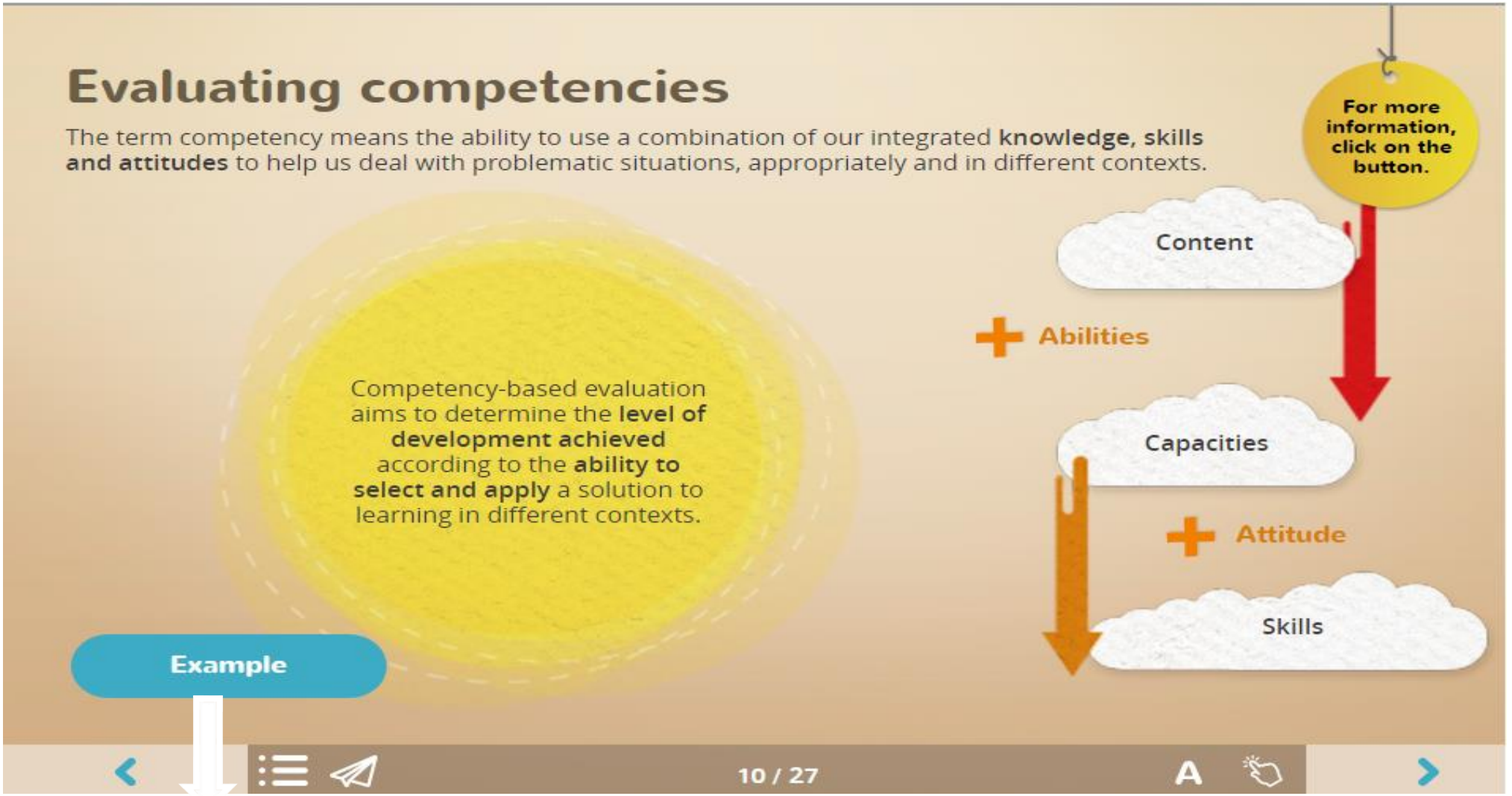
There are various options (at the centre, at home, in the laboratory, the library, field work, etc.).

WHEN CAN WE EVALUATE?

Before, during and after the teaching session.

HOW DO WE EVALUATE?

In a **contextualised** way, **individually** or **in groups**, through problems using authentic conditions.



