Attachment F - Technical Proposal Questions

Detailed Scope of Services

Section 1. Scope of Work Questions

Question 1.1

(1) Assessment Design

The Johns Hopkins Center for Technology in Education (JHU CTE) and WestEd have collaborated for more than a decade to develop, implement, and administer early childhood assessments for state departments of education. Through partnerships with the Maryland State Department of Education (MSDE) and the Ohio Department of Education (ODE) and with the support of federal Race to the Top – Early Learning Challenge and Enhanced Assessment grants, JHU CTE and WestEd developed the Ready for Kindergarten assessment system, which includes the Kindergarten Readiness Assessment (KRA) and the Early Learning Assessment (ISPROUT), to assess the essential domains of school readiness for children between the ages of 36 and 72 months. Both instruments are currently used in Maryland and Ohio. The KRA is also used to assess all incoming kindergarten students in Hawaii and South Carolina. The Early Learning Assessment is also used in Indiana statewide, primarily for children receiving special education services, and has been customized and branded as ISPROUT. In partnership with the MSDE, JHU CTE and WestEd worked together to expand the early learning assessment progressions to assess children aged birth to 36 months.

JHU CTE and WestEd propose that Indiana use both assessments as the basis for its birth to kindergarten, Kindergarten Readiness Assessment solution, as described by this Request for Proposal (RFP). For the past five years, JHU CTE and WestEd played a vital role in executing Indiana's vision for ISPROUT (Early Learning Assessment). If given the opportunity to continue and expand our work in the state, we are confident that we can continue to provide Indiana with the same high-quality service and results.

The Early Learning Assessment is a formative assessment utilized to measure skill development in children from infancy to kindergarten. The assessment is broken down into 72 Skills, Knowledge, and Behaviors (SKB) that make up 32 learning progressions. For preschool students through age 5, the ISPROUT uses a subset of 28 SKBs that are in alignment with the Indiana Early Learning Foundations, which include the development of foundations such as:

- English/Language Arts
- Mathematics
- Physical Development
- Science
- Social Studies
- Student Wellbeing

These concepts are reported in three categories: social/emotional, knowledge and skills, and independence/motor coordination, which are also used for federal reporting to the U.S. Department of Education's Office of Special Education Programs (OSEP). ISPROUT (Early Learning Assessment) is currently utilized for Indiana students receiving services as part of an Individualized Education Program (IEP) to meet the reporting requirements of OSEP. In many cases, providers opted in to use ISPROUT with other students to determine levels of mastery.

The ISPROUT (Early Learning Assessment) helps teachers gain a better understanding of the whole child – of each child, including areas of strengths and areas of need. The Early Learning Assessment domains that are included on the ISPROUT are: Social foundations (includes Approaches to Learning/Executive Functions), Language and literacy, Mathematics, Science, Social studies, Physical well-being and motor development, and Fine arts. Each domain is then broken down into strands, learning, progressions, and finally, Skills, Knowledge, and Behaviors (SKBs).

Each SKB contains distinct levels of performance. Level 1 represents milestones at approximately three years of age. Level 4 represents approximate entry to kindergarten, and Level 5 represents the approximate end of kindergarten. Levels 2 and 3 represent a child's progress between three years of age and kindergarten entry. Levels A through D represent

developmental stages and standards before Levels 1 through 5. These allow teachers to assess children who may be at earlier stages of development than typical age-3 milestones.

The ISPROUT (Early Learning Assessment) is based on the teacher's ongoing observations of children engaged in typical daily routines and activities. Performance-based activities have been created to support the administration of ISPROUT based on Indiana teacher feedback. To assess, teachers gather evidence which can be entered into the system and linked to a specific progression and its rating. Multiple reports are available on demand for teachers and administrators. After the required administration window closes, an administrative user can generate a report for all teachers in the district or program.

The results of the ISPROUT are used primarily to guide instructional decision-making in a variety of preschool settings and to measure children's progress in response to educational activities and interventions. It is also used to inform decision-making by stakeholders at the program, district, county, and State levels.

IDOE has identified four assessment windows each year where providers assess children and enter ISPROUT data into the KReady online system.

Training and professional development is provided via a trainer-of-trainers model for all providers that will use the assessment. Required training includes observation practice and a simulation exercise to ensure calibration and maintain reliability with observation judgements.

While the ISPROUT measures skills for preschool children on a birth to 72-month continuum, JHU CTE and WestEd recently expanded the Early Learning Assessment to create progressions appropriate for administration with children aged birth to three.

Indiana would be able to continue to use the functions and features that are in the system and those customizations specifically built for Indiana's needs such as:

The Early Learning Assessment can be administered for children who are infants through age two. Just as Indiana made decisions about a subset of SKBs to implement as part of ISPROUT, the State may want to review the recommended SKBs based on standards alignment and determine which to use.

Kindergarten Readiness Assessment (KRA)

The Kindergarten Readiness Assessment is a developmentally appropriate mix of direct assessment and observational items designed to align to pre-kindergarten (4) standards to provide a comprehensive readiness profile for each child. Designed to be administered at a single point in time at the beginning of the student's kindergarten year, the KRA consists of four areas of early learning: Language and Literacy, Social Foundations, Mathematics, and Physical Well-Being and Motor Development.

The overall purpose of the KRA is to support and advance children's early learning and academic and social development. The KRA provides data that educators can use to differentiate instruction and ensure quality learning opportunities for children by building on the strengths of the individual student. The KRA supports and advances student's early learning and achievement by:

- informing prior school system and child care stakeholders of early learning standards and experiences that promote kindergarten readiness;
- identifying individual student's needs, gaps in foundational learning, and providing necessary supports to students and educators;
- assisting teaches in data-driven instructional decision making at the student and classroom level; and
- providing families with information about their children's learning and development.

The KRA utilizes two assessment methods – direct assessment and observation – and three item types – selected response, performance task, and observational. All direct assessment items can be administered by the teacher using paper-based materials including manipulatives. Additionally, teachers can save time by using the student-facing app on a device to complete some of the direct assessment items. A student listens to a short script and is then instructed to select

an item by touching, or dragging and dropping, a picture. Once the item is completed, the student touches the check mark to move to the next item.

The full KRA (2.0 version) instrument is 50-items. Two reduced-item versions have been developed and are available for Indiana to select instead of the 50-item version: A 30-item version, and a 27-item version. Each of these versions consists of two forms (Form A and Form B). Each of the versions and forms was created using the same assessment blueprint.

Teachers use one of the methods available in the secure, online Ready for Kindergarten Online (KReady) system or student-facing KRA app to input or capture student scores. At any time during the administration window once one or more students have all items complete, an overall scaled score is calculated for each student. The scale score is used to assess their readiness for instruction in kindergarten using standards rated at one of three levels: Demonstrating Readiness, Approaching Readiness, and Emerging Readiness. The KReady system supports multiple assessment types and provides reports for all of the data in the system.

Developmentally Appropriate Assessment

The ISPROUT and KRA follow the principles and guidelines provided by the National Association for the Education of Young Children (NAEYC) for developmentally appropriate assessment in the following ways:

- **Individualized and Comprehensive:** They take into consideration the unique characteristics, needs, and abilities of young children. The proposed kindergarten readiness assessment solution will provide a whole child picture that includes individual strengths and developmental progress of children across multiple domains of development, including cognitive, social-emotional, physical, and language development.
- **Observation-based and Authentic**: The KRA uses a developmentally-appropriate mix of assessment methods including observation. ISPROUT data are collected from observing children in multiple settings during everyday activities and collect multiple sources of information. Assessment data are collected in an authentic manner; over time using real-life situations.
- **Culturally and Linguistically Responsive:** A fully accessible approach to assessment design and implementation is necessary to ensure that children with diverse learning characteristics have the opportunities to demonstrate their knowledge and skills. Teachers and parents need to have a true sense of children's development, in order to effectively identify areas of focus that promote growth and learning for all. To meet the needs of all children, a structured decision-making process has been customized for the assessment solution to help teachers identify and implement individualized student supports. Additionally, through the training – with focus on anti-bias assessment strategies and individualized guidance for supporting English Learners and children with disabilities) – and the family reports, the assessment solution aims to respect and support the different languages, cultures, and backgrounds of the children being assessed.
- **Age-Appropriate and Used for Instruction:** The assessments are appropriate for the child's age and developmental stage. They align with the state's standards and research literature for typical developmental milestones. The formative ISPROUT assessment recognizes that children develop at different rates by seeking to understand where each child is in their development and progress, and allowing educators to identify areas where they may need additional support and plan instruction.
- **Family Involvement:** The assessments provide family-friendly reports and resources for families and assessment data are used to enhance the parent-teacher collaboration.
- **Professional Development:** Educators involved in the assessments receive training to ensure they understand and implement developmentally appropriate assessment practices effectively. The professional development includes fair and ethical assessment implementation with observational practice, review of test security procedures, and training for using data appropriately.

Alignment to Indiana's Early Learning Standards

The complete Early Learning Assessment comprises 32 learning progressions and 72 SKBs. When Indiana adopted the Early Learning Assessment in 2019, IDOE staff and Indiana educators selected 28 SKBs, aligned them to the three OSEP reporting categories, and named the assessment ISPROUT. Appendix C includes the alignment of all the Early Learning Assessment SKBs, including the ISPROUT SKBs, to the current Indiana Early Learning Standards (see the ELA

(ISPROUT) SKB Alignment worksheet). Section 1.5 Alignment provides more information about the technical evidence that the proposed assessments are aligned to the Indiana Early Learning Standards

The Early Learning Assessment (ISPROUT) Framework is also included in Appendix C (see the ELA (ISPROUT) Framework worksheet). The ISPROUT Framework includes all 28 SKBs and their alignment to the Indiana Early Learning Foundations (2019) and the Indiana Early Learning Standards (2023) for comparison. The ISPROUT Framework also includes a column that denotes which SKBs apply to infant/toddler-aged children.

In addition to the alignment information provided, Section 2: Assessment Criteria and Evidence Questions (particularly 2.1) provides evidence that the assessments measure appropriate levels of difficulty and cognitive complexity, and that there is a full range of items at appropriate levels within the assessments. The ISPROUT Early Learning Assessment provides progressions of development from age birth to 72 months.

Section 2 also provides detailed information about how the assessment system supports valid and reliable scores for each student. Additionally, reports are described in Section 1.3 and they include both individual students reports and aggregated reports (e.g., by progression level or approximate age.)

Our responses to Question 1.26/Section 6.1.2 (Scoring Method), Question 1.27/Section 6.1.3 (Validity and Reliability), Question 1.32/Section 7.1.4 (Technical Analyses), Question 1.33/Section 7.1.5 (Technical Reports), Question 1.36/Section 7.1.8 (Validity), Question 1.37/Section 7.1.9 (Reliability), Question 1.38/Section 7.1.10 (Scaling and Equating), and Question 1.39/Section 7.1.11 (Inter-Rater Reliability Study) provide detailed information as to how WestEd plans to meet the standards for validity, reliability, and technical quality described by the Standards for Educational and Psychological Testing (AERA, APA, and NCME) and by the peer review guidance provided by the U.S. Department of Education (USED).

ISPROUT Assessment Administration and OSEP Reporting

The kindergarten assessment solution fulfills federal requirements for reporting to the U.S. Department of Education's Office of Special Education Programs (OSEP). As described in Question 1.26/Section 6.1.4 (Scoring Method) Question 1.32/Section 7.1.4 (Technical Analyses) and Question 1.38/Section 7.1.10 (Scaling and Equating), the Early Learning Assessment (ISPROUT) utilizes a Rasch scale for each reporting category, allowing for the creation of a table that converts a raw score to a scale score. This approach avoids the need for pattern scoring and makes immediate reporting much easier. The Rasch scale score for each reporting category is used to determine a progress level and, subsequently, OSEP growth category for each OSEP functional area. Given that the reporting category scales have already been established for the Early Learning Assessment (ISPROUT), there would be no need to complete a linking study after the administration in 2024–2025.

