Course of Mind

Product Evaluation Guide

FORMATIVE ASSESSMENT

COURSE OF MIND

ISTE

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Introduction

How do you distinguish between edtech products that are built well vs. those that are not? Which products are built in a way that naturally aligns with how people learn best?

These questions are foundational in the edtech selection and buying process, and the need for valid, reliable methods of product assessment are universal across educational organizations at all levels.

Through Course of Mind, ISTE continues to help educators and leaders across the country find well-built digital products and see the best learning impacts. This evaluation tool is one resource to aid teachers and edtech decision makers in finding those "best" products.

About Course of Mind

Course of Mind is an evidence-based initiative that is transforming the educational landscape by leveraging learning sciences and educational technology hand-in-hand. Through the translation of proven learning science findings into practical strategies for both the classroom and edtech selection, Course of Mind continues to help educators optimize instructional time, and decision-makers approve the very best digital products for teachers and students.

About ISTE

ISTE inspires educators worldwide to use technology to innovate teaching and learning, accelerate good practice and solve tough problems in education by providing community, knowledge and the ISTE Standards, a framework for rethinking education and empowering learners.

Who is this guide for, and what does it do?

This product evaluation guide is designed to help school district leaders, administrators, and instructional technology specialists make decisions about edtech purchasing by providing a framework you can use to evaluate educational technology products against product design benchmarks that are based on current learning sciences research. In other words, this guide helps educational practitioners determine the degree to which an edtech product aligns with how we know humans learn best. Note that there are separate guides for each of three product types: digital curriculum products, formative assessment products, and learning management system (LMS) products. Make sure to review the guide that is designed for the type of product you're interested in reviewing because the evaluation criteria will differ by product type.

This evaluation guide includes four parts:

1. **Introduction** = Describes what's in the guide.
2. **Scoring instructions** = How to use the guide to score a product.
3. **Indicators** = A set of criteria that describe the essential features of a product based on the learning sciences. These indicators are what you'll evaluate a product against.
4. **Scoring sheet** = A sheet you can use to evaluate a product. You'll probably want to print several copies of just that sheet, and look at the completed example to get an idea of how to use the scoring sheet.

As you explore a trial version or sandbox account for a new product, score it against each indicator. When you're done scoring, you'll have a clear picture of how well the product's build and features align to rigorous, research-based practices about how people learn most effectively. You can then compare your ratings with those of colleagues to see where you agreed or disagreed, and use your ratings to guide conversations with product providers in ways that help you ensure that you get down to the most essential questions about a product's build and fit for the teachers and students in your schools.

What are the learning sciences?

The learning sciences make up an interdisciplinary field of research with the common goal of studying and understanding how people learn, and how to apply this understanding to the design and evaluation of learning experiences. Key fields that contribute to the learning sciences include cognitive psychology, educational psychology, human development, linguistics and social psychology. Knowledge from multiple fields helps us understand learning as an interaction between learners and their environment including peers, teachers, learning materials, and instructional products.

Other terminology that will be helpful in using this guide includes:

- **Product:** An educational technology (edtech) application that can be purchased by an educational organization or individual. Digital curriculum products provide content as well as other functionality (such as interactive activities). Digital curriculum products are distinguished from "platforms" that provide functionality but entirely lack content.
- **Content:** The information the product provides. Content can be any format or media type such as text, images, audio, simulation, or video. Digital curriculum products present informational content to learners while platforms do not.
- **Activities:** The assessments and/or interactive elements requiring student response and interaction. Distinguished from "content" here, although edtech curriculum products often quickly switch between or intertwine content and activities.
- **Digital curriculum products:** Products that provide content (usually academic instruction) as well as other functionality (such as activities). These curriculum products are distinguished from "platforms" that provide functionality but entirely lack content. If students are exploring a new topic with technology, they are probably using a digital curriculum product.
- **Platform products:** A type of educational technology product that does not include content. Instead, platforms only include functionality features. Examples of "platforms" include learning management systems, student information systems, and assessment applications that entirely rely on teachers (or other instructional support people) to input content.
- **Formative assessment product:** A formative assessment product is an edtech product that helps teachers create, distribute, and review interactive experiences to understand what learners know and don't yet know; commonly thought of as a "quiz."
- **Learning Management System:** Also known as an LMS, a learning management system is a product used to manage the creation, administration, delivery, and reporting of educational courses.