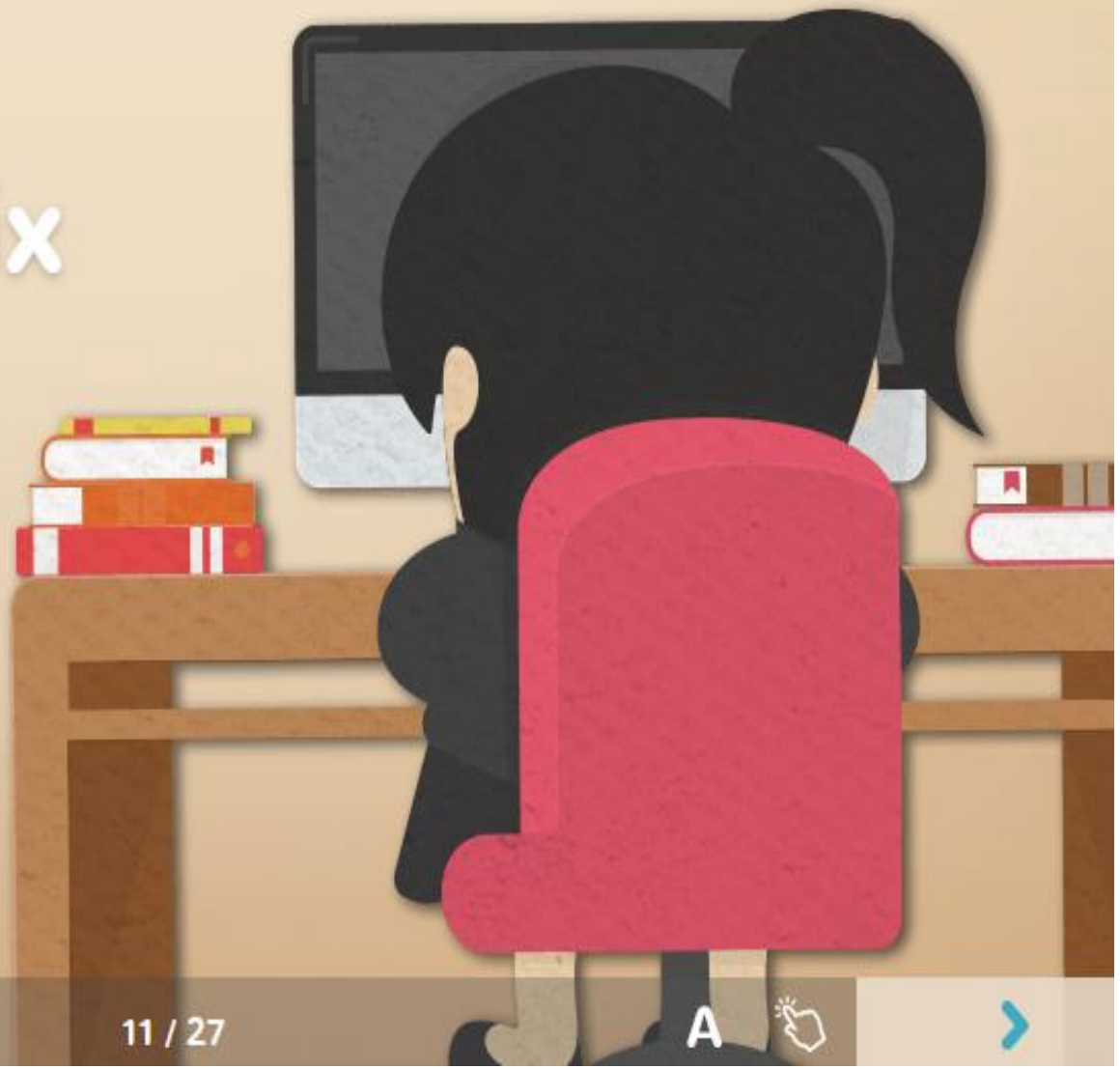
THE COMPETENCIES

To evaluate competencies first of all these competencies have to be taught. Regarding this, Martín Pinos (2012) posed a very clear example: if we teach the times table, we will be able to evaluate knowledge or content. If we teach students to resolve problems in which the student uses a multiplication to find a valid answer, then we can assess their capabilities. And if we teach using real or simulated contexts, which are varied, significant or functional to solve problems using multiplications, that is when we can evaluate competencies.

To evaluate, the evaluation criteria will be taken as reference, which must be understood as guides which mark and orientate the achievement of the objectives and the acquisition of basic competencies.