The subsequent sections of this response will describe the basic design of the Early Learning Assessment, the Kindergarten Readiness Assessment, and the Ready for Kindergarten Online (KReady) system used for administration and reporting of the assessments. The processes used for development will address the procedures used to ensure the appropriateness of the assessment for students in early childhood programs across Indiana. While we can begin with offering the existing ISPROUT assessment instrument, given the adoption of the revised Indiana Early Learning Standards (2023) and IDOE's desire to expand the assessment system to include infant/toddler-aged and kindergarten children, IDOE might wish to revisit the ISPROUT Framework and make minor adjustments to the SKBs included within ISPROUT. JHU CTE and WestEd can support IDOE with any adjustments to the ELA (ISPROUT) frameworks. JHU CTE and WestEd are committed to providing meaningful data for parents, teachers, districts, IDOE, and other stakeholders to inform instructional practice and better prepare students for the rigor of future learning.

Question 1.2

(2.1) Assessment Timeline

The ISPROUT is available year-round, and providers are able to complete the assessment, enter data, and receive reporting of results within the State's required timelines. We currently provide annual assessment windows for Indiana educators which allow for administration anytime throughout the year (e.g., the child's birthday). Currently, preschoolers in Indiana are assessed with ISPROUT at preschool entry and exit as well as annually. Results can be reported immediately upon completion of the assessment administration. JHU CTE currently provides the state data file quarterly to meet the state reporting requirements.

In our current five-year contract with Indiana, we added an ability to teachers to identify a data set as Entry, Exit, or Interim. That data field is available in the system and on state reports which is necessary for federal reporting. Teachers can assess during any portions of their day, and the KReady system is available during weekdays, nights, and weekends for data entry as needed. A technology Help Desk will also be available 24/7 to assist teachers with the technology.

For the KRA, IDOE will define the start and end dates of the assessment window (i.e., six week window from the start of school). Teachers are able to access reports for students as soon as one data point is entered in the KReady online system. Teachers can generate Individual Student Reports for families for a child on their roster immediately – and at any time during the window -- once the assessment is complete.

Question 1.3

(3.1) Delivery

JHU CTE, in collaboration with state leaders and assessment specialists, has made a national impact on the conversation surrounding kindergarten readiness. In December 2011, Maryland and Ohio were awarded Race to the Top-Early Learning Challenge Grants to revise and enhance kindergarten entry assessments, develop formative assessments, and conduct a rigorous review of existing screening tools for children in both states. Since then, the departments of education in Maryland (MSDE) and Ohio (ODE) have partnered with JHU CTE and WestEd to design, implement, and support the Kindergarten Readiness Assessment (KRA) and the Early Learning Assessment.

Since 2011, JHU CTE has coordinated project partners, led the development of the technology platform, and designed the professional development that supports the KReady system. The KRA has been in place statewide in Maryland and Ohio since 2014, and the Early Learning Assessment has been implemented with large populations of students in Maryland and Ohio since 2016. We have been supporting the implementation of Indiana's Early Learning Assessment (ISPROUT) for the past four years. We also have experience implementing the KRA in South Carolina, Michigan, and Hawaii.

JHU CTE has provided comprehensive services and support for these states similar to what is included in our proposal such as:

- Deploying, managing, and maintaining a Comprehensive Assessment Infrastructure in Indiana
- Providing implementation support for the administration of the kindergarten readiness assessment solution
- Developing and delivering a robust train-the-trainer model and an extensive set of online professional development (PD) training materials, resources, webinars, and simulations designed to support Indiana's administration
- Providing timely, ongoing technical assistance and coaching to practitioners administering the assessments, serving as a point of contact for questions related to assessment implementation, data analysis, and instructional planning
- Providing assessment customizations, report development, and psychometric support in partnership with WestEd

The technology infrastructure for the proposed kindergarten readiness assessment solution includes both the KReady system and applications for both the ELA and KRA. The KReady system serves as the primary interface for teachers to access the ELA and KRA assessments, enter assessment data, access professional development and supporting resources, review class rosters, manage small groups, and run a variety of reports to support instruction and to communicate with families. We have also made customizations to the system to meet the needs set forth by the Indiana Department of Education (IDOE), such as a new ISPROUT Individual Student Report for Families and the ability in the system to identify data sets as entry, exit, and interim. The ability of Indiana to directly shape the ongoing development and enhancement of the KReady system is a notable advantage over the purchase of commercial, off-the-shelf software products.

The **ELA App** is an application designed for teachers to administer the Early Learning Assessment by collecting observation-based notes, uploading authentic artifacts such as pictures and video, and entering SKB ratings for children based on the learning progressions and rubrics provided.

The **KRA App** is an application that includes a student-facing mode to support the delivery of direct assessment items using child-friendly, touch-screen technology.

The KRA and ELA Apps are available for use on iOS devices (Apple) from the Apple App Store, and Android devices from the Google Play Store. In addition, a version of each App is available via web browser on computers (including Chromebooks) using HTML 5 technology.

All states that use the KRA or Early Learning Assessment are invited to participate in the Ready for Kindergarten Collaborative. Regular discussions between and among the state participants support collective sharing of experiences, challenges, and solutions with the goal of continuous improvement of the system and tool as well as information to support policy and practice. If JHU CTE was awarded this contract, Indiana would continue to participate in this Collaborative of states.

Question 1.4

(3.1.1) Test Window and Timing

The assessment system will be available so administration can begin at the start of the 2024–2025 school year. JHU CTE will work with IDOE to schedule training so that it takes place in the spring and/or summer (prior to the school year). The assessment system will be available throughout the full school year with the exception of a small amount of time for routine scheduled maintenance. For the KRA, the State will determine the exact days for the administration window for kindergarten assessment at the start of the school year.

Question 1.5

(3.1.2) Alignment

The Ready for Kindergarten system, comprising the Early Learning Assessment (and current ISPROUT) and the Kindergarten Readiness Assessment (KRA), was developed through an iterative process that involved teacher and cognitive interviews, pilot studies, field tests, and several content reviews conducted by MSDE and ODE, early childhood development experts, and the technical advisory committee. This iterative and methodical development process ensured that the system and its assessments are carefully aligned to early childhood learning and development standards. The [redacted] provide detailed descriptions of the alignment and development processes for the Early Learning Assessment (ISPROUT) and KRA, respectively.

As described in these development reports, the Ready for Kindergarten system is based on the Common Language Standards, which include the domains, strands, standards, and essential skills and knowledge that were initially developed by Maryland and Ohio, in conjunction with WestEd and the initial TAC members. The Ready for Kindergarten System addresses the essential domains as defined by the U.S. Department of Education (social and emotional development, approaches to learning, language and literacy development, cognition and general knowledge [including early mathematics and early science development], and physical well-being and motor development) and has been expanded to include content addressing social studies and fine arts. At the highest level, these domains align closely with the domains within the Indiana Early Learning Standards.

In the development of the Ready for Kindergarten system, several other states, including Indiana, collaborated with Maryland and Ohio to review and revise the Common Language Standards by utilizing a formal standards alignment and crosswalk protocol to conduct a standards-to-standards alignment study with other states' early learning standards. The alignment and crosswalk protocol, which was facilitated by WestEd, identified substantially identical content across all the states and informed revisions to the original Common Language Standards developed by Maryland and Ohio. This alignment and crosswalk protocol resulted in minimal changes, and the revised Common Language Standards were formally approved by leadership from all states. The Ready for Kindergarten system and the Common Language Standards are aligned to the essential domains of school readiness. The Common Language Standards can be found in Appendix C (see the Common Language Standards worksheet).

The Early Learning Assessment (ISPROUT) includes learning progressions, which consist of one or more SKB(s), that are research-supported and aligned to the Common Language Standards. Each SKB includes up to nine level descriptors (i.e., Levels A, B, C, D, 1, 2, 3, 4, 5) that represent the typical milestones of a child's development. Levels 1–5 describe a continuum of the typical skills and behaviors that children develop between 36 and 72 months of age. Levels A–D represent developmental stages that precede Levels 1–5, which allow teachers to assess children who may be at earlier stages of development, including children with disabilities. Each SKB is aligned to an observational rubric, which includes an operational definition of the SKB, directions for observing the SKB, and examples of observable behaviors associated with each level descriptor within the SKB. The learning progressions and SKBs describe the skills and behaviors that

prepare children for school readiness. The complete Early Learning Assessment comprises 32 learning progressions and 72 SKBs. When Indiana adopted the Early Learning Assessment in 2019, IDOE staff and Indiana educators selected 28 SKBs, aligned them to the three OSEP reporting categories, and named the assessment ISPROUT. Appendix C includes the alignment of all the Early Learning Assessment SKBs, including the ISPROUT SKBs, to the current Indiana Early Learning Standards (see the ELA (ISPROUT) SKB Alignment worksheet).

The Early Learning Assessment (ISPROUT) Framework is also included in Appendix C (see the ELA (ISPROUT) Framework worksheet). The ISPROUT Framework includes all 28 SKBs and their alignment to the Indiana Early Learning Foundations (2019) and the Indiana Early Learning Standards (2023) for purposes of comparison. The ISPROUT Framework also includes a column that denotes which SKBs apply to infant/toddler-aged children.

Further, given the adoption of the revised Indiana Early Learning Standards (2023) and IDOE's desire to expand the assessment system to include infant/toddler-aged and kindergarten children, IDOE might wish to revisit the ISPROUT Framework and make minor adjustments to the SKBs included within ISPROUT. JHU CTE and WestEd can support IDOE with any adjustments to the ELA (ISPROUT) frameworks.

Lastly, JHU CTE and WestEd have recently concluded initial work on the development of the Early Learning Assessment 2.0 (ELA 2.0), which focused on selecting a group of SKBs that were highly predictive of kindergarten readiness. This work also included revisions to the current SKBs to better align them to expectations for children from infancy through kindergarten. While ELA 2.0 has not been broadly field tested, this updated version might be of interest to IDOE. Therefore, the ELA 2.0 alignment and framework are also included in Appendix C (see the ELA 2.0 Alignment and ELA 2.0 Framework worksheets). JHU CTE and WestEd envision that the ELA 2.0 could be a more streamlined version of the Early Learning Assessment, supporting a more concise but comprehensive assessment experience for early childhood educators. If IDOE is interested, JHU CTE and WestEd could collaborate with IDOE to evaluate whether the ELA 2.0 would meet IDOE's objectives. WestEd could also support the development of a small set of additional SKBs, if necessary, to ensure better alignment to the Indiana Early Learning Standards and IDOE's reporting goals.

The Kindergarten Readiness Assessment (KRA) component of the Ready for Kindergarten system includes 50 items, 26 direct-assessment items and 24 observational-rubric items. Appendix C includes the preliminary alignment of the KRA items to the Indiana Early Learning Standards (see the KRA Item Alignment worksheet). Further, the KRA Blueprints, based on the Indiana Early Learning Standards and the Common Language Standards, are also included in Appendix C (see the KRA Blueprints worksheet). If necessary to ensure better alignment or reporting, WestEd could develop additional KRA items, which could be field tested during the fall 2024 administration of the KRA.

The current versions of the Early Learning Assessment, ISPROUT, and KRA are included as attachments to this proposal. These assessment materials are considered secure testing materials and should be kept confidential.

WestEd and JHU CTE acknowledge that alignment between the Early Learning Assessment (ISPROUT), the KRA, and the Indiana Early Learning Standards is critically important. Based on our preliminary alignments, we believe that the Ready for Kindergarten system strongly aligns with the Indiana Early Learning Standards; however, we will fully support the independent third-party alignment studies by providing all content and support materials required by IDOE and/or the independent evaluator, as specified in Question 1.34/Section 7.1.6 (Third Party Alignment Study).

Question 1.6

(3.1.3) Educator Involvement

WestEd, as the subcontractor responsible for test design, content development, scoring, and reporting, is committed to the active involvement of Indiana educators in item acceptance review (per Question 1.8/Section 3.1.5), new item development (if necessary), review of performance level descriptors, standard setting, and focus groups to review and/or enhance reporting.

