Assessment of learning in online educational contexts

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1. The value of ICT in assessing learning

Learning assessment is one of the key elements of any educational process, along with teaching and learning. Depending on how this assessment is considered, depending on the context and tools available, how it is taught and learned will be conditioned.

Thus, if the teaching and learning activity takes place in a context where the support of Information and Communication Technologies (ICT) plays a key role, then evaluation can propose strategies for monitoring students remotely, making accompaniment continued over time.

The use of digital tools makes it easy to present results, regarding both the process and the final product. Moreover, when self-assessment and online co-assessment strategies are incorporated at different times in the process, **self-regulation of learning** and **student autonomy** are promoted. In this sense, ICTs allow to speed up the management of evaluation from all its dimensions and aspects, thus becoming very complete.

> **The use of information and communication technologies (ICTs)** it allows to generate added value in the evaluative process, both for teachers and for students. Its use makes it easier to track learning experiences and process more continuously, both in a group and individual way. The management of personalized qualitative feedback, the automation of immediate responses, the management of diversified instruments of evaluation, co-evaluation and self-assessment, or the management of the information they give us of digital data that is collected and generated throughout the training process, are some examples.

2. Focus of the evaluation

2.1. Continuous and formative

It's important to note that it's not the same **evaluate to qualify** What **evaluate to learn**. It is recommended that you create a different evaluation culture, understand evaluation as part of the learning process, and that all proposed activities become opportunities to learn and evaluate with a clear training orientation.

Reflection!
- *Are we using ICT to implement the same assessment dynamics or are we really taking advantage of it and opportunities to do different things?*

In this sense, we understand that the evaluation should be:

- **Continued**, throughout the entire learning process, and not just at the end.
- **Formative**, aimed at improving, not only to measure and qualify, but to offer opportunities to improve learning.

In this line, the evaluation may have different purposes or purposes:
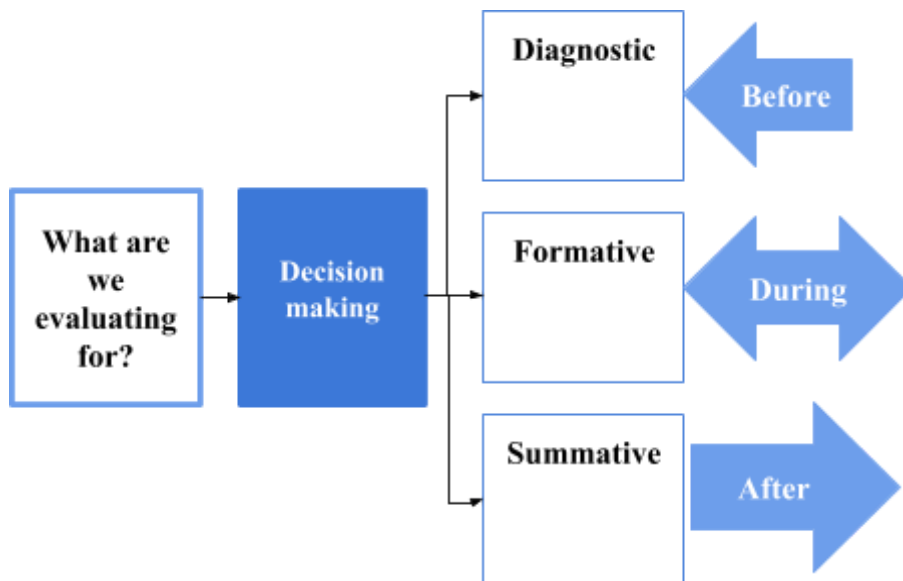
First, the **diagnostic assessment** it is carried out at the beginning of the teaching and learning process in order to know what the student's level of prior knowledge or initial competency development is. Secondly, the **formative assessment** it is the one that is carried out throughout the educational process in order to accompany, assist and follow up that allows students to progress and improve with a clearly regulating intention and supervision of the development of competencies. And, thirdly, the **summative assessment** is the one that takes place at the end of a learning process, so it certifies whether the skills raised have been developed.

Important !
In order to carry out a useful and quality learning assessment, the milestones of this and the methods used must be consistent with educational objectives.

2.2 Design by competencies

We understand by competence the articulated integration of different complex knowledge that is activated or mobilized to face diverse situations in the most suitable way and acting effectively.

For this reason, an educational proposal must integrate not only knowledge but also ....

... cross-cutting competencies related to the comprehensive training of people
and specific competences related to vocational training.