Scoring Instructions

This evaluation guide includes a scoring sheet that can be used as a worksheet to evaluate or "rate" an edtech product as you explore a trial version, sandbox account, or even watch a demo video. **Here's how to use it:**

1. **Print the scoring sheet.** Print the scoring sheet included in this guide and keep it in front of you while you review the product. You may also want to print this entire guide, as it contains important details about each indicator for the product - it may be helpful to have those in front of you "on paper" as you explore a product.

2. **Select a product sample.** Decide WHAT in the product you're going to look at in order to evaluate it. If you're working with colleagues who will all score the product, make sure that everyone is looking at the SAME PRODUCT PAGES so that you're all scoring the same product sample. If different people are looking at different pages, you won't know if your product evaluations (i.e. scores) should be lining up with each other or not because you will have looked at different parts of the product.

3. **Score the product.** On your scoring sheet, write in the name of the product and your name, then use the scoring sheet to evaluate the product sample based on your best understanding of the criteria. To what degree does the product meet each indicator? Place an "X" on the "Rating" line to indicate the degree to which the product sample meets expectations set forth by the criteria.

   a. The central vertical line represents "meets minimal expectations" for the indicator, so mark an "X" on that line if the product generally meets your expectations based on the indicator description. Marking anywhere to the left of the central line indicates that the product does not meet the expectations articulated by the criteria. Marking anywhere to the right of the central line indicates that the product exceeds the minimally "adequate" expectations you see for any indicator.

   b. The "absence" and "exemplar" descriptions in this guide describe what to look for when you're scoring the product. If the product meets most of the "look fors" described in the exemplar, then assign it a score of meets expectations. If the product does an exceptional job with most or all of the look fors listed in an exemplar, assign the product a score of exceeds expectations, marking to the right of the central line.

   c. Don't be shy about assigning a rating of "does not meet" if you don't see evidence that the product is meeting expectations for that indicator. There might be a tendency for you to think, "Oh, I guess this is good enough." But if you don't see evidence that the product is meeting the expectations set forth in the indicator, mark to the left of the vertical line, assigning a rating of does not meet expectations.

d. Scoring is necessarily subjective. Your goal is not to "score it perfectly" but rather, take a close look at the product, evaluate the product, and compare your ratings with those of your colleagues so that, as a team, you come to a rigorous conclusion about the product's quality. So, your scoring doesn't have to be "perfect" but, instead, informative.

4. **Summarize your assessment.** Once you're done assigning ratings for each indicator, assign a score of -1 for each row (indicator) where the product does not meet expectations, 0 for meets expectations, and +1 for exceeds expectations. Enter those scores in the boxes on the far right, and sum them. A total score of less than 0 may indicate that the product isn't built very well. In addition to the numerical scores, you may want to get a better sense of the product's profile by connecting your rating X's with lines and shading the area to the left of the connected line. This "jagged profile" can be a nice way to visualize where the product is strong, and where it's weaker. See the (fictional) scoring sample provided at the end of this guide to get a sense of what that should look like.

5. **Talk about it!** Once your product assessment is done, use your results to inform conversations with colleagues and companies! Talk with other educators and leaders at your school or district about how they scored the product. You may even want to try sitting down and scoring a product at the same time in the same room. Scoring the product may raise questions for you that are worth asking a product provider - and this way you can be confident that your questions are grounded in proven research about how people learn. This can really take conversations with providers up to the next level!

