

# STUDENT ASSESSMENT IN THE 21<sup>ST</sup> CENTURY



A new mindset towards supporting  
student competences development  
in an inclusive way.

## **ASSESS**

Empowering Teachers to Design Innovative  
Assessment Tools in a Digital Era

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**Empowering Teachers to an inclusive and  
meaningful assessment in the 21<sup>st</sup> century**

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## Introduction

Hello there! Are you an educator, work with kids or have kids yourself? Then, this information is for you!

Do you remember when you were younger and in school? Do you have memories of the feelings that you had when you thought about being assessed and receiving a final mark? How did you feel when you were studying for an exam? What was your emotional experience when doing tests or exams?

Traditional student assessment methods that focus mainly (or only) in scoring students based on their performance in tests and exams can often be stressful to children, hindering their learning process. They are also very limited in what they can say about the students' learning and development. You see, to have a good grade in an exam, students must have the ability to memorize a lot of content and to understand the precise meaning of each question. They also need to know how to express their knowledge in a certain way. So, while tests and exams are still valid methods for assessing students' knowledge retention, interpretation, and written expression, they fail to represent all the challenges that students have overcome overtime and all the skills that they have developed. Furthermore, assessing students with a number can often lead to a very abstract notion of the students' achievements and motivate competition among colleagues, which is the opposite of what society needs.



In ASSESS we aim to contribute to a more complete and human way of assessing students that not only qualifies their journey and achievement but also helps them to go even further and find meaning in their learning journey. Many teachers are joining us in this change, aiming to provide their students with a nurturing school environment and an assessment that is fair and supportive instead of judgemental and stressful.

As parents, caretakers, friends, and educators, we all must be part of this change and support our children, our students, and their teachers in this change.

Change is always uncomfortable, but if you are reading this, chances are that your children's teacher is embarking on this journey, coming out of their comfort zone, and fighting for a better life for all.

We hope that through this document you understand the idea behind this change and remember to encourage 😊.

If you are interested to learn more about the ASSESS project and materials, you can access <https://assess.nuclio.org>.



*Hello! My name is Brainie.  
I came here to say that  
**Happy Brains Learn  
Better!***



## Why should we rethink the way we assess students?

Technology is changing our society quickly and to prepare students for their future, school education needs to adapt. Sustainability, cooperation between different sectors, skilled workers, innovative minds, human and nature friendly approaches and solution centered perspectives have never been more important, and so, education must find a way to provide this.

Student assessment is a very important part of education, and it often determines the focus and the strategy of learning and teaching. If assessment is only focused on test and exams, teachers must work to prepare students for this. This means that the whole learning journey will be focusing on a very limited set of cognitive skills, being the main one, memorization. As such, to be able to update educational methods and bring education forward, we must rethink the way we assess our students first.

Considering that all the content from school curricula can be found online and that students tend to only retain 10% of the knowledge they memorize in school, an educational approach focused on developing skills becomes much more important. As such, assessment should be as diverse as human nature itself and allow teachers and students to explore all the richness of the learning experience. Assessment should be personalized and inclusive and should allow each student to learn how to thrive in their own specific way.

***Adequate assessment allows students to improve their skills in a constant exchange with teachers and allows for a more engaging environments that fosters learning, self-esteem, and well-being.***



## What does psychology have to say?

Research in psychology shows that the reasons that people attribute to their successes and failures have a very strong impact on their self-esteem and motivation to learn (Weiner's attribution theory). A person that believes that it is possible to improve, will more probably continue engaged in the effort of learning that a person that believes that their capabilities are fixed and do not change. Teachers, educators, parents, and caretakers, being the mentors and the guides in the learning journey, have the power (and duty) to help children identify the true reasons for their successes and failures and adjust their views about themselves, when needed.

Furthermore, it has been shown that students achieve better results when they feel that the teachers have higher expectations of them and that their learning might become hindered if they feel that the teachers have lower expectations. This means that teachers, parents, educators, parents, and caretakers' expectations, even if unconscious, influence children's development. Being aware of this, is fundamental for supporting students learning and development.