Unit 3

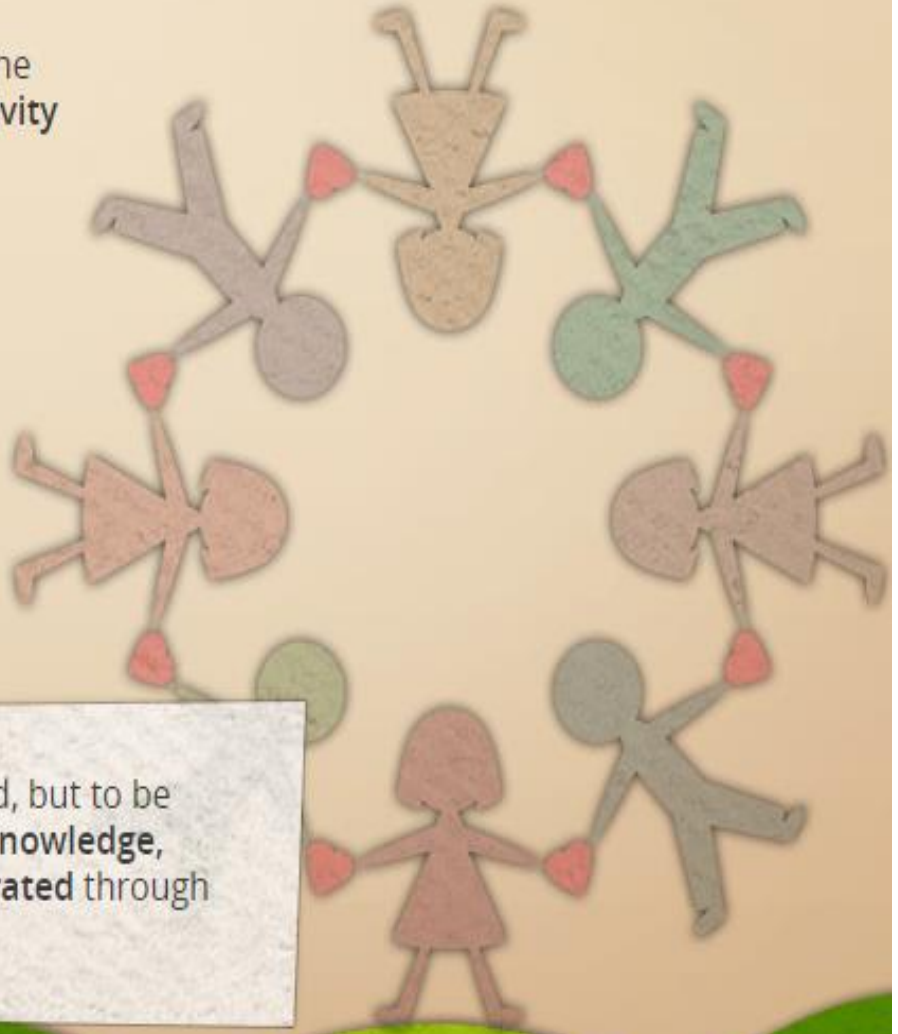
Louise Starkey Matrix



Where does it start?

Louise Starkey proposes a matrix that allows us to analyse both the **initial objectives** as well as the **results obtained** in a **learning activity that integrates ICT.**





Many forms of evaluating learning using ICT have been tried, but to be effective the evaluation must **recognise** the wide range of **knowledge, critical thinking, creativity and connections** that **are generated** through ICTs.

What is needed?

It is necessary to have a **flexible curriculum** applied within a **environment** which is **rich** in information thanks to Web 2.0. This requires, in turn, a **pedagogical strategy** which includes the **collaboration and interaction** with others, thus leading to learning outside of the classroom. All of this will generate more opportunities in which students create and develop their **critical thinking**, through connections that they make regarding all the information they receive.





What is the proposal?

For more information, click on the buttons.

Starkey includes **six aspects of learning typical of the digital society.**



1. Context



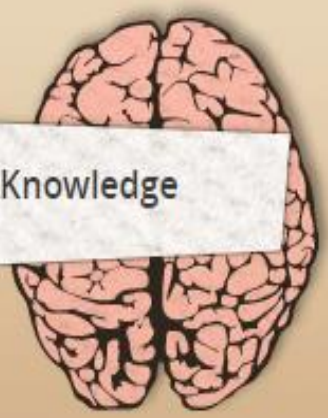
2. Connections

3. Understanding





4. Critique and evaluation



5. Knowledge



6. Connectivity, critique and creativity

1. CONTEXT

This is when students do something within a certain context, and this can involve searching for information online, uploading pictures onto a wiki or commenting on a blog.