Clear Presentation

DEFINITION: Information presented as images, written text, audible narration, and music clearly supports assessment goals.

DESCRIPTION: Information presented in images, written text, audible narration, and music clearly supports assessment goals by focusing student attention towards target objectives and content. The user interface provides ample space and clear presentation of directions, questions, workspaces, and answers.

PURPOSE: Graphics include arrows, headings, and other cues to tell students what to pay attention to (Clark & Mayer 2016). Extra words, pictures, and sounds - including "seductive details" that distract from the primary learning objectives - are excluded from the material so as to focus a student's attention (Clark & Mayer, 2016; Rey, 2012).

Consistent rules help students feel ownership in the space, increasing motivation (Deci & Ryan, 1985; Ryan & Deci 2000).

Inconsistent, overly complex, or clunky design for user interactions increases students' cognitive load and can impair their ability to access the information needed to "show what they know" during the assessments (Weinstein et al., 2018).

Research has shown that reiterating learning goals during the lesson is beneficial, directing attention to key pieces of information (Sana et al., 2020).

Absence: Graphics, narration, and text each provide information that are redundant with each other, and contain details that are irrelevant and distracting. Critical sources of information are absent. The layout of the interface does not give students enough space to show their work.

Exemplar: Graphics are simple and straightforward. Each information source (graphics, narration, and text) present information that is complementary to other sources, and it is clear which information is most important. Irrelevant or distracting details are absent. Students have enough space to show their work.

Chunking and Pacing

DEFINITION: Interaction expectations are previewed, user-paced, and divided into consumable segments.

DESCRIPTION: It is clear what students are supposed to do and easy for them to navigate the tasks (e.g., where to click, how to navigate through screens, how to submit their work), and such goals and activities are previewed for students. Longer activities are chunked and include "signposts" to guide students along multi-step journeys. It's easy for teachers to create and use materials quickly.

PURPOSE: Within or outside of a single lesson, students and teachers can feel overwhelmed when they do not know what they have completed, what they have left to do, or what is next. An assessment platform with poor navigational features can deplete students' limited cognitive resources and leave less attention and time for skill building since they are trying to figure out what they are supposed to do (Weinstein et al., 2018). There may be dozens of these tools used within a school building, so staff will not have the capacity to provide technical support on all possible products. Features that make the pace and place of the learning clear help build student and teacher agency, increase their engagement, save them time, and improve the opportunity for learning (Ryan & Deci, 2002).

Absence: There is either far too much or too little information (directions, images, etc.) that explains how students are supposed to navigate assessments. Some activities are too long (not chunked) and there is no clear indication of progress through such activities. It is not always obvious how students should submit ideas and responses.

Exemplar: Activities are chunked and paced in a way that maintains student's attention and does not overload the student. It's clear where and how students should submit ideas and responses, and what kind of progress a student has made at all times.

Cultural Relevance

DEFINITION: The tone and design of interactions are approachable, reflective of the targeted age group, and relevant to the community.

DESCRIPTION: Design of the activities is approachable to students and teachers, corresponding to each student's age and ability level. When present, voiced content sounds friendly and use human actors (perhaps with options for teachers to record messages with their own voice). Pre-created content is culturally relevant, and reflects a diverse set of circumstances.

PURPOSE: Students' engagement is positively impacted when they are learning about topics that they are interested in and are relevant to their culture (Ryan & Deci, 2000). Students learn better when they are excited about the information, in large part because their attention can more successfully be sustained (Schwartz et al., 2016). Friendly and conversational tones are more engaging than formal or computer-sounding tones (Clark & Mayer, 2016).

Absence: Design is misaligned in tone or presentation for the targeted age group. Content is not diverse or not representative of the cultural backgrounds or interests of the students or teachers. The flow and format of the experience is formal (such as a formal test) rather than friendly (and low stakes, or even fun).