***Encouraging a growth mindset, where students know that success comes with effort and that they can continuously grow and improve, fosters resilience and engagement. An effective assessment can do just that, and it is a key approach to promote a positive attitude towards learning, and to help students reach their full potential.***

**I have a Growth mindset!**  
*I learn from my mistakes.*  
*I can become who I want to be.*  
*My effort makes me grow.*  
*I use feedback to improve.*  
*If it is difficult, it just means I must work harder.*  
*I like to try new things.*  
**I can build my own future!**



**I have a Fixed mindset!**  
*I am limited by my mistakes.*  
*I am who I am.*  
*My efforts won't make a difference.*  
*Feedback from others upsets me.*  
*If it's difficult, I just give up.*  
*I prefer to only do what I know.*  
*I don't like to try new things.*  
**My future is limited by my abilities.**



## So, how can teachers assess to promote a positive development?

To do an effective assessment it is important to consider the difference between classification and assessment. Classification is the final score that students get, based on their overall performance and it is defined through what we call, a summative assessment. Assessment is the process of evaluating students' progress, performance, achievement, etc. It is very common that assessment is used only to get a classification. The result of this is that by the end of schooling, students are left with a number that defines their whole learning trajectory. It also gives them few opportunities to engage in self-knowledge and to define strategies for improvement along the process.

Let's imagine that a person goes to an interview and presents themselves like this:



"Hello, I am John, and I am a 17".

Would you hire this person? What does this number say about John? Does it define who he is? Now, imagine the following scenario:

"Hello, I am Maria, I learn fast, love to solve problems, am good in leading teams and have participated in the development of 5 projects around design and innovation in school. Here is the report of my development throughout my school years. You can see how well I have progressed and how fast I learn".



Which of these two people would you hire? The difference between both is that Jonh's assessment was classification-focused, and Maria's assessment was progress and development focused, and left her with a report of her development and a curriculum of her activities, which is what we promote in ASSESS. Maria's assessment also provided her with a final classification but gave her much more than that. It gave her the tools she needed to improve, and it focused on her personal journey, registering her achievements.

So, in ASSESS, we do this by combining formative and summative assessment, in an empathic way and with regular points of feedback.

## What is the difference between a formative and a summative assessment?

Formative and summative assessment are both important parts of student assessment, however they are different and serve different purposes.

Have you ever seen a clay mug being made? The person creating it begins with a piece of clay and starts shaping it. During the process, the piece becomes tall, short, fat, thin, and the creator moves it around until it becomes the desired shape. To achieve the final piece, the creator makes a constant evaluation of the process. Realizing that it is too tall, they make it shorter, realizing that it is too big, they make it smaller, and so on. This is what formative assessment does. It focuses on students' progress from day one and gives them a constant feedback and multiple chances to become aware of their process and to improve.



### Formative Assessment

Focuses on the process / Aids the process Constant evaluation and re-evaluation to achieve the desired result.



### Summative Assessment

Evaluation of the result – final grade - sum-up of all stages of the process. Legacy of what was done.

Summative assessment, on the other hand, is a final assessment of the process. Considering the clay mug example, the summative assessment would be the evaluation of the final piece. However, in education, this final evaluation can be done in the form of a final report that contains not only a classification (final score) but also the registration of the student's progress (with graphics of progress and comments by the teacher).

***An effective assessment should be a combination of formative and summative evaluations that not only demonstrate the students' progress but help them improve their talents and skills.***



## The ASSESS approach to student assessment

The ASSESS project was born with the aim of promoting a different mindset towards student assessment.



To achieve this, the process that teachers are invited to carry out is the following.

- Reflecting on the purpose of assessment and rethinking the way they do it.
- Finding the courage to step out of their comfort zone and experiment a new way of assessing students.
- Establishing the learning and development goals together with their students.
- Defining assessment criteria according to the established goals.
- Choose the tools and establish the timeframe of the assessment.
- Share the whole assessment strategy with the students, in a clear and accessible way. (Students should know how they will be assessed and what is expected from them, from the beginning).
- Perform a regular formative assessment using the ASSESS tools and readjust teaching and learning methods if necessary.
- Invite students to participate in the assessment, through self-assessment moments.
- Generate an automatic summative assessment in predetermined checkpoints, using the ASSESS tools.



*But the most important part, is establishing a positive environment and a positive communication with students. Remember that failing is an important part of learning.*

## The ASSESS tools

Embracing a new mindset towards student assessment is the most important part of supporting the necessary change, however, new tools are also important. For this, the ASSESS team analysed the needs of a set of around 200 teachers in 2021 and realized that most of them needed better tools for formative assessment of skills. Considering this and the increased effectiveness of new technologies, the team decided to create a set of tools to support teachers in this adventure. These are:

- Rubrics to assess the development of skills.
- Checklists to facilitate observation and note taking about students.
- An automated excel file to support offline student assessment.
- A smartphone app to facilitate a regular formative assessment and feedback to students.