2. CONNECTIONS

This can include comparison and collaboration activities, how to do something in different contexts or connecting with someone to exchange ideas.

3. UNDERSTANDING

This involves the student demonstrating their understanding of "big ideas" (conceptual knowledge).

4. CRITIQUE AND EVALUATION

Exploring the limits and potential of the information, the resources or processes (procedural knowledge).

5. CREATION OF KNOWLEDGE

Involves the students developing an original product by which you give them a new reality, using ideas or processes that have already been evaluated and previously critiqued.

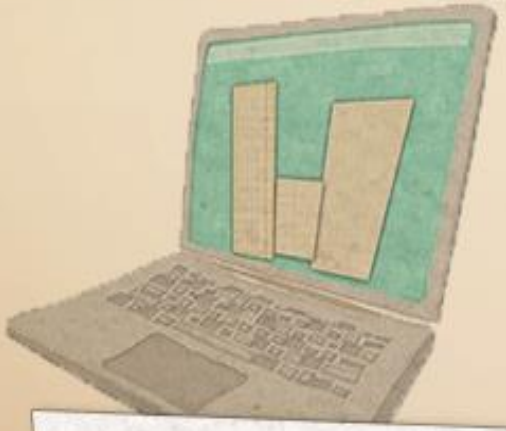
6. CONNECTIVITY, CRITIQUE AND CREATIVITY

This occurs when students share what they are learning through real and authentic contexts and give each other feedback.

Matrix

For more information, click on the buttons.

Below we will analyse a **table adapted** from Starkey's work (2011) where the **modified Bloom Taxonomy** is compared with the learning **matrix** of the digital age created by **Starkey**:



Learning matrix in the digital age



Bloom's Taxonomy modified

Know more

Download PDF

Matrix prepared by Louise Starkey (2011)

Learning matrix in the digital age	Bloom's Taxonomy modified
Learning by doing: isolated information. Focused on completing a task with the possibility of being scored.	1. Remember, recognise.
Thinking about connections: thinking through connecting knowledge. Simple knowledge in a previously chosen context of learning. Compare and share.	2. Understand, interpret, exemplify, classify, summarize, infer, compare, explain. 3. Apply, execute, implement.
Thinking about concepts: develop conceptual understanding of "big ideas".	4. Analyse, differentiate, organise, attribute.
Critiquing and evaluating: evaluating and critiquing to explore the limits and potential of the information, resources and processes.	5. Evaluate, critique, check.
Creating knowledge: creativity in applying ideas, processes and or experiences to develop a new reality.	6. Create, generate, plan, produce.
Sharing knowledge: share new knowledge gained through real and authentic contexts and obtain feedback to assess its value.	

Aspects of learning	Learning by doing	Thinking about connections	Thinking about concepts	Critiquing and evaluating	Creating knowledge	Sharing knowledge
Explanation of the aspects of learning	Isolated information. Focused on completing a task with the possibility of being scored.	Thinking through connecting knowledge. Simple knowledge in a previously chosen context of learning. Compare and share.	Develop conceptual understanding of "big ideas".	Evaluating and critiquing to explore the limits and potential of the information, resources and processes.	Creativity in applying ideas, processes and/or experiences to develop a new reality.	Share new knowledge gained through real and authentic contexts and obtain feedback to measure its value.
Use of ICTs						
Accessing the information	Access: images, graphics, films, information, data.	Information from more than one resource is connected and compared in the analysis.	Specific information that develops conceptual understanding.	Information and resources are critiqued and evaluated.	A new conceptual understanding develops.	The value of the product is determined by the quality and quantity of feedback from beyond the classroom environment. Learning takes place when the feedback is considered and analysed.
Presenting the information	Information can be presented using: sounds, images, words, videos.	The information presented has clear connections through formats and ideas.	The presentation or the explanation of the presentation has specific conceptual understanding.	The presentation, the methods and results are critiqued and evaluated.	The ideas that have been produced and critiqued or any new knowledge are presented.	
Processing the information	The information is processed or the data/ images are adapted as separate elements.	Connections between the information or the processed data or images and relevant concepts are made.	The processed data or information provides a clear conceptual understanding.	The process and the products are critiqued and evaluated.	New ideas and knowledge are produced and developed.	
Interactive programs or games	Play, design a quiz, enter into a virtual world.	Connections are made between the game/ quiz/the virtual world and other knowledge.	The relevant concepts in the game, quiz or virtual world are identified and explained.	The game, quiz or virtual world is critiqued and evaluated within a conceptual context.	Original ideas are created in order to create knowledge as a product.	