Exemplar: Design is aligned in tone and presentation for the targeted age group. The design includes many features to hook students' interest and maintain their attention, and the content generally reflects the cultures of the teachers and students using it. Multiple cultures and backgrounds are represented in the pre-created content. The flow and format of the learning experience is informal and friendly.

Engaging Design

DEFINITION: An engaging, interactive design that teachers can adjust in order to challenge students at their level so they can "show what they know."

DESCRIPTION: The design of the application moves beyond digital flashcards to provide opportunities for active learning where students must use the right amount of effort to solve problems. The interactive design promotes engagement by providing choices for students to "show what you know," and provides teachers the ability to adjust content to fit students' lived experiences.

PURPOSE: While playing games (taking quizzes) when you already know all the answers is easy and fun, it is not assessment for learning. Presenting students with material that is far too challenging doesn't help them learn either. Challenging, relevant content should stay within the student's zone of proximal development to accomplish mastery of multiple competencies (Vygotsky, 1978).

Problem solving helps students apply their skills into larger learning goals and develop a sense of self-efficacy and autonomy over their learning. When students solve authentic problems, they can see how their learning is relevant to their interests and experiences outside of the learning environment, which also fosters engagement (Bandura & Cervone, 1983; Ridley, 1992) while engaging with the material (Clark & Mayer, 2016). Finally, when students and teachers achieve meaningful milestones, it fuels their sense of competency and increases intrinsic motivation for learning (Ryan & Deci, 2000).

Absence: The design of the app is either boring or distracting. The program either lacks gamification features that would support engagement or the gamification features are excessive, distracting, or even annoying. It is difficult for a teacher to adapt the tool to meet their students' abilities and culture, which may cover a wide range within one classroom. Opportunities to connect the assessment content to real-world problems are rare or difficult.

Exemplar: The design of the app is highly engaging. Gamification features support celebration and movement forward through the content without being distracting or off-putting. Teachers have the information and tools they need to match task difficulty to student abilities, even when the range within a class may be wide. Teachers can select or infuse real-world, culturally relevant content and/or problem solving through the app.

Templates & Examples

DEFINITION: Templates and high-quality examples are searchable by topic, format, purpose, and/or standards.

DESCRIPTION: Teachers can best understand how to effectively use formative assessment tools when they see high quality examples already created for students, contexts, or purposes like theirs. In just a few clicks they should be able to find, use, and tailor templates or examples to their classroom.

PURPOSE: Similar to how concrete and worked examples help students learn, templates and samples give teachers new ideas on how to connect their relevant prior knowledge to new concepts and formats (Rawson et al., 2015; Schwartz et al., 2016).

Absence: Tool offer no or few templates and examples for teachers to use. Templates and examples are poorly constructed and/or showcase a very limited breadth of possibilities. Templates and examples are difficult to find and adapt for different student groups.

Exemplar: Tool offers multiple and varied templates and examples for teachers that are easily searchable and adapted for different student groups. Templates and examples are of high quality and vary in content and format.

Flexible Integration

DEFINITION: There are multiple ways to integrate the tool into the teaching and learning experience.

DESCRIPTION: Tools should have lots of options for the "who, what, where, when, why, and how" of engaging students while learning. Who? Whole class or in groups. What? About anything! Where? In person or remote. When? Synchronous or asynchronous. Why? To build consensus or explore divergent thinking. How? To collaborate or compete.

PURPOSE: Formative assessment could be viewed as playing with what you've learned. Play "frees us from the fear of failure, allows us to take risks, to explore, and try new things" (Gee, 2017). When tools allow for flexible integration into the classroom (or anywhere) at any time for any purpose, they can be the teacher's toolbox for every type of the best practices of practice: interleaving, spacing, and variability (Brown et al., 2014). With every learning experience comes an emotional experience, and with flexible integration teachers have control of both the content and emotional flow of the learning experience (Tokuhama-Espinosa, 2018).