WestEd proposes that the following educator meetings be held to support the Indiana Kindergarten Readiness Assessment (KRA) system:

Educator Meeting	Type	Duration	Participants	Timeline (Approximately)
Item Acceptance Review	Virtual	1 day	30 total 10 Infant/Toddler 10 Early Learning Assessment (ISPROUT) 10 KRA	March 2024
Performance Level Descriptors Review	Virtual	1 day	10	April 2024
Reporting Focus Group – KRA	Virtual	1 day	10	May 2024
Standard Setting – KRA	On-site	2 days	12	February 2025
Reporting Focus Group – Early Learning Assessment (ISPROUT)	Virtual	1 day	10	April 2025
Standard Setting – Early Learning Assessment (ISPROUT)	On-site	2 days	12	Summer 2025
Item Content and Bias Reviews (New Item Development)	Virtual	1 day	20 total 12 Content 8 Bias/Sensitivity	Summer 2024 (if necessary)

Note: The proposed dates are subject to revision based on the timeline for final execution of the contract.

Early in the project and prior to educator meetings, WestEd will collaborate with IDOE and JHU CTE to review in detail the three components of the Ready for Kindergarten system: the infant/toddler component, the Early Learning Assessment (ISPROUT), and the Kindergarten Readiness Assessment (KRA). This process will include thorough reviews of the assessment framework/blueprints and culminate in the development of criteria for selecting high-quality items during the Item Acceptance Review meeting with Indiana educators. While the existing ISPROUT has been administered since 2019, the review meeting with IDOE and the Item Acceptance Review meeting with Indiana educators will serve as the foundation for this project, specifying the key requirements and attributes of the Indiana KRA system. Convening the assessment framework/blueprint and item acceptance meetings in early spring 2024 will serve to inform the development of any new assessment items that might be needed to address any gaps in measurement (Question 1.9/Section 3.1.6) and better meet IDOE's desired content and technical qualities.

WestEd's assessment development practices always include the active engagement of educators in the review of content before it is presented to students in field test or operational forms. If IDOE and WestEd agree to develop new items to address any gaps in measurement, WestEd will work with IDOE staff and Indiana educators to revise and develop the content of the new items. Obtaining educator feedback throughout the process is critical, to inform both IDOE and WestEd staff of the alignment and utility of the assessment as designed and to build teacher support for the use of the assessment. Item content and bias review meetings would take place with Indiana educators prior to the addition of new items to any of the Indiana KRA components. Further, WestEd has been actively engaged in projects related to cultural and linguistic relevance in assessments and plans to introduce the key elements into all discussions and meetings about assessment design, item review, and item development.

Once the framework/blueprint and item acceptance meetings conclude, WestEd will again collaborate with IDOE to discuss and plan for the development of policy performance level descriptors. The existing Early Learning Assessment (ISPROUT) does not utilize performance level descriptors based on policy (or kindergarten readiness). Instead, the Early Learning Assessment (ISPROUT) utilizes the framework and structure of the SKBs to denote progress levels in each reporting category, which can then be compared between entry and exit to determine an OSEP category. Further, the existing KRA utilizes three performance levels, namely Emerging Readiness, Approaching Readiness, and Demonstrating Readiness. These KRA performance levels are predicated upon children's readiness for kindergarten curriculum and instruction, and are determined by cut scores that were determined and validated by Maryland and Ohio educators. Both the current Early Learning Assessment (ISPROUT) progress levels and the current KRA performance levels could be utilized in Indiana. However, per Question 1.11/Section 3.1.8 (Standard Setting), IDOE, in consultation with its TAC and other stakeholders, might wish to establish Indiana-specific performance and proficiency levels. Therefore, WestEd has planned and budgeted for a policy performance level descriptors review with IDOE and Indiana educators in March 2024. And if new policy performance levels are adopted by IDOE, then WestEd will facilitate standard setting meetings with Indiana educators for the KRA and Early Learning Assessment (ISPROUT). These standard setting meetings will take place on-site and in-person with Indiana educators in winter 2024/2025 (KRA) and summer 2025 (Early Learning Assessment (ISPROUT)).

In its recent work with IDOE and the Early Learning Assessment (ISPROUT), WestEd has had success in conducting focus groups with Indiana educators to better understand their reporting needs and to design score reports that are maximally useful for educators and families. WestEd proposes to conduct focus groups to review and revise, if necessary, the existing reports that are available with the existing KRA and the existing Early Learning Assessment (ISPROUT) components. These focus groups will take place in spring 2024 (KRA) and spring 2025 (Early Learning Assessment (ISPROUT)). The goal of the KRA reporting focus group in spring 2024 will be to ensure that the existing reports meet the educators' needs and that WestEd gathers information to support any necessary revisions to the reports based on the possible changes to the performance levels. The goal of the Early Learning Assessment (ISPROUT) reporting focus group will be to review the revised ISR that was developed in spring 2023 to ensure it is meeting the needs of Indiana educators and to explore additional revisions that might be needed to support OSEP reporting and/or progress monitoring.

Question 1.7

(3.1.4) Item Ownership

We understand and accept that we retain ownership of any items proposed for use that we currently own. We would like to propose that materials and items that JHU CTE develops under this contract where we have contributed our intellect will be owned by us. JHU would grant the State a non-exclusive, non-cancelable, perpetual, worldwide royalty-free license to use the materials and to use, modify, copy, and create derivative works of the materials. for its own non-commercial, educational purposes. There is no plan to obtain items from a third-party item bank.

As described more in detail in Question 1.5/Section 3.1.2 (Alignment), the Ready for Kindergarten system, comprising the Early Learning Assessment (ISPROUT) and the Kindergarten Readiness Assessment (KRA), was developed by early childhood development experts through an iterative process that included teacher and cognitive interviews, pilot studies, field tests, and several content reviews conducted by MSDE and ODE, early childhood development experts, and the technical advisory committee. This iterative and methodical development process ensured that the system and its assessments are carefully aligned to early childhood learning and development standards. [redacted] provide detailed descriptions of the alignment and development processes for the Early Learning Assessment (ISPROUT) and KRA, respectively. The plan to address any gaps in alignment and develop new items are described in Question 1.8/Section 3.1.5 (Item Acceptance Review) and Question 1.9/Section 3.1.6 (Addressing Gaps in Measurement).

The characteristics, metadata, and alignment of the Early Learning Assessment SKBs and KRA items are described in Appendix C (Content Alignment and Blueprints), including the number and types of items/SKBs per domain. All Early Learning Assessment (ISPROUT) SKBs and KRA items have been operational for 5–7 years and have been administered in Maryland (Early Learning Assessment and KRA), Michigan (KRA), Hawaii (KRA), Ohio (Early Learning Assessment and KRA), and South Carolina (KRA).

Sample Early Learning Assessment SKBs are included as Appendix A. Sample KRA items across domains are included as Appendix B. These are released items and not in use and therefore are able to be shared.

Question 1.8

(3.1.5) Item Acceptance Review

Should the contract be awarded to JHU CTE and WestEd, we will immediately collaborate with IDOE to review in detail the components of the Ready for Kindergarten system: the Early Learning Assessment (ISPROUT) and the Kindergarten Readiness Assessment (KRA). This process will begin with a thorough review of Appendix C (Content Alignment and Blueprints) included in this proposal. WestEd will collaborate with IDOE to ensure that the Early Learning Assessment (ISPROUT) Framework and KRA Blueprint meet the needs of IDOE and its intended reporting objectives. This review with IDOE will result in the completion of the Indiana KRA system framework and blueprints. Once this step is complete, WestEd and IDOE will collaborate in the development of criteria for selecting high-quality items that Indiana educators will utilize during the Item Acceptance Review meeting, tentatively scheduled for March 2024 (Question 1.6/Section 3.1.3).

While the existing ISPROUT has been administered since 2019, the review meeting with IDOE and the Item Acceptance Review meeting with Indiana educators will serve as the foundation for this project, specifying the key requirements and attributes of the Indiana KRA system. Convening the assessment framework/blueprint and item acceptance meetings in early spring 2024 will serve to inform the development of any new assessment items that might be needed to address any gaps in measurement (Question 1.9/Section 3.1.6) and better meet IDOE's desired content and technical qualities.

WestEd's assessment development practices always include the active engagement of educators in the review of content before it is presented to students in field test or operational forms. If IDOE and WestEd agree to develop new items to address any gaps in measurement (Question 1.9/Section 3.1.6), WestEd will work with IDOE staff and Indiana educators to revise and/or develop the content of the new items. Obtaining educator feedback throughout the process is critical, to inform both IDOE and WestEd staff of the alignment and utility of the assessment as designed and to build teacher support for the use of the assessment. Item content and bias review meetings would take place with Indiana educators prior to the addition of new items to the assessments. Further, WestEd has been actively engaged in projects related to cultural and linguistic relevance in assessments and plans to introduce the key elements into all discussions and meetings about assessment design, item review, and item development.

Question 1.9

(3.1.6) Addressing Gaps in Measurement

The results of IDOE's initial review and the Item Acceptance Review (Question 1.8/Section 3.1.5) will determine whether there are any gaps in measurement of the Indiana Early Learning Standards. While the preliminary alignment of the Early Learning Assessment (ISPROUT) and the KRA (Question 1.5/Section 3.1.2) with the Indiana Early Learning Standards appears strong, there is a possibility that IDOE might want to revise (or develop) a few Early Learning Assessment (ISPROUT) SKBs or KRA items to better meet the breadth and depth of the Indiana Early Learning Standards or better meet IDOE's desired reporting objectives. If the need arises, WestEd will develop SKBs or KRA items to address any gaps.

As mentioned in the previous section (Question 1.8/Section 3.1.5), WestEd's assessment development practices always include the active engagement of state department staff and educators in the review of content before it is presented to students in field test or operational forms. Therefore, if the need arises, WestEd will work with IDOE staff and Indiana educators to revise and/or develop the content of the new SKBs or KRA items.

Lastly, as mentioned in the Alignment section (Question 1.5/Section 3.1.2), JHU CTE and WestEd have recently concluded initial work on the development of the Early Learning Assessment 2.0 (ELA 2.0), which focused on selecting a group of SKBs that were highly predictive of kindergarten readiness. This work also included revisions to the current SKBs to better align them to expectations for children from infancy through kindergarten. While the ELA 2.0 has not been broadly field tested, this updated version might be of interest to IDOE. JHU CTE and WestEd envision that the ELA 2.0 could be a more streamlined version of the Early Learning Assessment, supporting a more concise but comprehensive assessment experience for early childhood educators. If IDOE is interested, JHU CTE and WestEd could collaborate with IDOE to evaluate whether the ELA 2.0 would meet IDOE's objectives. WestEd could also support the development of a small set of additional SKBs for ELA 2.0, if necessary, to ensure better alignment to the Indiana Early Learning Standards and IDOE's reporting goals.

Any SKBs or items that are significantly revised or newly developed will be field tested before inclusion on any operational forms (see Question 1.10/Section 3.1.7). If revisions to existing SKBs/items or new SKBs/items are warranted, then WestEd will begin the development process in late spring 2024, with the goal of completing the development and review process by late summer so that they can be field tested beginning in fall 2024.

Question 1.10

(3.1.7) Field Testing

As described in the previous section (Question 1.9/Section 3.1.6), the need to address gaps in measurement might arise. In this case, Early Learning Assessment (ISPROUT) SKBs or KRA items might need to be revised or newly developed. Any SKBs or items that are significantly revised or newly developed will be field tested before inclusion on any operational forms. If revisions to existing SKBs/items or new SKBs/items are warranted, then WestEd will begin the development process in late spring 2024, with the goal of completing the development and review process by late summer so that they can be field tested beginning in fall 2024.

Field testing of any revised or new KRA item(s) in fall 2024 would allow ample time after the administration to analyze and evaluate the item statistics to decide whether to include the revised or new item(s) in the operational KRA the following year. If revised or new item(s) perform well on the field test, then WestEd can calibrate and scale the new items so that they can be included in the operational administration in fall 2025 (i.e., pre-equate).

