

Cognia Assessments

Educational assessments serve an essential purpose in supporting effective teaching and learning processes, as well as holistic educational improvement. Assessments measure learning outcomes, help monitor learner progress, identify learner needs, and inform instructional decisions. Further, they may signal what is important, as well as spur learning and motivation (William, 2017; McTighe & Ferrara, 2021). Certain types of assessments, such as large-scale statewide summative assessments, are used for federal, state, and district accountability systems and serve to evaluate the effectiveness of instructional programs, identify trends in performance and performance gaps, and facilitate research and policy development. While there are many approaches to assessment, widespread consensus exists regarding key standards and principles for test developers and users. These include the 2014 American Educational Research Association (AERA) Standards for Educational and Psychological Testing (i.e., *The Standards*) as well as the High-Quality Principles as defined by the *Criteria for High-Quality Assessment* (Darling-Hammond et al., 2013). Additional principles, such as the U.S. Department of Education’s *10 Principles for Building a High-Quality System of Assessments*, reinforce similar core qualities, such as capturing an array of thinking, emphasizing alignment, ensuring coherence and fairness, and encouraging continuous improvement (2018). Further research supports an array of practices that improve the quality of assessments and their utility in supporting learning. Cognia’s approach to large-scale summative assessment emphasizes three key elements: principled design, purposeful collaboration, and meaningful data. Each employs rigorous research to deliver assessments aligned to their intended use, with maximized utility.

Principled design

Principled assessment design refers to a process of creating assessments that are well-founded, ethically sound, and aligned with educational principles and goals (Ferrara et al., 2016). Assessments are intended to accurately measure learner knowledge, skills, and abilities in a fair and meaningful manner. In order to do so, assessment developers and users must consider how to best ensure the assessment’s validity, reliability, and effectiveness (AERA, 2014; Chapelle, 2020; Darling-Hammond et al., 2013; Ferrara et al., 2016). This process begins with clear and consistent identification of the



intended purpose and use of the assessment. A variety of assessment types and practices exist, each with their own intended use(s). Paramount to the degree of effectiveness of an assessment is the alignment of each of its components (e.g., test design, content, psychometrics, data, reporting) with the intended use of the assessment, as defined by the needs of its users (AERA, 2014; Ferrara et al., 2016; Perie et al, 2009).

Cognia’s commitment to principled design is evident throughout its process and services. Cognia prioritizes the early identification and continuous evaluation of score interpretations and uses (SIUs) as the north star for assessment design and delivery. The ongoing gathering of validity evidence is crucial to high-quality assessment programs. Through the application of research on argument-based validation, Cognia explicitly aligns its validity argumentation with the SIUs of the assessment, thereby ensuring that the core intent of the assessment is never lost (Chapelle, 2020). Cognia’s industry-leading technical reporting ensures that all technical artifacts of an assessment are reported by explicitly linking them to the supportability of the intended interpretations and uses. Each of Cognia’s assessment services teams, including content, psychometrics, implementation, and reporting, utilize *The Standards* and *High-Quality Principles*, along with other industry practices such as universal design, to ensure the highest content quality and prioritization of equity, fairness, and inclusion (AERA, 2014; Darling-Hammond et al., 2013; Ferrara et al., 2016). With an average of over 15 years of experience, Cognia’s team of educational experts continues to contribute to the field through regular presentations and publications. For example, Cognia psychometrician Louis Roussos has been cited in more than 1,000 peer-reviewed research articles. Most importantly, Cognia applies its own emphasis on continuous improvement to its services. Assessment teams regularly engage in program evaluation practices, such as lessons learned, quality assurance reviews, and developing and refining theories of action, to ensure that their work meets intended outcomes and best supports the needs and uses of their clients.

