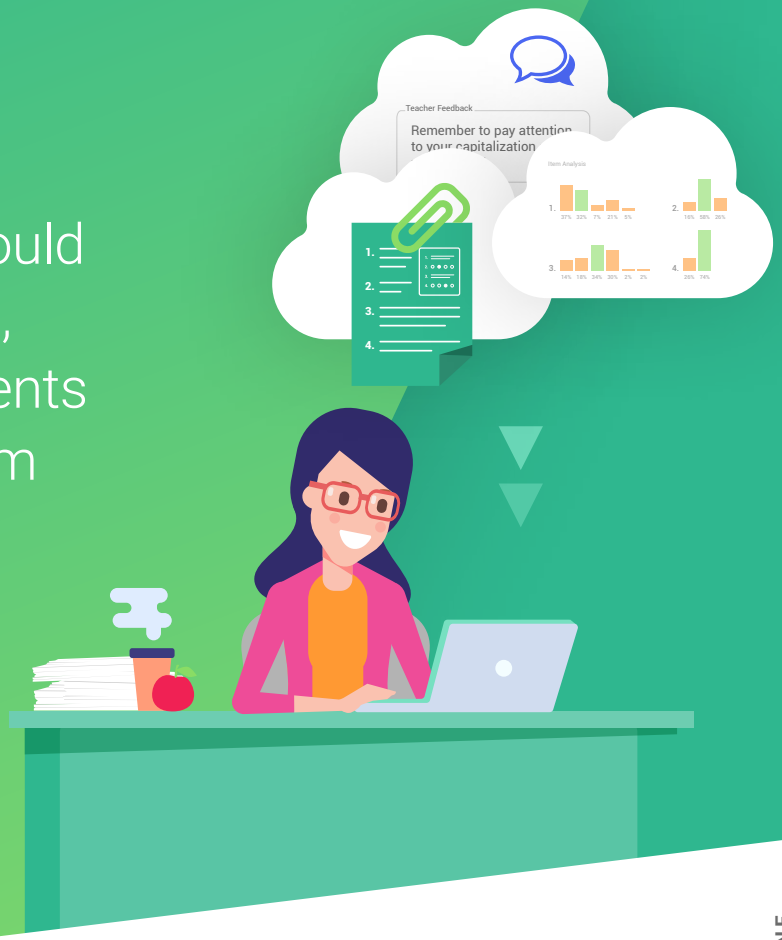
FORMATIVE ASSESSMENT

Strategies and Trends to Recover Learning and Increase Efficacy

Presented by GradeCam in collaboration with education transformation expert Dr. Kecia Ray.

GRADECAM

Ultimately, assessment should be used to drive instruction, instill learning, inform students of their progress, and reform teaching practices.



INTRODUCTION

Assessment has been a long-standing part of the instructional process, but over time it has morphed into an accountability practice rather than an instructional practice. The recent pandemic shed light on this transformation, and states and districts are considering assessment in its more rudimentary form. Ultimately, assessment should be used to drive instruction, instill learning, inform students of their progress, and reform teaching practices.

ASSESSMENT TYPES

Assessment can, in its simplest meaning, be broken into two major categories: formative and summative. Some may view benchmark assessments as a combination of each and therefore call it out as a third category.

Summative assessments are the high-stakes assessments that rose out of the late seventies and early eighties and became the focus of state accountability systems we know and love today.

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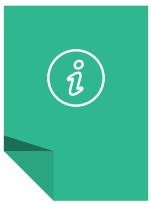

Formative assessments are what we typically think of as teacher-generated or teacher-selected if they are adapting or adopting a textbook assessment. Where summative assessments are used to measure mastery over time, usually year over year, formative assessments are typically daily or weekly assessments of student mastery. They can even be given hour by hour, if needed.

- 2 -

Benchmark assessments came into popularity to track progress toward summative measures. Districts, in particular, would implement benchmark testing to see where students were in order to determine what interventions may need to take place between the benchmark and summative assessments to assure overall success on high-stakes tests.