Any revised or new Early Learning Assessment (ISPROUT) SKB(s) would be field tested throughout the 2024–2025 school year. Because SKBs span multiple developmental milestones, field testing throughout the school year would allow ample time to collect sufficient information and ratings to conduct item analyses and to decide whether to include the revised or new SKB(s) in the operational Early Learning Assessment (ISPROUT) the following year. If revised or new items perform well on the field test, then WestEd can calibrate and scale the new items so that they can be included in the operational administration in fall 2025 (i.e., pre-equate).

Question 1.11

(3.1.8) Standard Setting

Currently, the Early Learning Assessment (ISPROUT) and KRA utilize separate Rasch scales and have established progress/performance levels and associated cut scores that aid to support the intended purposes of the assessments.

For the Early Learning Assessment (ISPROUT), WestEd utilized an embedded standard-setting method to create eight cut scores on each reporting category scale, delineating nine progress levels that are based on the SKB levels. The progress levels can be used to compare ISPROUT entry and exit scores to determine an OSEP growth category. The [redacted] describes the embedded standard-setting process in more detail (see Section 4.4 of the report).

For the KRA, WestEd utilized a bookmark standard-setting method for setting cut scores on the overall scale score. Two standard-setting meetings were conducted with Maryland and Ohio educators to initially set, then validate, the cut scores on the overall KRA scale that determine the three KRA performance levels:

> ***Demonstrating Readiness:*** The child demonstrates foundational skills and behaviors that prepare him/her for curriculum based on kindergarten standards.
>
> ***Approaching Readiness:*** The child demonstrates some foundational skills and behaviors that prepare him/her for curriculum based on kindergarten standards.
>
> ***Emerging Readiness:*** The child demonstrates minimal foundational skills and behaviors that prepare him/her for curriculum based on kindergarten standards.

To show relative strengths in each student's performance, domain scale scores are also reported for each student, with each based on the subset of KRA items that are aligned to each domain. The domain scale scores are reported using the same scale as the overall score. Therefore, KRA reporting typically includes an overall scale score, a performance level (described above) based on the overall scale score, and domain sub scores. Together these results provide a valid and reliable interpretation of a student's readiness for instruction based on kindergarten curriculum.

Although the ISPROUT and KRA scales and progress/performance levels are well-established, WestEd acknowledges that IDOE and the Indiana TAC might prefer to set new or Indiana-specific performance levels and cut scores on ISPROUT and/or the KRA. In this case, WestEd will be prepared to support a formal standard-setting process, beginning with a performance level descriptor review meeting, and culminating with a standard-setting meeting with Indiana educators. WestEd is experienced in conducting standard-setting meetings using various procedures, including bookmark, modified or extended Angoff, and body-of-work methods. If a standard setting meeting is requested, WestEd will design and conduct the meeting with Indiana preschool and kindergarten educators, with the method selected in conjunction with IDOE and the Indiana TAC. After the meeting, WestEd will summarize the design, procedure, and results of the standard-setting activities in the annual technical report.

Question 1.12

(3.1.9) Accessibility

Universal Design

JHU CTE and WestEd uses universal design principles to ensure that every child has the opportunity to demonstrate the knowledge, skills, or behaviors being assessed. Levels A-D of the Learning Progressions have been developed following universal design so that most children will be able to demonstrate their knowledge and skills related to each progression. Supports are provided to eliminate further barriers not addressed by universal design and thus to improve the quality of measurement. For Levels A-D in ISPROUT, in addition to universal design, suggested supports have been included for use by teachers. These supports allow for changes in the environment or differences in observed behavior so that children with disabilities are able to demonstrate knowledge and skills in relation to the SKBs being assessed. The designated supports have been designed to ensure that children with disabilities are assessed in ways that measure ability, rather than disability, and at the same time, do not change what is being addressed. A full list of these ISPROUT Adaptations can be accessed in Appendix E.

In Indiana, Maryland, and Ohio, ELA data is used to inform the Child Outcomes Summary (COS) process, support the development of IEP goals, and support progress monitoring. Ratings on specific SKBs help providers to measure child outcomes to meet federal accountability reporting requirements for children receiving services through an IEP to kindergarten age. For these children, the ELA provides an important reference for typical development and provides detailed information on children's developmental levels. Educators can determine if a child with an IEP or Individualized Family Service Plan (IFSP) demonstrates improved social-emotional skills, acquisition of knowledge and skills, and use of appropriate adaptive behaviors to meet their needs.

As part of the professional development training and resources, educators using the ISPROUT/Early Learning Assessment will be able to observe children with reliability and use data to inform instruction, IEP goal development, and progress monitoring.

JHU CTE and WestEd will approach the technical development of any new items with accessibility at the forefront. WestEd content specialists will use universal design principles to ensure that children have opportunities to demonstrate the knowledge, skills, or behaviors being assessed. Whenever possible, items that are inclusive of all students will be developed. For the observational rubrics, WestEd and JHU CTE will provide scoring supports that allow raters to base student scores on a range of student responses.

Allowable Supports for Children with Disabilities and English Learners

To meet the needs of all children, a structured decision-making process will be customized for the Kindergarten Readiness Assessment solution in Indiana to help teachers identify and implement individualized student supports.

The provided professional development includes a "Guidelines on Allowable Supports" component to help teachers administer the KRA to all children. The guidelines were developed using feedback from teachers, plus input from state and national experts. The supports and strategies are intended to maximize the participation of all students.

The process will outline additional allowable supports and procedures for further individualization that may be needed for students with disabilities or English learners. These additional supports and procedures will be emphasized as part of professional development. Please see Appendix F for the easy to use, printable KRA Quick Guides for teachers.

As illustrated in Figure 1, the decision-making process for differentiating administration of the Kindergarten Readiness Assessment takes the following approach:

When administering the KRA to students with disabilities or English learners, teachers would not need to move sequentially through these three options. Instead, they can start administration using the Level the Field supports. Teachers should, however, avoid assuming that administration for a student with a disability or English learner should begin beyond General Administration.

Accessibility

All supporting web-based PD content for teachers will be designed for Section 508 compatibility and compliance with Web Content Accessibility Guidelines (WCAG) 2.0 accessibility standards. All new PD content will also be designed for Section 508 and WCAG 2.0 compliance. Professional development will include tiered decision-making procedures and guidelines for teachers to determine which accommodations and supports may be needed to ensure that all children are able to effectively demonstrate their knowledge and skills. The accessibility features, tools, and supports will be finalized with the State by the start of implementation of the professional development.

Question 1.13

(4.1) Test Administration, Systems, and Security

JHU CTE proposes that IDOE leverage the KReady system to administer Indiana's Kindergarten Readiness Assessment (KRA) solution. KReady is a proven system with a track record for security and reliability, having been utilized by more than 80,000 educators across five US States to deliver the KRA to more than 2.5 million children. Provided below are additional details related to test administration, systems implementation, and security of the KReady solution.

Note: KReady is currently used by Indiana in the administration of the formative ISPROUT early learning assessment. JHU CTE proposes expanding the State's use of KReady to support KRA administration.

Test Administration:

As a mature system in use for more than a decade, KReady meets or exceeds all requirements outlined in Section 4.1. Specifically, KReady includes:

- Support for customized setup of administration windows annually in the Summer or early Fall based on Indiana's requirements;
- Tutorials, training modules and PD Resources are provided within the system, including access to the full KRA instrument and manipulatives;
- Detailed scoring guides and other supports for teachers and administrators;
- A family-friendly student report, available in multiple languages, that includes descriptors of the KRA results and targeted resources for families to use to support their child;
- Multiple, intuitive methods for educators to collect data online that align with their instructional practices;
- A series of 'Level the Field Supports,' designed particularly for students with disabilities and English learners along with a decision flow chart to support teachers in selecting appropriate supports;
- A 'not scorable' option in cases where, even with allowable supports, an item not be appropriate given the child's disability or level of English language proficiency;
- Guidelines and training related to appropriate security measures for data collection and test administration;
- The ability to generate a variety of secure, printable reports and on-screen data displays (described in Question 1.25/Section 6.1.1 (Reporting Results) that support the use of KRA results to improve instruction;
- The ability to disseminate information related to all aspects of the KRA for the appropriate audiences;
- An annual technical report (described in Question 1.33/Section 7.1.5);
- The ability to run Completion Reports at all levels, for teachers and administrators, to help track KRA administration status, and the ability to lock scores upon completion of the assessment delivery; and
- Providing the ability to include notes or comments and upload documentation to support observations.

Systems Implementation: KReady is a powerful data-collection and reporting tool designed to support the administration of early childhood assessments. JHU CTE proposes that KReady be used as the online interface for Indiana's teachers, administrators, and data managers to access and administer the KRA, including entering assessment data, monitoring administration progress, and analyzing and sharing results through powerful reporting functionality. The system is accessible via common web browsers, has an intuitive interface refined over ten years based on educator feedback, and places the protection of student information as a central tenet of its technical requirements.

Preparing for Implementation - Data Managers: KReady users with the role of data manager are primarily responsible for a school, district, or site's technical preparation before KRA administration occurs. Three types of data are required to successfully implement the KRA: Teacher data, Student data, and Enrollment data. Each type of data uses a specific template to ensure local data is onboarded into KReady efficiently. Templates include data fields that are required for the system to operate (such as student ID) and other data fields required for state tracking and reporting (such as demographics).

The time required to onboard the data required to administer the KRA depends on many factors, including the size of the school/district/institution, the method used to populate KReady with local data, how frequently the data changes, and the experience level of the data manager. Since its original launch, the data onboarding and updating process for KReady has been continually improved, including the addition of automated methods for retrieving and transferring necessary student, teacher, and enrollment data from local student information systems, ensuring the data within KReady always reflects the most recent changes to a local SIS and saving a Data Manager substantial time. Easy-to-understand error messages and data validation tools have also been refined over time to improve the speed and efficiency of the preparation process.

Data managers are provided with detailed documentation and resources, as well as training conducted via Webinar in which local data managers are encouraged to interact with the live system and ask questions in real-time. In addition, the help desk is trained in KRA data management and is equipped with a knowledge base of common issues and errors to help facilitate the process and improve speed and efficiency.

Preparing for Implementation - Principals and School Administrators: As part of KReady's Professional Development, a checklist has been created for principals and other school administrators to guide implementation steps before, during, and after KRA administration. (See Appendix G for a sample Implementation Checklist). Before the KRA testing window begins, activities include coordinating the training of teachers and data managers (new and returning), tracking training completion, disseminating critical information about the KRA to trainers, teachers, data managers, principals, and families, and working with data managers to ensure all kindergarten student, teacher, and enrollment data is loaded before the start of school. During the KRA window, administrators track their district or school's completion using KReady completion reports. After the KRA window, administrators monitor data clean-up activities, run score reports to view results, and begin using the data to inform instructional and resource decisions.

As with the data manager activities, the time required to complete these steps is largely dependent on the number of students and teachers in the administrator's school/district/institution, though KReady provides a variety of tools to reduce the burden of delivering training, tracking training completion, overseeing data onboarding, monitoring KRA completion status, and analyzing and understanding the KRA results.

Technology requirements: KReady is accessible via the web using any common browser (Microsoft Edge, Google Chrome, Apple Safari, and Mozilla Firefox). For security and performance reasons, it is suggested that the browser version not be older than 2 years. Any Windows or Apple computer capable of running such a browser will be capable of accessing and utilizing KReady. No third-party plugins or add-ons are required. A child-friendly app is available to deliver up to 1/3 of the KRA directly to children using touch-screen technology. The KRA App is available for iOS 10+ and Android 7+ tablets and can be downloaded from the Apple App Store or the Google Play store. A web version of the KRA App written with HTML 5 can be used on computers or Chromebooks that are compatible with Google Play apps.

Scalability: KReady's use of AWS architecture, including advanced scaling techniques such as elastic computing and load balancing and the spinning up of new server instances to respond to any unexpected spikes or variability in usage, ensures that large numbers of simultaneous users can be accommodated. Performance monitoring across multiple years in Ohio, Maryland, Michigan, and South Carolina has informed KReady's scaling architecture to ensure strong performance during periods of peak load. Past performance indicates that all Indiana kindergarten teachers and administrators could use KReady at the same time without performance degradation.