Competences are constantly developing, and this fact conditions the assessment proposals, which become a key piece in this process of continuous development of capabilities and skills. In short, a process oriented to the improvement and achievement of new knowledge.

For this reason, **assessment should be aimed at measuring and assessing the continued development of these competencies,** and will do so from the collection of information on diverse learnings that may be presented as valid evidence of the different **levels of the competence development criteria** of the students.

In this sense, designing by competences involves:

1. An assessment that contextualizes learning to make it more meaningful.

2. An assessment consistent with the method chosen and that allows to record both the process and the learning results.

3. An assessment that makes the evaluation criteria explicit to students, in relation to the development of competencies.

4. An assessment that shifts some of the responsibility to students to foster autonomy, critical spirit and self-reflection.

5. An assessment that is not only based on the assessment of a single delivery, a test or a one-off product, but is developed from the assessment of different learning evidences.
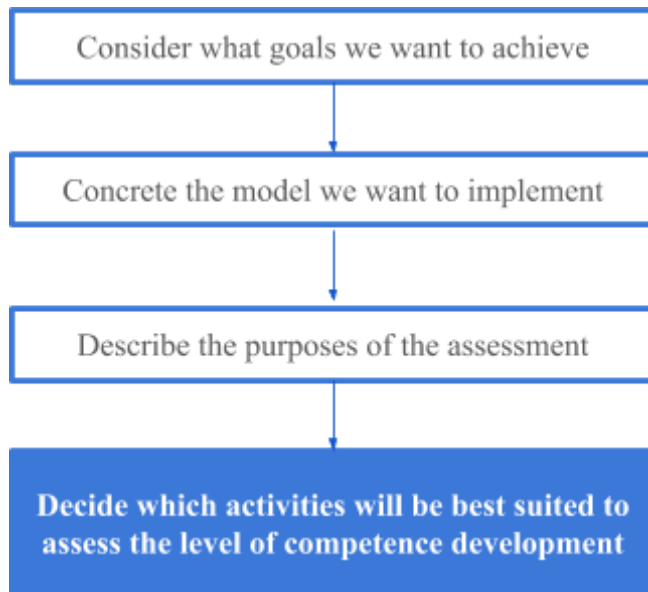
3. Assessment planning

To design an assessment model based primarily on the use of digital technologies for online educational environments, we need to first identify what features this assessment should have, so that it can be implemented in an online context and we can get the most out of it.

Reflection!
- *Innovation in evaluation, focused on guiding the learning process, can provide the impetus needed to transform a highly based education even with the transmission of knowledge to skills-based education.*

When we set out to design and plan the type of evaluation we want to propose, we have to:

Consider what goals we want to achieve

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Concrete the model we want to implement

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Describe the purposes of the assessment

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Decide which activities will be best suited to assess the level of competence development

Therefore, it is important to decide:

- The object of the evaluation (WHAT).
- The approach and purpose of the evaluation (HOW and FOR WHAT).
- Learning conditions and activities (CONTEXT).
- Evaluation criteria or standards (CRITERIA).
- The moment we want to implement it (WHEN).
- The roles that teachers and students will have (WHO / ROLES).
- Available technology (ICT RESOURCES);
- The instruments to be designed (EVALUATION);
- The type of feedback you will want to provide and with what purpose, when and how, individual/group (FOLLOW/FEEDBACK).

The agents involved in the teaching and learning process should know what is the proposed assessment plan, and at the same time need to appropriate the assessment criteria (dimensions and items of which the development of a levelly structured competence is composed).

The evaluation model should be the frame of reference that helps you plan and design the scenarios from which you can **measure the levels of development of students' competencies**. These scenarios are developed taking into account the criteria and assessment tools that will enable **offer feedback to each student**, so you can make decisions about your learning process.

4. Follow-up and feedback

From the premise of a formative evaluation, it is necessary to evaluate the learning facilitating continuous feedback and addressing successes and errors with a clear orientation towards improvement, thus helping to progress these and these students. When done from a regulatory perspective, **assessment is one of the key drivers of learning and encourages critical reflection**.

> The formative assessment is defined as that assessment that provides continuous feedback to students about their development, so that they can improve their learning process.

The follow-up or feedback provided in the context of a training assessment may bring the following benefits to students:

- To enhance the culture of self-reflection on their own learning process.
- Develop critical thinking and self-regulated learning of studies.
- Allow students and students to demonstrate their knowledge in multiple ways and with evidence.
- Identify opportunities to improve on the following tasks.
- Receive information about how you are progressing through the teaching and learning process and how you are learning.