Analysis of the proposal

Have you downloaded the table? The matrix presented has been designed as a **tool** for **reflection and planning** for teachers to **incorporate ICT** into their **lesson planning.**

For more information, click on the buttons.

Teaching activities

TEACHING ACTIVITIES
Through the use of this digital learning matrix, teaching activities are examined including a **critique**, making **connections**, **collaboration** and the **creation of learning.**

Learning

LEARNING
Learning through **connecting** and **sharing ideas and emerging knowledge** are important aspects which enable the development of knowledge in a knowledge and information society.

Students

STUDENTS
In the digital age they should have **the skills to create** connections, **understand** concepts, critiquing them, create them and **sharing** knowledge.

Methodologies

METHODOLOGY AND EVALUATION
Ideas and ways of **teaching and learning** in a knowledge and information society are evolving, and therefore, it is necessary to not only find suitable methodologies but also effective ways to evaluate the knowledge acquired through **ICT**.

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In this case, the matrix was configured as follows:

Aspects of learning	Learning by doing	Thinking about connections	Thinking about concepts	Criticising and evaluating	Creating knowledge	Sharing knowledge
Explanation of the aspects of learning	Isolated information. Focused on completing a task with the possibility of being scored.	Thinking through connecting knowledge. Simple knowledge in a previously chosen context of learning. Compare and share.	Develop conceptual understanding of "big ideas".	Evaluating and critiquing to explore the limits and potential of the information, resources and processes.	Creativity in applying ideas, processes and or experiences to develop a new reality.	Share new knowledge gained through real and authentic contexts and obtain feedback to measure its value.
Use of ICTs	Anatomy and physiology. Access to information and use of interactive programs.					
	Access to information about muscles using interactive programs.	Connections made through learning in class about bones and interactive activities.	Concepts about muscle movements and structures of the bones.	Not included.	Not included.	Not included.