Currently supported technology: Because of the ubiquitous nature of web browsers and Windows/Mac computers, the primary technology decision for local sites will be whether to support the use of tablet devices such as iPads to facilitate the use of the optional KRA App. In addition, a reliable wired or wireless Internet connection is recommended to ensure KRA scores are instantly saved into the KReady database, though paper and pencil methods remain available in situations without an Internet connection. In those cases, scores can be transferred from paper to the database using an on-screen spreadsheet mode, or via a printable bubble scoresheet and the KRA App.

Common report formats: All score reports are delivered in either printer-friendly PDF format or CSV/Excel format for data extracts. See Question 1.25/Section 6.1.1 (Reporting Results) for additional information on the types and levels of reports and data extracts available.

Question 1.14

(4.1.1) Test Administration and Delivery Platform

Ease of Use: The KReady platform has been refined over the past ten years based on user feedback to ensure it is intuitive to navigate for both non-technical users and power users with sophisticated technology skills. For many functions, including data entry and user management, KReady provides multiple methods for accomplishing the same task, including low-technology options, to support the widest possible range of users. All functions required to administer the KRA are available in a browser-based environment. In addition, an app is available as an optional tool to support assessment administration on a tablet device, laptop, or Chromebook.

Roles and Permissions: In order to ensure the strict safeguarding of personally identifiable student data, KReady utilizes a role and permission-based data architecture, guided by the rules of FERPA, to limit data access, management,

and reporting to only those individuals with a direct educational purpose. The roles described in Section 4.1.1. will be accommodated in KReady using existing teacher and administrator roles at the State, District, and School levels. In addition, the permissions within these roles are granular and can be customized by local Data Managers to fit unique circumstances, such as when a student is enrolled in more than one program, a teacher is assigned to more than one site or school, or if an educator serves in multiple roles.

Data management and Tracking: The KReady system supports audit tracing of data entry events and is capable of securely and accurately tracking student demographics, accommodations, and assessment data. Before teachers can begin administering the KRA, student, teacher, and enrollment data must be securely transferred to KReady. The 'bulk loader' is the primary vehicle through which KReady onboards student, teacher, and enrollment data. Since the launch of KReady in 2012, the process of connecting KReady with up-to-date information from a district, school, or other institution's Student Information System (SIS) has been continually improved and simplified. Because local technical requirements and data systems vary widely, KReady allows for multiple modes of data compilation and import, including:

- Manual entry and updates by educators:
- Bulk loading of multiple student, teacher, and enrollment records using .CSV files; and
- Automated methods for retrieving and transferring necessary student, teacher, and enrollment data from a local student information systems, ensuring the data within KReady always reflects the most recent changes to a local SIS.

APIs: In addition to the above methods, KReady capacity to support APIs has been recently expanded and JHU CTE is open to exploring additional ways to reduce data management burden through API transfers.

Transfers: Student transfers are easily handled within KReady, with the KRA data following the child from teacher to teacher or institution to institution. The intuitive process and mechanisms for supporting student transfers are covered in data manager training.

Performance and Scalability:

1. The KReady was designed to function well under low-bandwidth conditions;
2. Institutions without Internet access can record KRA data on printable score sheets and transfer the data into the KReady database at a later time or from another location using the online spreadsheet mode, or transferring the data automatically using a printable bubble-sheet and app;
3. KReady is a secure platform designed to operate at the appropriate baseline as defined in the National Institute of Standards and Technology (NIST) Special Publication 800-53 defining security and privacy controls to protect sensitive data;
4. KReady is hosted in the Amazon Web Services (AWS) cloud across multiple geographic regions to ensure a stable, reliable connection;
5. System errors have been refined over time based on user feedback to ensure they communicate in simple and effective language with clear next steps;
6. KReady's use of AWS architecture, including advanced scaling techniques such as elastic computing and load balancing to respond to any unexpected spikes or variability in usage, ensures that large numbers of simultaneous users, including all Kindergarten teachers in Indiana working at the same time, can be accommodated without performance degradation; and
7. KReady supports a variety of data entry methods and modes to align with IDOE's expected workflow for the KRA, including entering data at multiple time points in which the date is recorded upon entry.

Question 1.15

(4.1.2) Data Security

JHU CTE considers the protection of Indiana's data to be of paramount importance and will carry out all technology-related activities with data security at the forefront of our plans and actions. Data protection is an active rather than a passive process, requiring a contractor to continually monitor and review processes and activities to ensure Indiana's data is protected at all times and by all those with a role in the KReady project. This ongoing process involves: 1) Risk

assessment to identify potential threats and vulnerabilities, 2) Risk mitigation measures based on those findings (e.g. encryption, access controls, additional training, disaster recovery planning, etc.), 3) Impact analysis of security measures on other factors such as user accessibility and system performance, 4) Continuous monitoring, scanning, and penetration testing, and 5) ongoing evaluation of the effectiveness of plans and procedures and making adjustments based on an evolving landscape of potential threats.

Staffing: JHU CTE also has considerable experience collecting, hosting, and managing confidential educational records for thousands of public and nonpublic schools across Maryland, South Carolina, Ohio, Michigan, Hawaii, and Indiana. Data is secured and monitored by experienced technical personnel. Independent audits and frequent hardware/software scans are conducted to identify potential vulnerabilities. Engineers and research staff with access to confidential data are trained in FERPA compliance and sign an "Acknowledgement of Confidentiality" agreement. JHU CTE's Associate Director for Emerging Technologies (Dave Peloff) and Program Director for Business Systems and Technology Solutions (Kristen Thompson) are responsible for overall oversight of KReady technology systems. JHU CTE has a long-time relationship with a vendor in Baltimore (NoInc) that directly manages the server infrastructure and security model utilizing AWS-certified engineers.

Encryption: NIST 800-53 standards and controls guide all activities and functions involving the transmission and storage of sensitive data. KReady enforces 256-bit SSL encryption on all connections and data transfers, in and out of the system, both in transit and at rest, including archival and backup data, and for access and transferring data via the KReady web interface and apps.

Redundancy, Disaster Recovery, and Incident Response: While KReady's server environment has been optimized based on a decade of operational performance, policies, and protocols to ensure system redundancy, disaster recovery, and incident response are documented and reviewed on a regular basis, both internally and via 3rd party audit, to help ensure uninterrupted service and to guide actions after unexpected incidents. To ensure redundancy, KReady utilizes multiple servers across multiple AWS regions, scalability and elastic load-balancing configurations, and auto-failover and creation of new KReady instances in the event of hardware degradation or unexpected spikes in usage activity. Disaster Recovery policies include industry-standard procedures for data and file backups, automatic db snapshots throughout the day, storage infrastructure that utilizes multiple servers across multiple regions, leveraging AWS, and the configuration of critical system notifications to alert key staff in the event of system degradation or failure. Incident response policies include detailed steps for 1) problem identification, 2) incident prioritization, 3) escalation criteria and procedures, 4) response times, and 5) key personnel and communication protocols.

Security Audits: Beginning in the Summer of 2023, JHU CTE contracted with a 3rd party intendent security firm to conduct annual SOC 2 Type 2 audits covering all operations pertaining to the use of KReady. The report will be provided to the State within 30 days of its completion each year of the contract. Any identified issues or material weaknesses will be addressed and remedied at no cost to the State. Previous security audits were conducted internally with the support of external security consultants.

Indiana Policies: As part of JHU CTE's existing contract with the State, JHU CTE requested access to Indiana's security framework and was provided the document "Indiana Statewide IT Policies relevant to Vendors" as well as the document "State of Indiana Additional Terms and Conditions - Software as a Service Engagements." These documents contain extensive requirements related to data security and security incident handling. These documents were reviewed and accepted by JHU CTE in July of 2023 in conjunction with a contract renewal.

FERPA: In order to ensure the strict safeguarding of personally identifiable student data, KReady utilizes a role and permission-based data architecture, guided by the rules of FERPA, to limit data access, management, and reporting to only those individuals with a direct educational purpose. For instance, a teacher may only access data for their class, while the data manager for her district can access data for their district, and only their district. These permissions are granular and can be customized for all unique circumstances, such as when a student is enrolled in more than one program, or a teacher is assigned to more than one site or school. Neither JHU CTE or its contractors will ever provide shared data with any individual or organization with a direct need for the data to carry out the activities in the contract.

Secure FTP: A Secure FTP will be used to transmit protected data files between IDOE and JHU CTE. JHU CTE has built and supports a Secure FTP mechanism in conjunction with the KReady system API that has been used for multiple years with IDOE to transfer data files. JHU CTE recommends continuing to use that protocol to securely transfer data to IDOE.

Question 1.16

(4.1.3) Test Security

Reducing Test Security Threats and Risks

Test security is essential to obtain reliable and valid scores for accountability purposes. It is important that we take every step to assure the security and confidentiality of test materials. Trainers must provide appropriate information for all teachers involved in testing so that they have a common understanding of test security and appropriate testing practices. The test administration manual (TAM) for the Kindergarten Readiness Assessment provides test security information and administration guidelines. The TAM must be provided to teachers during their training session or given to teachers in sufficient time prior to testing to become familiar with test security laws, regulations, and procedures, as well as their responsibilities within the classroom. During the training session, the trainer must review test security policies and procedures with the teachers and require them to read all appropriate materials and documents provided to them.

We proposed to work with IDOE to develop a test security agreement that teachers must sign prior to administering the assessment. It is recommended that this agreement align with the test security policies and procedures used for other secure tests in the state.

Storage of Test Materials

Teachers are required to store test materials in a secure locked location. Additionally, all assessment materials are stored in the password-protected KReady online system and require a distinct password to access. JHU CTE and WestEd do not share assessment materials with outside parties without a non-disclosure agreement and use secure means to store assessment materials through the stages of development (i.e., via a permissions-based folder in Box.com).

Secure Transfer of Data

Reports will be available for every user in the KReady system, including providers at the classroom level, the school/program level, the district level, and the state level. Reports will be available at any time throughout and after the administration period (as determined by the State). Because the system is permissions-based, individual users will only see data to which they have access. To help the State monitor and track completion of the assessment, JHU CTE will provide completion reports throughout the data collection period as requested by the State. JHU CTE will export a state-level data file to share with the State when requested by the State throughout or after the data collection period. The state will use this file to support OSEP reporting. The state level data file will be provided 1 month after the previous data collection period has closed. Monthly completion reports will be provided to monitor data entry for initial implementation. All state level reports are securely transferred by a State-level FTP account created for IDOE.

Additionally, JHU CTE will ensure that all data in its possession and in the possession of any subcontractors, or agents to which JHU CTE may have transferred data, are destroyed or transferred to the State when the data are no longer needed for their specified purpose, at the request of the State.

Security Adapting to Individual Institutions' Technology Environment

In order to collect and report assessment data, educators will need to access the KReady system and applications in their schools and systems. The system is password protected, and individuals have unique usernames and passwords that they control and maintain. Individuals who have not logged in within the past 365 days are considered inactive and their system access is removed. Data in the KReady system are not stored locally on devices so it cannot be accessed outside of logging into the system. As noted previously, because the system is permissions-based, individual users will only see data to which they have access.

Question 1.17

(5.1.1) Program Manager and Project Core Team

Project Manager and Project Core Team

JHU CTE's chosen Project Manager for this project holds a PMP certification and five years' experience managing the ELA ISPROUT with IDOE. The Project Manager will work with the rest of the JHU CTE project core team to oversee and coordinate the tasks and deliverables both from our organization and from all associated subcontractors. JHU CTE's

Project Manager will serve as the primary point-of-contact for all State partners and will be available via phone or email during business hours.

JHU CTE will plan, monitor, and report on the work as necessary to ensure successful development and implementation of the proposed work. This will help ensure that tasks are clearly communicated, roles and responsibilities are understood, schedules are followed, deadlines are met, potential risks are evaluated and managed proactively, and all work is completed within allocated budgets.

JHU CTE will implement and maintain the project schedule/timeline; manage and support all project-related meetings through collaboration on agenda development; document meeting discussions, decisions, and identify action items for follow-up; and work to ensure effectiveness and efficiency in all system processes through continual review and improvement. JHU CTE will oversee and facilitate work around critical design issues, coordinating the involvement of the TAC and other advisory councils at key junctures.