Absence: Tool integration is limited to only a particular technical feature (e.g., embedded in a Google slide) or a specific setting (e.g., in person in a classroom) or instructional purpose (e.g. "exit ticket" quiz). Tools are clunky to pick up and use in the middle of a lesson or in between lessons.

Exemplar: Tool integration offers multiple technical options for use (e.g., ipad app, browser, with other apps or alone) and could be used in a variety of settings and instructional purposes. Tools are easily picked up and used in the middle of a lesson or between lessons.

Format Options

DEFINITION: Activity formats match assessment goals, including student learning goals as well as teacher feedback goals.

DESCRIPTION: The app offers teachers a variety of formats for assessment items in order to best fit the relevant learning goals. Additionally, functionality options facilitate teachers' providing feedback at just the right level. For example, if teachers need to be able to circle where a mistake has been made, then they should be able to draw on the student's response, and any recordings (audio or video) or notes should be present and accessible at the relevant place in the assignment being reviewed.

PURPOSE: Formative assessments included in digital curriculum should be customizable and flexible in their format in order to meet the variability of students' individual strengths and weaknesses, elicit various types of recall/retrieval, and appeal to a variety of student cultural backgrounds (Agarwal & Bain, 2019). Additionally, teachers should be able to provide feedback that is specific, actionable, and immediate (Brookhart, 2017).

Absence: Formative assessments are not customizable, or are prohibitively complex to change. Teachers have very limited feedback options.

Exemplar: Formative assessments vary in format, purpose, and even cultural references. Assessment formats are customizable and can be easily adjusted by the teacher to better fit student needs. Teachers have a variety of feedback options, and can choose how "scores" count towards cumulative performance metrics.

Timely Results

DEFINITION: Information about student performance on assessments is available right away and can be viewed over time.

DESCRIPTION: Depending on the purpose of the assessment, reporting could be shared immediately with group results (such as a live polling app) or at the end of a session with individual results (such as a quiz). As appropriate, teachers can access the results by student for each session, as well as longitudinally over time.

PURPOSE: Assessment performance data should be available to teachers and students in real time. Such feedback is timely (Brookhart, 2017), and can support teachers in adaptable lesson plan shifts to best meet student needs.

Absence: Student results are not available right away or are difficult to access quickly. Information about student scores over time is absent or difficult to access and analyze.

Exemplar: Information about student performance is provided instantly and in a format that is easy to access, share, and understand. Insights about student performance over time is available and is easy to access and understand.

Actionable Data

DEFINITION: Performance results and reports should provide enough detail to help teachers make instructional decisions.

DESCRIPTION: Reporting information should help teachers make decisions about what to teach to whom, limiting the amount analysis (qualitative and quantitative) that the teachers need to do on their own. As such, results should be available in aggregate, as well as by subgroup or individual easily. Additionally, artificial intelligence can make the teacher's next steps more effective for every student, such as through good instructional suggestions.

PURPOSE: Reports should also be easy to read, navigate, find information, share, and save information when needed. To truly personalize and accelerate learning, assessment reporting should highlight diagnostic information for varied instructional purposes (teach, reteach, remediate) and sizes (whole, small group, or individual) - in other words, where learners should go next (Brookhart, 2017). Formative assessments should be easy to administer and quick to find the information needed to inform the direction of learning. Time is a precious resource, so digital tools should be mindful to keep the administrative burden low for teachers and school leaders.

Absence: Information about student performance is extremely limited and does not provide the teacher with insights to inform instructional decision-making for students, either as individuals or in groups. Interoperability of the app with other relevant data systems is poor.

Exemplar: Information about student performance is translated into insights the teacher can use to easily inform instructional decisions for each student as well as student groups. Interoperability of the app with other relevant data systems is excellent.

Varied Retrieval Options

DEFINITION: App offers a variety of formats for retrieval practice, including opportunities that support "free recall" of knowledge and elaboration.