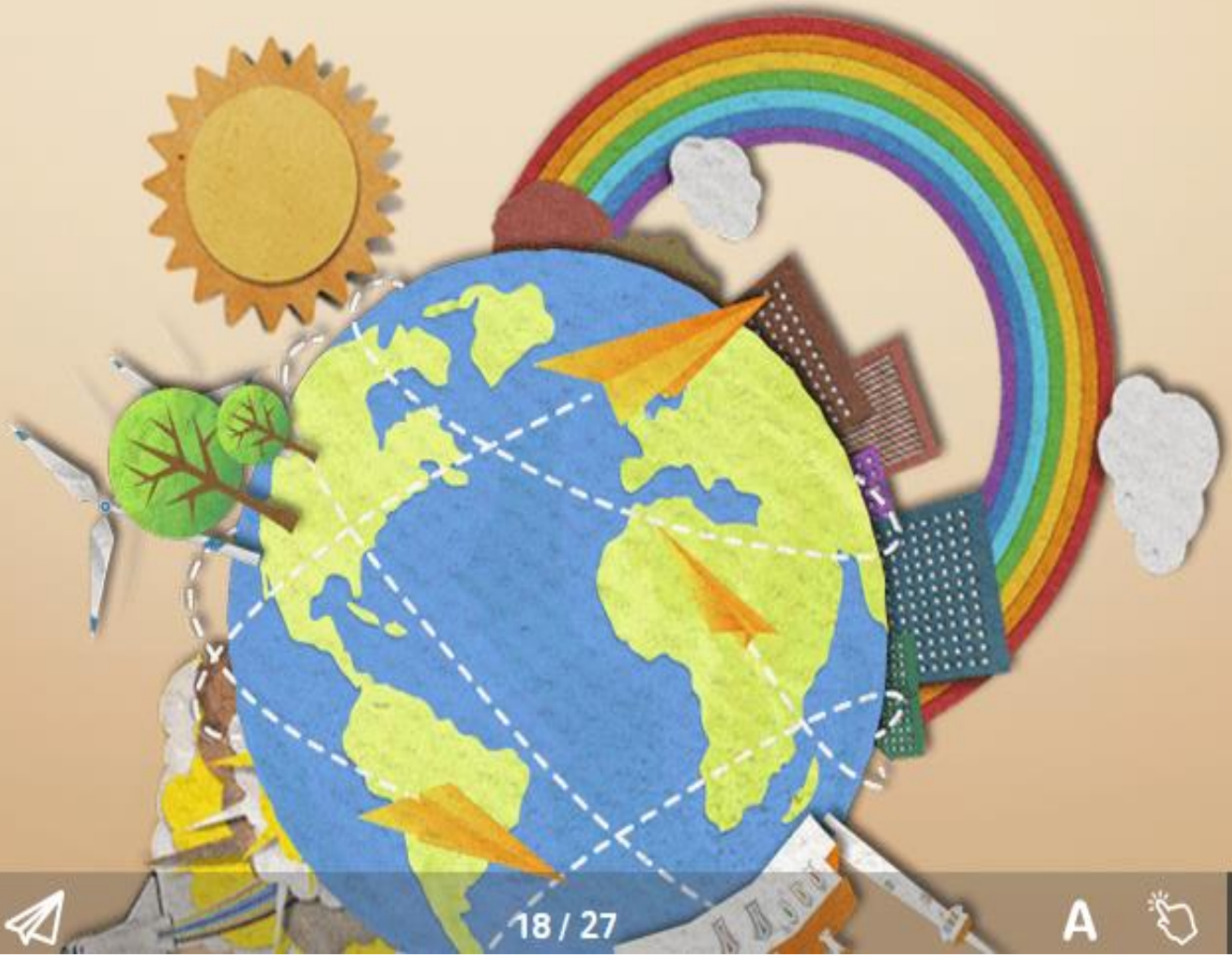
Unit 4

Rubric



What are they?

An **evaluation matrix**, also known as a **rubric** is an **assessment tool** that allows us to **find out** (both teachers and students) **how the student is learning**.



What does it comprise of?

It is composed of a series of **specific and fundamental criteria** to assess learning, knowledge and/or competencies **achieved by the student** to perform a **specific task.**



What does it provide us with?

For more information, click on the vertical arrows

Through these tools, the teacher clearly **specifies** the **results they expect,** so students know **how and what is going to be evaluated,** enabling them to focus their work or tasks better.



Students



Teachers

The rubrics can be **used by teachers and students alike,** thus enabling **new forms** of evaluation such as a **self-evaluation and peer evaluation.**

What does it provide us with?

For more information, click on the vertical arrows

Student

This tool provides the following **advantages** to students:

- Students understand what the final product they have to create should be like.
- The evaluation criteria is shown graphically, providing students a progress guide in their work which, if they follow it, will lead to success in the task.
- It encourages them to review their work before handing it in to the teacher.
- It promotes critical thinking and responsibility.
- It clearly indicates where the students are lacking, therefore enabling the teacher to help them in these areas and thus facilitating effective feedback.



What does it provide us with?

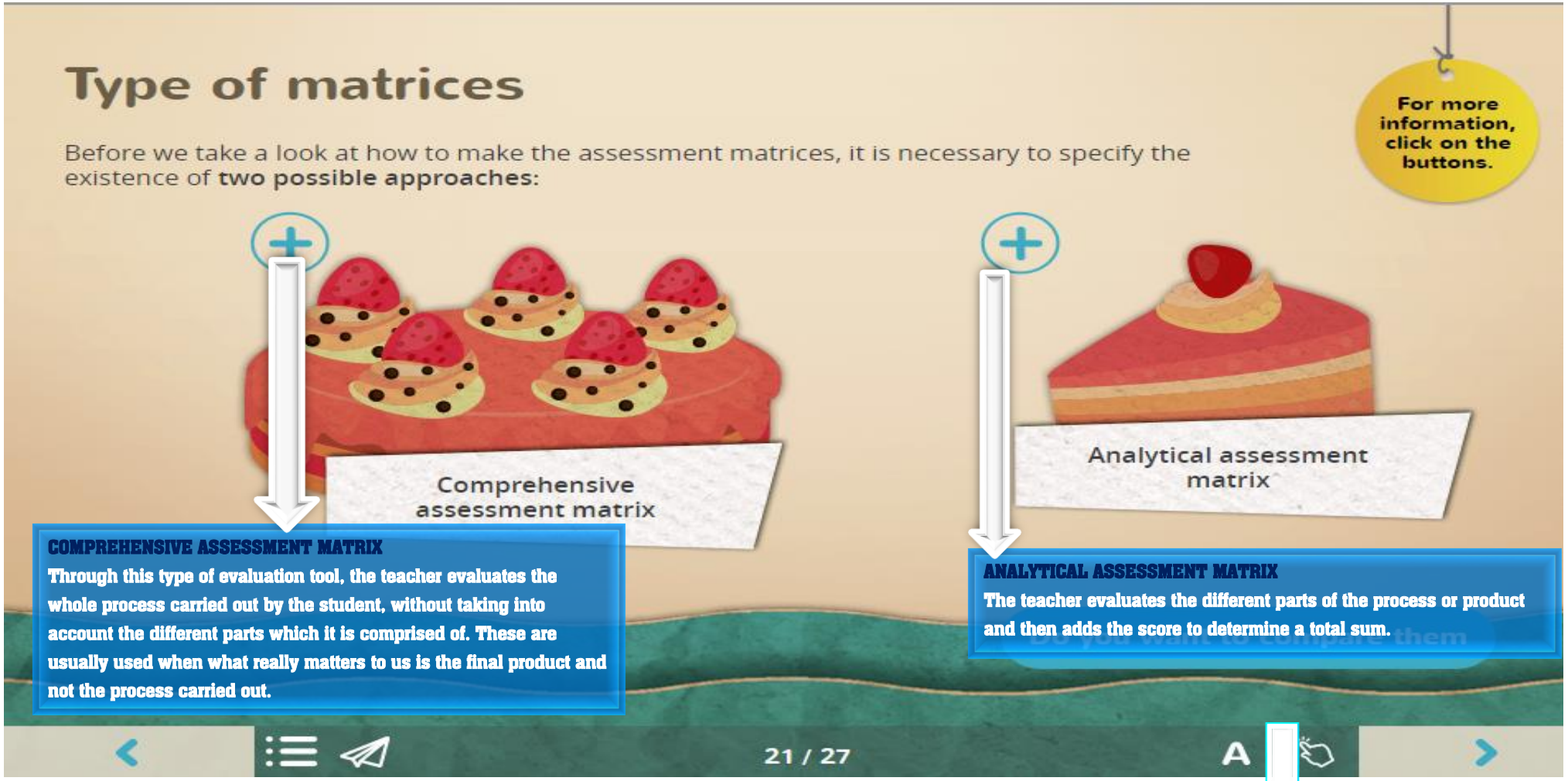
For more information, click on the vertical arrows