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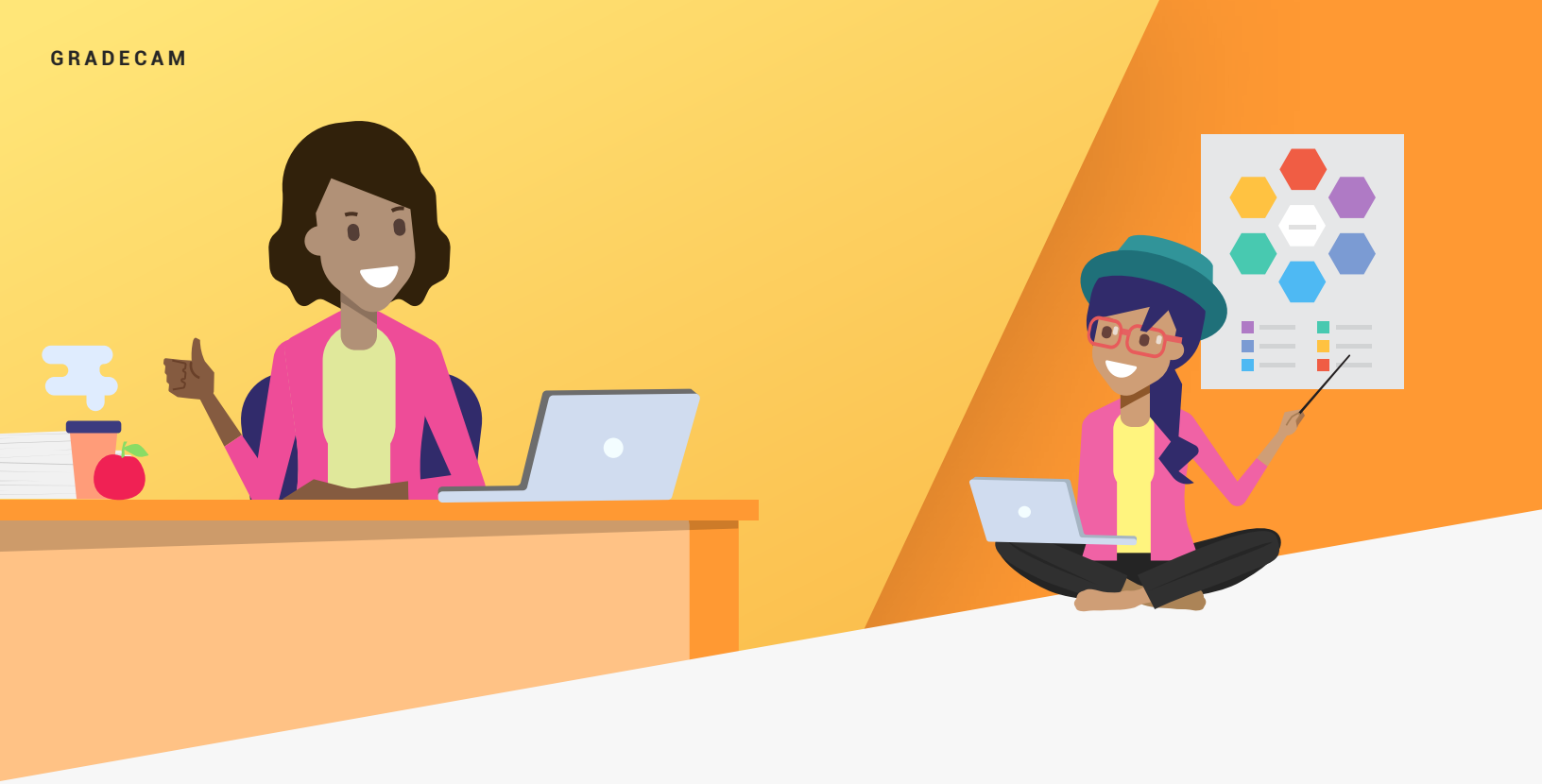

ASSESSMENT TECHNOLOGY

The recent pandemic is challenging the way districts and states are thinking about assessments.