DESCRIPTION: The app offers a variety of options for retrieval practice that go beyond flash cards and multiple-choice quizzes. This includes opportunities that support "free recall" of knowledge, as well as elaboration activities for students to connect prior knowledge to new learning, thus demonstrating what they know in a variety of ways.

PURPOSE: Students perform better when retrieval practice it distributed (spaced out), interleaved (has a mixed up, variety of related tasks), and is organized in a way that optimizes cognitive effort to enhance learning (Agarwal & Bain, 2019). The process of retrieval helps build and deepen connections between concepts in long term memory, which facilitates longer-lasting learning - and regular assessment is highly effective at prompting students to make such connections. New knowledge must get connected to existing knowledge in the brain, and activating or building prior knowledge facilitates the formation of these new connections when information is passed from working memory into long term memory (Fisher et al., 2012; National Research Council, 2000). Elaboration is the process whereby students make connections between new and prior knowledge to grow their understanding, and assessment activities can support such elaborative practice.

Absence: Assessment items are limited, fixed types (e.g., all multiple choice), and/or are difficult to adjust.

Exemplar: Assessment items vary to provide a wide range of retrieval experiences, including multiple choice, free response, ranked choice, drawing, text-based, graphic and multimedia, etc.

Immediate & Personal Feedback

DEFINITION: Specific and actionable feedback provided in real-time that is "just for me."

DESCRIPTION: Feedback to students should be personal (or personalized), elaborating on student's correct thinking and/or address misunderstandings; feedback that is personal is more relevant and engaging for students. If immediate feedback is not possible, it is better for feedback towards students to be delayed than not provided at all. Feedback is grounded in clear success criteria.

PURPOSE: Personal feedback is more meaningful and effective than general feedback (Gay, 2000), and the feedback should be as immediate (near to the assessment opportunity) as possible (Brookhart, 2017). Clear success criteria are essential for informative learning experiences including feedback (Clarke, 2021); such criteria can promote self-management skills through self-review, and social awareness and management skills can be practiced and developed through peer-review. (Andrade & Heritage, 2017).

Absence: Formative assessment tool offers students little or no feedback as they are working, and feedback provided by an intelligent (AI) tutor is limited and repetitive. Real-time feedback functionality for teachers is clunky or extremely limited.

Exemplar: Formative assessment tool offers student helpful and relevant feedback in real time, and is grounded in clear success criteria as appropriate. Feedback provided by an intelligent (AI) tutor is varied and specific. Real-time feedback functionality for teachers is easy to use.

Feedback dialogue

DEFINITION: Tool facilitates back-and-forth dialogue between educators and students through feedback to support student work revision.

DESCRIPTION: Feedback is a form of communication, and a good formative assessment app should support a back and forth between educators and students, where students can receive and respond to feedback (i.e., correct their mistakes) to learn through revision and inform educators of future learning needs.

PURPOSE: Through the consistent exploration of what students know, educators can learn more about their students' skills and interests. This knowledge sharing helps strengthen the match between students' needs and an educator's plans, thus building trust and empathy between the pair (Hattie & Clarke, 2019). A cycle of feedback also provides students with opportunities to correct their mistakes and achieve the satisfaction of finding the correct answer, which builds their sense of competence and motivation (Deci & Ryan, 2002).

Absence: Formative assessment tool doesn't allow for ample student-teacher communication or work revision as appropriate.

Exemplar: Formative assessment tool easily allows for ample student-teacher communication through feedback dialogue, and offers students opportunities to revise and resubmit work as appropriate.

Spacing and Interleaving

DEFINITION: App offers teachers the ability to easily space and interleave assessment items across instructional activities and lessons.

DESCRIPTION: By returning to old concepts (spacing) and mixing them in with other topics (interleaving), formative assessment can be quite effective at helping solidify learned concepts. Formative assessment apps should offer functionality and prompts that support both of these practices.