Teachers

This tool provides the following **advantages** for the teachers:

- It clarifies what the expectations and the objectives to be attained by the students are.
- It allows the teacher to organise qualitative and quantitative evolution of the student and of their tasks, thus reducing the subjectivity of the evaluation.
- It facilitates the comprehensive evaluation of basic skills.
- It facilitates communication with the student.
- It is easy to use and explain.
- It provides the teacher information on the effectiveness of the teaching process that they are using.





Comparative

Comprehensive assessment matrix	Analytical assessment matrix
Evaluates the complete process or product.	Each step of the process is evaluated.
It is used when the important thing is the end product of the process and not the process itself.	It is used when the important thing is the process.
It is quicker for the teacher, as it is comprised of just one exam.	It is slower, as teachers have to review the progress often.
There is very little feedback.	There is a lot of feedback.
It promotes the summative evaluation.	It promotes formative evaluation.
For open tasks.	For closed tasks.

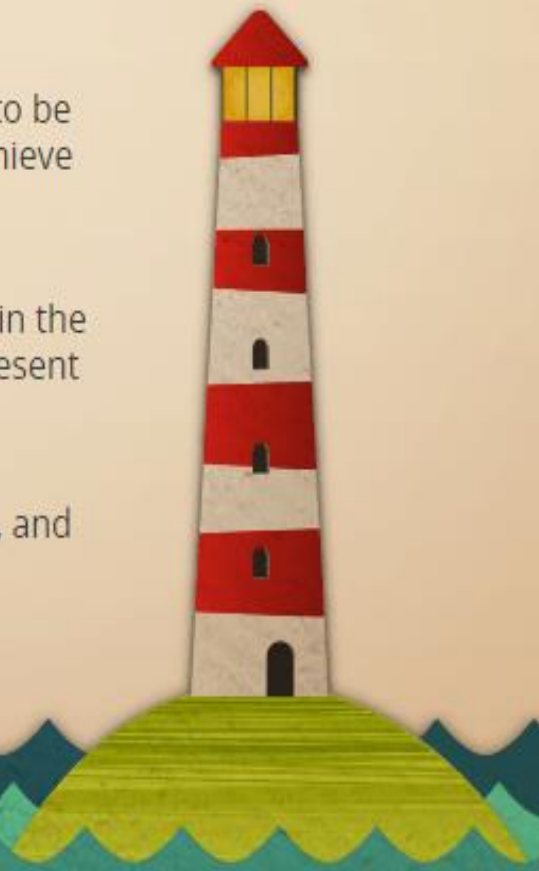
How is it prepared?