Purposeful Collaboration

Scholars have identified a nearly ubiquitous benefit to collaboration across various contexts (Byrk et al., 2015; Jordan et al., 2016; Okul & Nyonje, 2020; Quay & Lockwood, 2019). This includes the power of collaboration to lead to improvements in learning outcomes, school effectiveness measures, individual well-being, and capacity-building (Byrk et al., 2015; Okul & Nyonje, 2020). When focusing on assessment programs, it is crucial that collaboration be continual and purposeful. That is, collaboration must be authentic in order to yield optimal rewards like increased assessment quality and better-aligned uses (Byrk et al., 2015; Hamilton et al., 2009). Diverse stakeholder collaboration may improve the specified assessment through bias reduction, greater cultural sensitivity, and accurate interpretation (AERA, 2014). It may also serve as a powerful learning opportunity for educators, for whom such a collaboration may yield a deeper understanding of assessment techniques and principles, ultimately fostering increased likelihood that the resulting assessment function as intended (AERA 2014; Black et al., 2011; Byrk et al., 2014; Hamilton et al., 2009).

Partnership is at the heart of all Cognia services. Cognia's commitment to aligning its assessment products to the intended uses and purposes of the client is reinforced through continuous collaboration with a variety of local stakeholder groups, as well as diverse teams within Cognia. In every assessment program, initial planning begins with the definition of the program's purpose, goals, and intended uses (e.g., SIUs). Then, beginning with reporting and interpretation resources, Cognia engages with a variety of stakeholders to inform the content, design, and key features of assessment reports and supports. In addition to improving delivery of services in a manner aligned to the intended uses of the assessment, intentional collaboration is essential to promote shared ownership and utility of an assessment program (Black et al., 2011). Cognia promotes educator involvement throughout the assessment development cycles with item writing workshops, content review, cognitive labs, bias and sensitivity review, item data review, and standards setting. Each of these distinct and necessary stages of the process enables educators to work alongside Cognia staff to ensure that the resulting assessments are high quality, appropriate, and executed in alignment with their intended use.

Meaningful Data

Data on what students know is crucial to inform meaningful instruction (Connor, 2019; Halverson et al., 2007; Hamilton et al., 2009). Further, information from assessments empowers educators and educational leaders to monitor learning progress and make data-driven decisions to promote mastery (Foegen et al., 2007; Harkin et al., 2016; Swan & Mazur, 2011). While other forms of assessment may be more instructionally sensitive, there are many possible ways

in which all assessments, including large-scale summative, may inform instruction (Abrams et al., 2015). Summative assessment scores provide an important and necessary longitudinal and systemic view of student learning across a state or region. With a high degree of stability and consistency, state summative data provides reliable and valid information regarding learner readiness that may be used to monitor trends and inform programmatic decision-making. Particularly key for policy makers and district and state leaders, summative assessment data provides effective guidance and support to local education agencies, and the identification of areas of strength and opportunities for improvement. Though vastly different than formative assessment practices, summative assessments, like all assessments, should be used formatively, so that the information gleaned is used in a constructive manner to inform action and shape educational programs (Hoover & Abrams, 2013). Key to supporting the effective and appropriate uses of assessment data is the ability of stakeholders to interpret and understand results in a meaningful manner, often referred to as assessment literacy (Black et al., 2011).

Ensuring the meaningfulness and utilization of assessment data is the primary driver behind Cognia's emphasis on the intended uses of an assessment program. Regardless of the quality of the assessment, timeliness of delivery, or accuracy of reporting, if the assessment results are not provided in a manner that evokes meaning and utility, the services were unsuccessful. To maximize meaning and utility, Cognia assessment services are bolstered by professional learning opportunities and interpretation and use resources. Dynamic reports and analytics tools are provided to leaders and educators to support greater insights into learning outcomes and trends in performance. Additionally, via Cognia's Continuous Improvement Platform, high-quality and research-based professional development (e.g., Learning Labs) is available to support assessment literacy. Customized professional learning opportunities are also available and provided by experienced staff to facilitate the greatest understanding of assessment outcomes and appropriate uses. Together, Cognia's services aim to enhance each component of the assessment program including the quality of the assessment, the usability of reports, and the ability of users to appropriately apply the information.

Cognia weaves principled design, purposeful collaboration, and meaningful data throughout its assessment design and delivery processes. Assessment is a crucial lever in supporting student learning, and warrants significant expertise, care, and commitment. Cognia's use of research and best practice maximizes the quality and value of its assessments.

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