PURPOSE: Spacing is the practice of reviewing information from a prior lesson, and helps with long-term retention. Interleaving refers to the practice of switching between different ideas in one learning episode. As key features of effective retrieval practice, both spacing and interleaving can significantly improve long-term retention. (Benjamin & Tullis, 2010; Rohrer, 2012)

Absence: App does not prompt teachers to space or interleave across topics and lessons, and offers very limited functionality (including pre-loaded items) to support these practices.

Exemplar: As a default, the app suggests spacing and interleaving assessment items across topics and lessons, and makes doing so easy for teachers.

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COURSE OF MIND
AN ISTE INITIATIVE

Formative Assessment Scoring

Product _____ Rater _____ Total Score _____

Label	Definition	Rating	Score
Clear Presentation	Information presented as images, written text, audible narration, and music clearly supports assessment goals.		
Engaging Design	An engaging, interactive design that teachers can adjust in order to challenge students at their level so they can "show what they know."		
Effortful Practice	Curriculum design supports students' effortful practice to improve learning, including spaced practice, interleaving, and active retrieval activities.		
Chunking and Pacing	Interaction expectations are previewed, user-paced, and divided into consumable segments.		
Cultural Relevance	The tone and design of interactions are approachable, reflective of the targeted age group, and relevant to the community.		
Flexible Integration	There are multiple ways to integrate the tool into the teaching and learning experience.		
Templates & Examples	Templates and high-quality examples are searchable by topic, format, purpose, and/or standards.		
Format Options	Activity formats match assessment goals, including student learning goals as well as teacher feedback goals.		
Timely Results	Information about student performance on assessments is available right away and can be viewed over time.		
Actionable Data	Performance results and reports should provide enough detail to help teachers make instructional decisions.		
Varied Retrieval Options	App offers a variety of formats for retrieval practice, including opportunities that support "free recall" of knowledge and elaboration.		
Immediate & Personal Feedback	Specific and actionable feedback provided in real-time that is "just for me."		
Feedback dialogue	Tool facilitates back-and-forth dialogue between educators and students through feedback to support student work revision.		
Spacing and Interleaving	App offers teachers the ability to easily space and interleave assessment items across instructional activities and lessons.		

COURSE OF MIND
AN ISTE INITIATIVE

Formative Assessment Scoring

Product _____ Rater _____ Total Score 1

Label	Definition	Rating	Score
Clear Presentation	Information presented as images, written text, audible narration, and music clearly supports assessment goals.		-1
Engaging Design	An engaging, interactive design that teachers can adjust in order to challenge students at their level so they can "show what they know."		0
Effortful Practice	Curriculum design supports students' effortful practice to improve learning, including spaced practice, interleaving, and active retrieval activities.		0
Chunking and Pacing	Interaction expectations are previewed, user-paced, and divided into consumable segments.		-1
Cultural Relevance	The tone and design of interactions are approachable, reflective of the targeted age group, and relevant to the community.		1
Flexible Integration	There are multiple ways to integrate the tool into the teaching and learning experience.		1
Templates & Examples	Templates and high-quality examples are searchable by topic, format, purpose, and/or standards.		1
Format Options	Activity formats match assessment goals, including student learning goals as well as teacher feedback goals.		1
Timely Results	Information about student performance on assessments is available right away and can be viewed over time.		0
Actionable Data	Performance results and reports should provide enough detail to help teachers make instructional decisions.		1
Varied Retrieval Options	App offers a variety of formats for retrieval practice, including opportunities that support "free recall" of knowledge and elaboration.		-1
Immediate & Personal Feedback	Specific and actionable feedback provided in real-time that is "just for me."		-1
Feedback dialogue	Tool facilitates back-and-forth dialogue between educators and students through feedback to support student work revision.		1
Spacing and Interleaving	App offers teachers the ability to easily space and interleave assessment items across instructional activities and lessons.		-1