1. **Review the content** to be taught.

2. **Select the objectives, competencies and/or activities** which we are going to be developed on this content. In other words, what we want the student to achieve and know after doing the task or activity posed.

3. Once we know the expectations, we must write them as clearly as possible in the form of **evaluation criteria.** That is, to identify all possible criteria that represent what we want to achieve when we start the task.

4. These criteria must be organised by **levels of effectiveness** to qualify them, and can be numeric (5, 4, 3, 2, 1), using **letters** (E, D, C, B, A), or through **nomenclature** (excellent, good, fair, poor).



Result

For more information, click on the buttons.

Once we have done all this, we can now create the rubric, which is **advisable to be divided** in the following way:

MARKS

In this design, the levels of performance or rating scale are located in the upper section, in a horizontal row, with a ranking going from best to worst, being able to choose the most suitable for each case.
In the first vertical row are the aspects to be evaluated or elements that have been selected to be evaluated.



Aspects to evaluate	Excellent	Good	Satisfactory	Fair	Poor
	5	4	3	2	1
	A	B	C	D	E
Presentation	.....	.....	.....	.....	.....

One of the **essential requirements** for the proper functioning of the evaluation through rubrics, **is that students can see them before they start the corresponding work or activity.**

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To better understand how to make evaluation rubrics, some examples are attached. The first of these is a rubric to assess the abilities of the use of the Internet and searching for information:

ASPECTS TO EVALUATE	LEVELS OF PERFORMANCE			
	Excellent	**Good**	**Sufficient**	**Fair**
USE OF THE INTERNET	Successfully uses the suggested links to find information and browses easily without assistance.	Uses the suggested links to find information and browses easily without assistance.	Uses the suggested links occasionally and browses easily without help.	Needs help to use the suggested links or to browse the web.
REPORT/ SUMMARY	The summary is very detailed. Includes all the information requested.	The summary includes information that is requested and is understandable.	The report includes most of the information that has been requested but it is difficult to understand.	The report is very hard to read, but it contains part of the requested information.
QUANTITY OF INFORMATION	All the topics have been addressed and all questions answered in three or more sentences.	Includes all topics and most of the questions have been answered, in at least two sentences.	All of the topics have been addressed and most of the questions answered using at least one sentence.	One or more of the topics were not included.
QUALITY OF THE INFORMATION	The information is related to the topic and examples are also given.	The information is related to the topic and it includes an example.	The information is related to the topic, but examples are not included.	The information is slightly related to the topic.

The following rubric is related to the evaluation we can do for the task of the *Preparation of a digital mural* (or not):

ASPECTS TO EVALUATE	LEVELS OF PERFORMANCE		
	Excellent	Good	Fair
TITLE	Correct and suggestive title.	Correct title.	Complete title
MEASUREMENTS	Suitable to the needs of the contents	Correct measurements, but with blank spaces or spaces which are too full.	Too small or too large.
COLOURS	Applied to the background and to the font, making it easy to read.	Various colours.	Few or unappealing colours.
TEXT	Readable and suitable sized writing.	Written correctly.	Writing too small or irregular.
VOCABULARY	Appropriate, rich, accurate and correct.	Normal, correct.	Basic and lacking variety.
SPELLING	No mistakes.	A few mistakes.	Several mistakes.
IMAGES	Appropriate to the subject, with correct size and properly positioned.	Appropriate images.	Too few or too many images.

Unit 5

Conclusion



Practical activity

Activity

Complete one or more of the evaluation rubrics using the Rubistar website. Base them on activities done through ICT, such as: videos, blogs, conceptual maps, story narrations, memorising (flashcards), participation in a forum, advanced search with Google, online survey, etc.

Objective

Put into practice the evaluation rubrics.

Results

First a more detailed description of what the activity which they are using as a base consists of will have to be written, and then make an evaluation rubric.

Without connectivity, there are contents that will not be displayed.

Summary

Competency-based evaluation aims to determine the **level of development achieved** according to the **ability to select and apply** a solution to **learning** in different contexts.

A **rubric** is an evaluation tool that allows us to find out (both teachers and students) how the student is learning.

Through these tools, the teacher clearly specifies the **results they expect**, so students know **how and what is going to be evaluated**, enabling them to **focus their work** or tasks **better**.



Final word

We encourage you to apply this new methodology approach in your daily work.

Are you ready to change and/or adapt your evaluation systems?

We remind you that to finish you can take the evaluation test and check what you have learnt.