There are some strategies for easy online feedback using:
- Automated tutoring, such as xatbots or others.
- Automated task correction.
- Receiving written and oral comments in various formats.
- Evaluation of evaluation criteria via rubrics or stairs.
- Sending emoticons with different expressions.
- Use of electronic ePortafolio.

To implement useful feedback, teachers should reflect on some of the following questions:

1. Is the feedback really helping you improve learning?
2. Does the student know what to do with feedback?
3. Have we included examples of the learning outcomes you should get in relation to the task you intend to do?
4. Are we providing information on how they should improve the next task?
5. Are we facilitating feedback on time, to make it useful for your learning?

Important !
The assessment should encourage self-regulated learning of students through student engagement strategies such as self-assessment and peer evaluation.

Important !
Training feedback allows the student to improve and refine their work.

5. Evaluation strategies with the use of digital tools and resources

5.1 Methods and strategies

Depending on the approach of the evaluation you want to implement, and the strategies you want to put into play, the use of methods and instruments varies.

If we use a competency-based formative assessment approach, it is important **plan multiple methodologies and evaluation strategies that allow teachers to start from various evidence and learning samples** to help you issue a more accurate and fair assessment.

Some of these strategies and evaluation tools may include:

OBSERVATION	Direct observation of teachers in the virtual environment, synchronously or asynchronously, in collaborative spaces, etc.
PROJECT	Final product with partial results throughout the elaboration process and that asks for continuous feedback.
DISCUSSION	It allows to evaluate the capacity to argue, to generate and build new ideas from the contributions of others, to contrast, to reflect, to be critical, etc.
QUESTIONNAIRE	It provides quantitative or qualitative data, you can manage automated or semi-automated responses, you can make global statistics of the group and assess the progress of the class group, etc.
SYNTHESIS	Product summarized that can provide us with information on the level of understanding of the topics, the detection of the relevant, the capacity of synthesis, concreteness, etc.
WRITTEN PRODUCT	That can be generated from multiple types of activities (reports, tests, memories, etc.).

SOLVING A PROBLEM	It arises a situation that requires a solution and apart from the result you can evaluate the process, the ability to reason, to look for solutions, etc.
SELF-ASSESSMENT	It provides information to students about how they see themselves in the learning process and fosters the critical spirit.
COLLABORATIVE EVALUATION	Also called co-assessment, where students are evaluated by their peers and make them more aware of their mistakes and awaken them to the critical spirit.
ePORTFOLIO	It becomes a methodology and an instrument, at the same time, where the student can present evidence of learning in relation to the competences developed, and from where the teachers can follow up, provide feedback and evaluate over a given period.
RUBRIC	It is a guide that presents the criteria for evaluating the development of a competition. These criteria are presented on a grid, and we define the levels of development with descriptors. The rubric can be used by both teachers and students, because it allows self-assessment, co-evaluation and evaluation.

5.2 Digital tools and resources

There are a number of applications that can support assessment processes and help analyze students' responses.

The tools and resources **should be allowed to present a selection of evidence in relation to the skills that are being developed throughout the learning process**. Depending on the objective, the selection of evidence and its presentation will include elements of reflection and the use of different supports that facilitate the evaluation of this evidence.

These tools are developed from the **criteria for the development of competences in relation to the learning outcomes obtained and that will allow us to evaluate them, providing the following benefits**:

a) To **teachers**, establish an evaluation framework shared by all actors to be involved; transparently make the rules that are applied to measure and assess the levels of achievement of skills development; and streamline the learning process.
b) To **students**, to know the aspects to improve and commit to their own evaluation and the self-regulation of their learning becoming active actors in their assessment process.

6. Synthesis

And as a summary, we can summarize that the key principles of online evaluation would be as follows:

1. More active participation of the student in the process and results of their learning.

2. Emphasis on continuous evaluation as a formative approach.

3. Varied use of digital methods and instruments that facilitate the most integrated and comprehensive skills development.

4. Evaluation based on the presentation of learning evidence in different digital formats.

5. Prominence of feedback in all its dimensions (continuous feedback, oriented to improvement, dialogical, that encourages self-regulation and motivation)

6. More intensive use of digital technologies as support for continuous monitoring and accompaniment.

7. Obtaining analytical data that can help you better monitor learning processes and make decisions more agilely.