Throughout the duration of the contract, JHU CTE will monitor all organizational activities and track progress toward completion of key deliverables (on time and within budget); adapt plans to meet emerging project needs as activities unfold; ensure that roles and responsibilities are understood and that outcomes meet expectations; promote sustainability of the initiative through responsible planning, ongoing documentation, careful monitoring, and proven communication practices; and identify, manage, and mitigate risks.

JHU CTE will provide ongoing communication with the State and its stakeholders, will manage the day-to-day project activities, and will report on progress delivery. JHU CTE will also manage help desk support and will provide ongoing support for trainers and data managers throughout assessment administration. The JHU CTE Project Manager will provide overall contract management and program coordination, according to the State's established project management processes, practices, and preferences.

Any changes in key staff members or subcontractor changes (WestEd, NoInc, Briljent, BCforward,Bingle Research Group, Inc.) will be communicated to the State in a timely manner. In the event that one of the named subcontractors needs to be replaced, JHU CTE will obtain approval by the State in advance of their contributions to the program.

Please see Appendix H for our Staffing Plan which includes the key staff on this project.

Question 1.18

(5.1.2) Subcontractors

JHU CTE will work with five subcontractors in this contract: WestEd, NoInc, Briljent, BCForward, and Bingle Research Group, Inc.

WestEd

WestEd will be responsible for content development, including the review of the assessment framework, blueprint, and specifications documents, and for technical and psychometric services. WestEd will also facilitate the following meetings with Indiana educators: Item Acceptance Review, Performance Level Descriptors Review, Reporting Focus Groups, Standard Setting, Item Content and Bias Reviews.

WestEd's Project Manager will work closely with the Project Managers for JHU CTE. WestEd staff resumes are available in the Appendix H: Staffing Plan and they demonstrate WestEd's qualifications and expertise for engaging in assessment development and psychometric activities for this project.

NoInc

NoInc will be responsible for technical development, quality assurance testing, and code deployments. They will also monitor and maintain the AWS server environment. The NoInc team consists of technical developers, quality assurance specialists, devops technicians, production managers, and visual designers.

NoInc has been the primary software development lead for the KReady online system and technologies and has been supporting, maintaining, and enhancing the system for a decade.

Briljent and BC*forward*

Briljent, a women's business enterprise (WBE) under the direction of Adam Gulla and BC*forward*, a minority business enterprise (MBE) under the direction of Todd Tolson, will provide the trainer-of-trainers (ToT) and data manager trainings. These companies have provided these services in our contract with IDOE for the past five years for the ISPROUT assessment, and have demonstrated their ability to deliver training with fidelity.

We will prepare and certify these trainers to take on this role, and provide teacher training materials for face-to-face, blended, and fully online formats. They will also access the data manager training materials as well as the full system user manual with how-to documents and videos. The Training Specialists will be individuals located in Indiana, and they will have demonstrated expertise in early childhood education, formative assessment, and adult learning principles as well as a high comfort level with technology.

Bingle Research Group, Inc. - Fred Bingle from Bingle Research Group Inc. (IVOSB) will be providing evaluation services including a Voice of the Field evaluation of implementation. Fred Bingle has over thirty years of experience in the marketing and marketing research business and founded the Bingle Research Group in 1999. Mr. Bingle's depth of experience in marketing research design, data retrieval methodologies and marketing consulting services has been the fundamental cornerstone for growth of the firm. His understanding of consumers/customers has been a major factor in positioning the organization as a high-quality provider of marketing consulting services supported by custom designed primary research. The ability to employ innovative data gathering and database approaches to meet the informational, cost, and time objectives of clients has contributed to the company's overall success and growth.

Mr. Bingle received his B.B.A. degree in Marketing from the University of Notre Dame and his M.B.A. in Marketing from the Ohio State University. He has been a member of the Indianapolis Chapter of the American Marketing Association and has served on the Board of the Notre Dame Club of Indianapolis.

Any changes in key staff members or subcontractor changes (WestEd, NoInc, Briljent, BCforward, Bingle Research Group, Inc.) will be communicated to the State in a timely manner. In the event that one of the named subcontractors needs to be replaced, JHU CTE will obtain approval by the State in advance of their contributions to the program.

An organizational chart that shows the key staff members and the organizational structure and supervision of contractors are provided in Appendix H of this technical proposal, the Staffing Plan.

Question 1.19

(5.1.3) Project Plans and Schedules

The proposed project plan is provided in Appendix I. While some activities are ongoing, a detailed schedule for activities and deliverables will be identified with IDOE. The schedule will include rounds of review which is consistent with the practices we are currently employing with IDOE for the ISPROUT implementation project.

1. **Provide an annual project plan/schedule by May 1 of each contracted year, agreed upon by both parties, that includes an update of the year one plan and schedule following contract execution.** JHU CTE will work immediately with this collaborative group to develop detailed schedules for all system components. The final project plan, including detailed information about project milestones, will be developed and submitted to the state for review by May 1 of each contracted year, agreed upon by both parties, that includes an update of the year one plan and schedule following contract execution. The final project plan will encompass the overall scope and schedule of the assessment system development. Any proposed changes to the project plan will be provided to the State for approval. The project plan will specify the primary tasks, services, activities, schedule, and requirements for the contract. As such, it will be available to all partners, to ensure a common understanding of the project's scope, schedule, and context. To support this effort, Smartsheet, an online project planning and collaboration tool, will be used to assign and manage tasks, staffing, and other resources in order to ensure that all timelines are met.
2. **Provide IDOE with appropriate direct, real-time access to the project schedule.** IDOE Project Managers will have access to Smartsheet, where the project schedule will be kept for this project.
3. **Provide weekly updates of 1) current week deliverables and 2) upcoming deliverables for six weeks.** Weekly project management reports, including the current week deliverables, upcoming deliverables for six weeks, and stoplight-status reports, will be shared with the State. The stoplight-status reports will provide a high-level progress indicator for each core assessment component—indicating, for each assessment component,

whether it is considered in progress, complete, or pending due to other circumstances. Any variances from the anticipated schedule will be reported along with strategies for course correction, the estimated likelihood that corrective action will be effective, and possible mitigation strategies if course correction fails.

4. **Note any deliverables or key milestones that have been missed or are at risk, along with plans to correct these deficiencies**. JHU CTE will assess and analyze risk; communicate quality assurances to stakeholders; use effective quality-management methodologies; identify, control, and monitor risk and articulate risk responses, strategies for mitigating risk, and contingency plans; keep all stakeholders updated on project status; and conduct cost-benefit analyses. Additionally, as mentioned above, the weekly project management reports will also indicate status on deliverables and key milestones and any associated information as to their risk status.
5. **Provide an updated project plan (including any schedule adjustments) by the first of each month (Note: Any changes to key milestones require a contract amendment and will need to go through IDOE's change management process).** JHU CTE will provide IDOE with an updated project plan by the first of each month.
6. **Meet weekly with IDOE staff to review current priorities.** JHU CTE and WestEd will establish a communication protocol, including quarterly leadership calls, weekly check-ins with the State, and ongoing work groups.
7. **Provide documentation regarding any missed deadlines, litigation, or breaches of contract due to missed deadlines resulting in compromises of an assessment program.** JHU CTE will provide documentation for any missed deadlines, litigation, or contract breaches caused by missed deadlines that compromised an assessment program.

Question 1.20

(5.1.4) Project Kickoff Meeting

After the contract is finalized, the JHU CTE Project Manager will arrange a virtual project kickoff meeting with IDOE. This meeting serves to introduce key stakeholders, establish points of contact for the project, address any questions or concerns from either the vendor or IDOE, provide an update on the contract's status, and outline the next steps for project implementation. This kickoff meeting will be conducted via Zoom. The Project Manager will ensure that a meeting agenda is distributed to all participants at least 72 hours prior to the meeting. During the meeting, the Project Manager will lead the discussion, take detailed meeting notes, and record action items. Within 24 hours of the meeting's conclusion, the meeting notes will be shared via email with all participants.

Question 1.21

(5.1.5) Status and Planning Meetings

Weekly Status Meetings

The JHU CTE Project Manager will schedule weekly Project Meeting with the State and members of the JHU CTE professional development and technology teams, as well as the WestEd Project Manager to discuss the progress and day-to-day implementation tasks. This will be a 60-minute recurring web conference call and will be scheduled to occur at the same day and time every week. The weekly meetings will be conducted via Zoom which is accessible via web browser with no additional software installations required. The Project Manager will act as the primary point-of-contact for the State and work throughout the week to collect and document implementation activities, project status updates, and any issues to discuss.

An agenda of proposed topics will be delivered to IDOE 24 hours in advance of the scheduled call for review. The Project Manager will facilitate each weekly project call using the planned agenda and actively record notes and key action items. The meeting notes and action items will be documented and be consistently reviewed for progress-monitoring purposes. JHU CTE will provide weekly written reports via email describing tasks for JHU CTE, our subcontractors, and the State that are in process or completed, as listed in the schedule, and key decisions made or pending. The Project Manager will report on the status of ongoing activities, decisions made, decisions pending, activities completed, activities that are behind schedule, timelines for scheduled activities, and key project risks and their status. The State will approve the report format. JHU CTE, WestEd, and IDOE will document all decisions via emails or meeting notes.

Weekly Written Status Reports / RAID log / Decision and Action Log

The JHU CTE Project Manager will develop a Risks, Actions, Issues, Decisions (RAID) log in a format that is approved by IDOE. The RAID log will be reviewed in the weekly status meetings and will provide read access to IDOE. The RAID log will also include a decision and action log combined with the RAID log to track any outcomes from meetings held with the IDOE. The decision log and Smartsheet project plan will document any decisions necessitating a contract amendment.

Action items discussed in weekly meetings will be recorded in the meeting notes and tracked within the project plan schedule, subject to weekly review.

As evidence of our experience with this activity, please review Appendix J for the current ISPROUT RAID Log.

Planning Meetings

JHU CTE will collaborate with the State to organize and hold at least two annual virtual planning meetings. These meetings will cover various topics such as high-level planning, scheduling, setting the vision, making necessary adjustments, identifying enhancements, and engaging in collaborative problem-solving for the upcoming administration(s). The specific format of each meeting will be decided during the scheduling and planning process. Following each meeting, JHU CTE will promptly provide meeting minutes to the State for their review and approval, within a maximum of five working days.

Additional ad hoc meetings can take place as needed during the initial start-up phase for more in-depth topics.

Question 1.22

(5.1.6) Lessons Learned Meeting

The JHU CTE Project Manager will schedule one Lessons Learned meeting to be held virtually after the conclusion of year 1 to discuss the implementation rollout, address any problems or concerns, and formulate solutions for implementation in future testing windows. The Lessons Learned meeting will be held on Zoom, which is accessible via web browser with no additional software installations required. The Project Manager will provide a meeting agenda at least 72 hours in advance of the meeting. The Project Manager will facilitate the call and document meeting notes and action items. Within 24 hours of the meeting, the meeting notes will be emailed to all meeting participants.

Question 1.23

(5.1.7) Risk Management

JHU CTE will work with IDOE to identify implementation barriers, risks, and workable solutions or mitigation strategies. Three major levels of risk will be used to categorize and develop mitigation strategies:

- Program-level risk. Any potential issue identified that could jeopardize the overall success of the project.
- Component-level risk. Any potential issue identified that could jeopardize the development or implementation of core assessment components.
- Deliverable-level risk. These risks will be managed within the project teams.

Response plans and mitigation strategies will be captured for risks at each of these levels. Additionally, risks will be classified according to the various types of potential impact or domain: financial, schedule, technical, legal, quality, etc.

The State, WestEd, NoInc, Briljent, and BCforward will work with the JHU CTE to capture, identify, and classify the various risks that each of these bodies can anticipate and will establish appropriate mitigation strategies and response plans. Over the last five years, JHU CTE and its subcontractors have consistently demonstrated their capability to effectively document and implement risk management strategies during our collaboration on the ISPROUT ELA with IDOE and we will maintain our commitment to this project if it is granted to us.