Formative assessment strategies are morphing and technology is being used more and more to support all types of assessment. Formative assessment embedded in educational software enables more formal measurement models because student responses are automatically captured. Those responses can then be used in delineating underlying proficiencies, and those delineations are acted upon to adjust instruction.[1]

A recent study examined the effect an internet-based formative assessment tool had on primary grade students' achievement. The findings revealed that students who participated in internet-based formative assessment demonstrated growth, as well as an increase in student achievement that was affected by the number of times the outcomes of the assessment were used to make instructional decisions.[2] Primary students aren't the only ones who benefit from technology-based assessments.

Secondary students, especially low-performing students, appreciate the opportunity to practice and receive teacher feedback and more personalized instruction.[3] The use of computer-based formative assessment can be influenced by the comfort a teacher has with technology, as well as the teacher's belief in technology and autonomy for the teacher.[4]

BRIDGING THE GAP

Trending instructional models that embrace technology and take advantage of the use of computer-based assessment include blended learning and micro lessons.

Within each of these models for instruction, there is a cycle of assessment, review of data, and modification of instruction that is reactive to the data review. These models are especially helpful in addressing learning gaps.

A recent study notes that the long-term effects of the pandemic can be mitigated with remediation and a long-term reorientation to the curriculum.[5] A reorientation to curriculum using a blended learning or micro lesson approach could accelerate the remediation and reduce the gap significantly.

Utilizing benchmark assessments for progress monitoring, educators use the progress monitoring to implement daily formative assessments to identify gaps in skills and mastery. Information gathered through formative assessment helps define instruction and align activities to appropriately measure mastery.

Technology can accelerate this formula even further as well as provide reliability in the data collected by reducing bias. Research supports using technologies to collect student responses and provide technology-based feedback, further affirming that formative assessment is vital and meaningful not only for teachers but also for students in the teaching and learning process.[6]

SUPPORTING SUCCESS

The more comfortable a teacher is using technology, the more likely they are to have success using technology as a formative assessment tool.[7]

The pandemic that began in March of 2020 ignited the use of technology in classrooms around the globe. Teachers are becoming much more familiar with technology as an instructional tool, which unveils the benefits of technology as an assessment tool. Utilizing computer-based formative assessment tools will increase as technology becomes more prevalent in how teaching and learning occurs.

Education is forever changed as a result of the recent pandemic, and the need for formative assessment is greater than ever. Embracing technology to create greater efficiency in data collection through formative assessment can not only provide more accurate data, but it can also more accurately inform decisions around instruction.

Formative assessment increases student achievement and academic self-regulation.[8] In fact, a 4-year study of high school biology teachers who designed their own formative assessment activities, practiced using those activities with their students, enacted the activities, and then reflected on next steps to guide their instruction, concluded that student learning of the content resulted in learning progressions as a result of this practice.[9]

KEY TAKEAWAY

Today, technology and formative assessment are interlinked, and the results of incorporating formative assessment in your instructional practice are significant.

Increasing achievement, reducing learning gaps, and attending to academic self-regulation are just some of the ways computer-based formative assessment can benefit teaching and learning.

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- Dr. Kecia Ray

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Dr. Kecia Ray created and patented one of the first technologies to measure student technology literacy.

Dr. Kecia Ray

Education Tranformation Expert

Dr. Ray's career includes designing technology within the Frist Center for the Visual Arts and directing technology research through Vanderbilt University School of Medicine Science Outreach programs. As a district administrator for Metropolitan Nashville Public Schools, she led the award-winning design, implementation, and evaluation of instructional technology programs including instructional design for online and blended learning environments, redesigning physical learning environments, establishing the virtual high school, and redefining school libraries. Dr. Ray is published and recognized internationally for her work in online and blended learning as well as flexible learning environments.

Dr. Ray is a member of the International Society for Technology in Education (ISTE) and is past president of the ISTE Board of Directors. In 2015, she was invited to serve on a USDOE technical working group focused on evaluating education technology. She is a four-time recipient of the President's Volunteer Service Award and the ISTE lifetime achievement 'Making IT Happen' Award. Dr. Ray was named '20 to Watch' by the National School Board Association, Woman of the Year by the National Association of Professional Women, one of the top 10 EdTech Leaders by Tech and Learning magazine, and as a Top 100 EdTech Influencer by EdTech Digest. She is a brand ambassador for Tech & Learning and leads a leadership community forum and consulting group, K20Connect, along with other passion projects.