## The ASSESS Rubrics

Rubrics are a very effective way of assessing students' performance. Not only they provide students with the concrete information about what is expected from them, but they allow teachers to perform an assessment based on concrete descriptors. This fosters a positive and more effective communication between teachers and students and allows for a more comprehensive assessment. Furthermore, rubrics allow students to know what they can still achieve and to have a perspective of how they have progressed, which can foster their self-esteem and self-regulation of learning.

In ASSESS, we provide teachers with already created rubrics, adapted from the most updated bibliography and partners' experience. These related to the following competences:

- Critical Thinking
- Creativity
- Interpersonal Communication
- Collaboration – Teamwork
- Problem Solving
- Diversity and Interculturality
- Oral communication
- Writing skills
- Learning Orientation
- Ethical Sense
- Project Management
- Embodying Sustainability Values
- Embracing Complexity in Sustainability
- Envisioning Sustainable Futures
- Acting for Sustainability



*Learning new skills makes me feel good about myself and gives me the confidence I need to succeed in life!*

## The ASSESS App

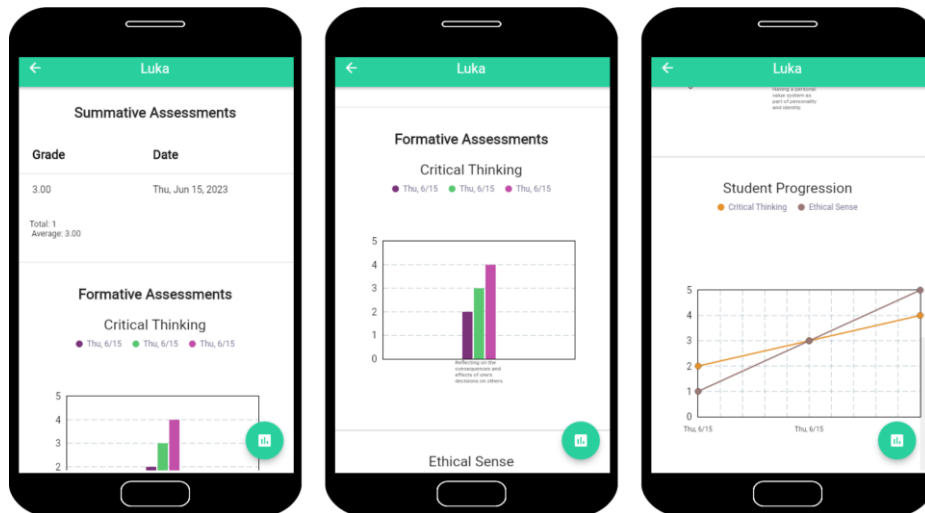
Teachers' work is very demanding. Not only they have to prepare all their classes in advance and participate in school meetings, but they also have to give the classes, correct assignments and assess each and every student. Adding to this, in their daily practice they are confronted with the need to relate to dozens (if not more than 100 students) each week, understand each student's personality, background and needs, and make the effort to be fair, patient and a good educator. Although it might seem simple, anyone who has spent one hour trying to teach a class of 20 students knows how challenging and demanding it is!



For this reason, the ASSESS team developed the ASSESS app. The ASSESS app aims to provide teachers and students with a common interface where all assessments can be easily performed. Teachers create an account, create their classes, provide a link for their students who also create an account and enrol in their classes. There, students can see which competences will be assessed and they can read the rubrics, discovering what will be expected of them. Parents and caretakers can also create an account and have access to the evaluations whenever teachers and students decide to share. This



allows parents and caretakers to follow their children's journey throughout the school year, allowing them to better support teachers and students in the process.



The ASSESS app

## Conclusion

ASSESS proposes a new and more positive approach to assessment that aims to inspire students to want to learn and to gain a strong sense of self, with a growth mindset and the willingness to always improve.

Students learn better and feel better when their parents and caretakers actively participate in their school life and support their teachers. In a rapidly changing society, the role of parents and caretakers in education has never been more relevant in staying updated on new practices, as well as in promoting a positive mindset in school education.

It is our hope that this work will support parents and caretakers to empower students to the highest of their potential.



Remember that a happy brain learns better!

We urge you to be supportive and choose a positive communication with teachers and your children. Together we can help our children to become great human beings!