In the preparation of the project plan for the upcoming contract year, JHU CTE reviews potential timeline issues and risks, such as resource allocation or delivery timeframes. These considerations are informed by extensive prior experience in similar endeavors and are documented within the Smartsheet Project Plan. If necessary, a "review deliverable schedule" process is scheduled several weeks before the start of each deliverable phase. For instance, in the case of webinar activities, a comprehensive review is conducted by JHU CTE and the State, occurring four weeks before the initiation of the first deliverable.

A thorough review of all upcoming deliverables is conducted two to three weeks before the scheduled start date. This review assesses whether additional information is required or if adjustments to the deliverable dates are necessary. To maintain a proactive stance, weekly reviews are conducted with the State to identify any potential schedule risks arising

from delays in completion. In cases where an activity is at risk of falling behind schedule, JHU CTE and the State will collaborate to evaluate the level of risk, analyze related activity dependencies, and implement necessary actions or potential schedule modifications.

If it becomes evident that risk mitigation or contingency planning is necessary, a detailed plan will be developed and submitted to the State for review and approval. Typically, these mitigation and contingency plans are created in response to a significant scope change, a substantial alteration in the project schedule, or the absence of required data.

As an example, while analyzing the ISPROUT ratings data for the Interrater Reliability Analysis in July 2023, it was determined that due to a lack of participant information and feedback provided by the TAC, the IRR Study Plan needed to be revised. This information was communicated to IDOE via meetings and emails, documented in meeting notes, and updated in the Project Plan. WestEd and IDOE were involved with revising and approving the updated plan and schedule.

Weekly project management reports, including stoplight-status reports, will be shared with the State. The stoplight-status reports will provide a high-level progress indicator for each core assessment component—indicating, for each assessment component, whether it is considered in progress, complete, or pending due to other circumstances. Any variances from the anticipated schedule will be reported along with strategies for course correction, the estimated likelihood that corrective action will be effective, and possible mitigation strategies if course correction fails.

Please review Appendix J for a Sample Risk and Issue Management Plan, Appendix L for the current ISPROUT Escalation Protocol, and Appendix J for the ISPROUT RAID Log.

Question 1.24

(5.1.8) Help Desk

JHU CTE will provide a consolidated help desk to support Indiana educators and data managers on all aspects of KReady technology, including bulk loading SIS data (students, teachers, and enrollment, administering the assessment (data entry and the use of the student-facing KRA App), and using reporting functions. The help desk will be accessible via phone and email 24 hours a day/seven days a week throughout the calendar year to respond to support requests. Help desk personnel will be provided a knowledge base of common issues and trained to provide the level and quality of support that the State expects. Logs of questions/issues addressed will be maintained by the help desk and shared with the State upon request.

Complex issues or questions that the help desk cannot address will be escalated to JHU CTE, where technical staff will troubleshoot and provide support until the issue is resolved. JHU CTE will conduct weekly calls with the help desk team to discuss the status of escalated tickets, and any other issues for which the help desk may require additional support. If a system bug is identified, JHU CTE will work with the help desk on messaging to affected end-users about the issue, while initiating an internal process of working with programmers to develop, test, and deploy a fix as quickly as possible. JHU CTE will track ongoing analytics of help desk tickets, prepare quarterly help desk reports, and review ongoing performance as needed with the State.

Question 1.25

(6.1.1) Reporting Results

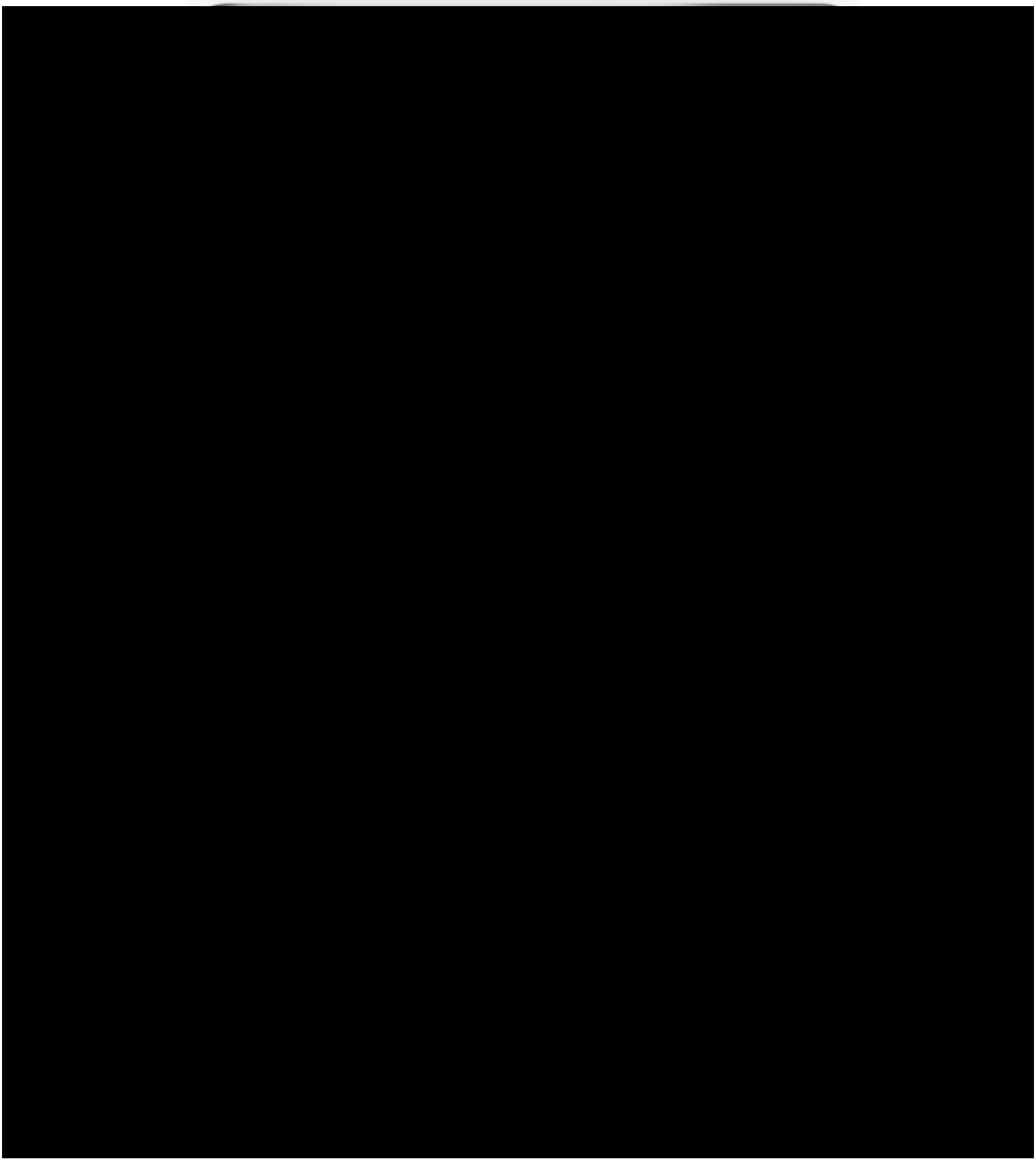
The KReady system offers a full range of reports in a variety of formats designed to help inform instruction and classroom practice, identify support services and interventions needed, and provide actionable information to help shape policy and make resource decisions.

Timely and accurate reports are available at five levels (student, classroom, school, district, and state) and for multiple audiences (teachers, families, principals, administrators, and state policy makers). Reports formats including raw CSV data exports, graphically designed PDFs, and colorful, interactive, on-screen data displays.

Below is a more detailed description of key aspects of the KReady functionality.

[redacted]

[redacted]



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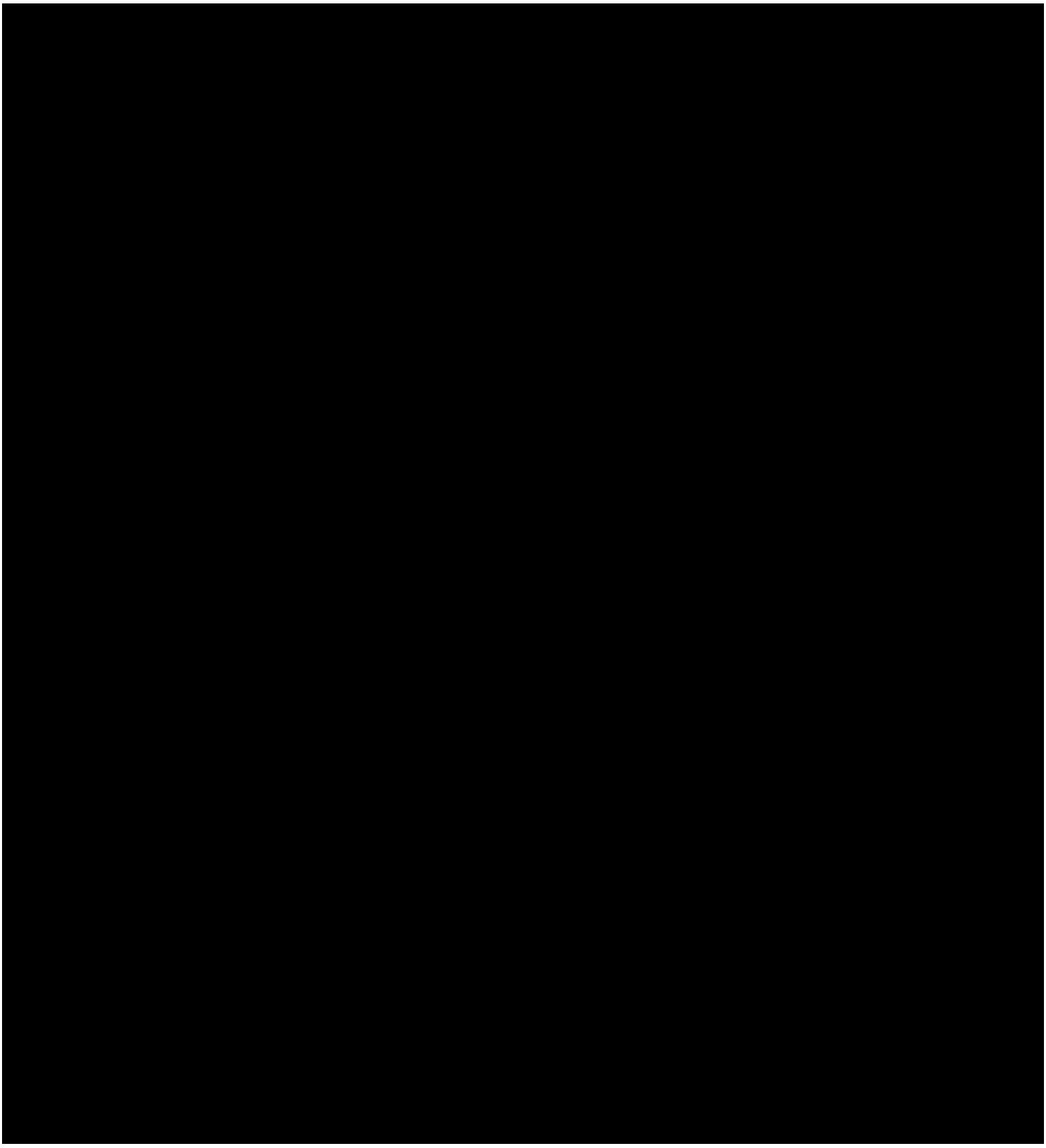

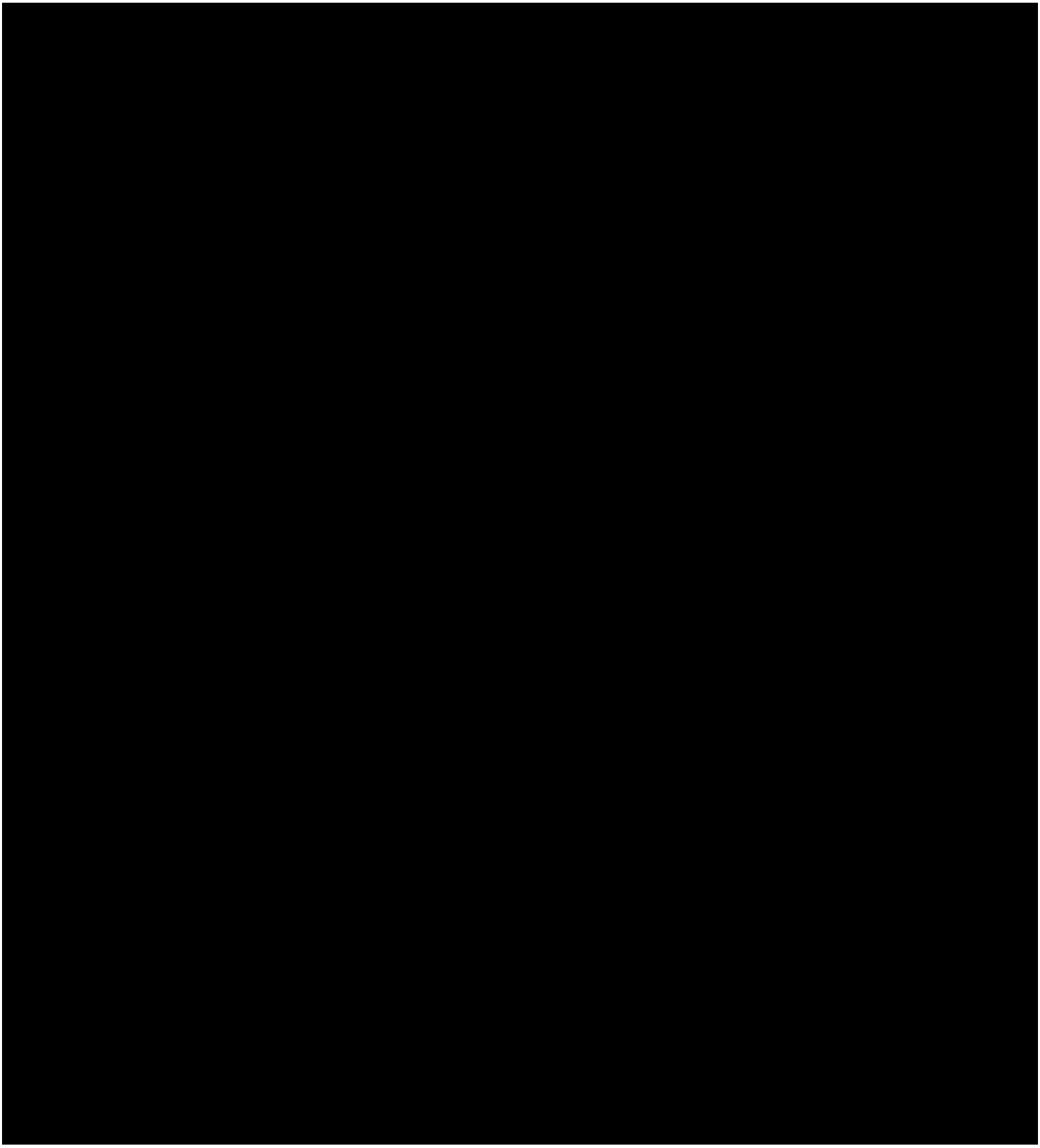

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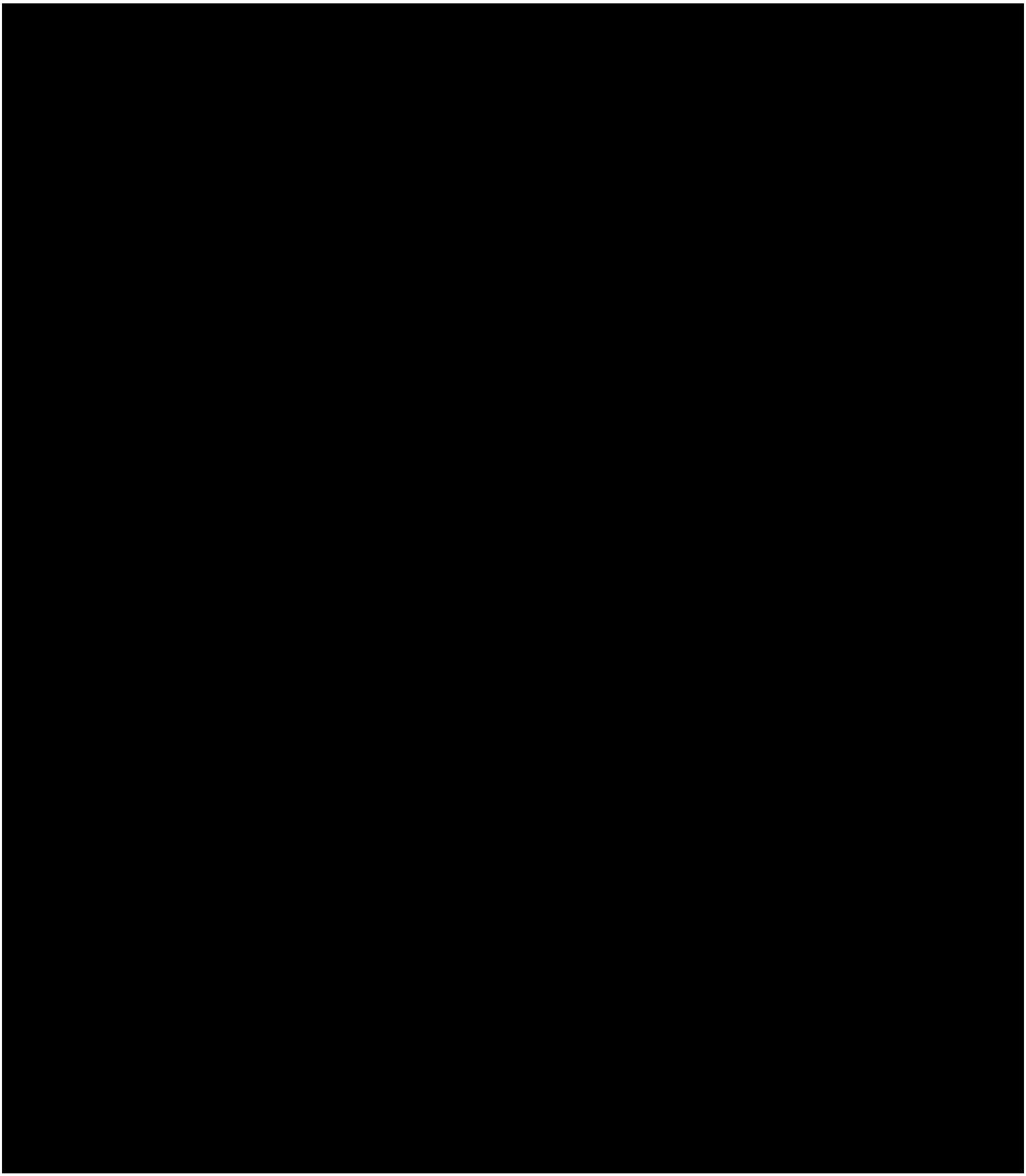

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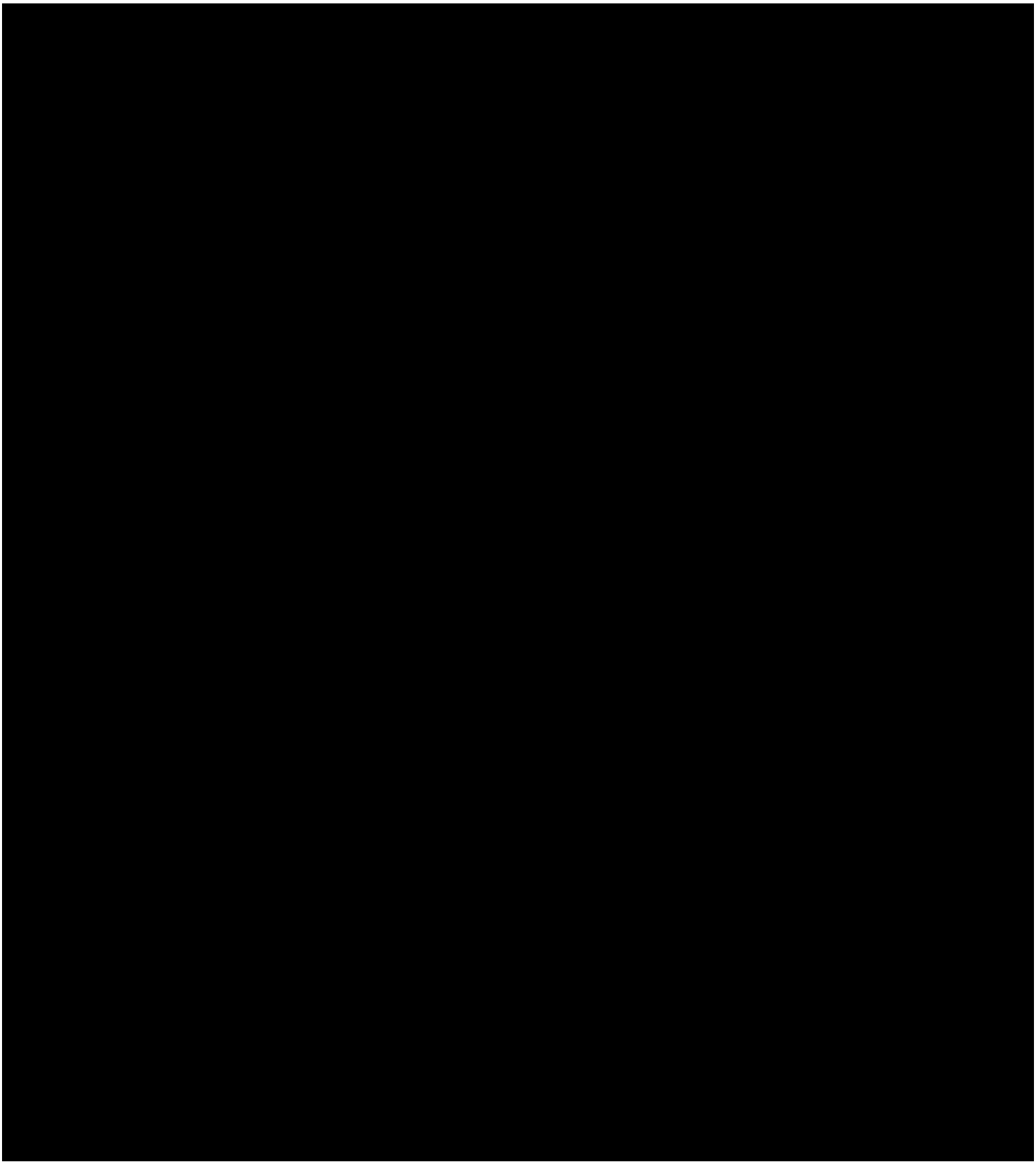


Question 1.28

(6.1.4) Access to Scores

Turnaround Time for Results

Districts have the ability to clean up demographic data within the KReady system. After an assessment window has closed and teachers are no longer able to enter scores, data managers can add and update demographic data for a period of time determined by IDOE. Then, all demographic data along with all score data can be exported for all levels of users (state, district, school, and classroom). District administrators, school administrators, and teachers can export their data directly from the online system. Depending on the assessment and the report, some results are available immediately after the teacher enters the data. Other results that need to be calculated will be made available within two weeks after the data collection closes. Rescoring does not apply to the assessments described in this proposal. If IDOE determines that an administration window needs to be reopened, then that can be done. The same timeline applies for re-calculating those additional scores and final results can be delivered within 2 weeks of the window closing. All final electronic data and scores will be delivered to the state through a secure FTP account that only IDOE has access to. All final scores and data as well as any demographic data collected by the districts for each assessment will be delivered as a flat CSV file. All districts and schools will be able to access all reportable scores within the KReady system.

Question 1.29

(7.1.1) Quality Assurance Protocols

In the four years that JHU CTE has worked in partnership with the State of Indiana on its ISPROUT initiative, we believe our organization has established a track record of exceptional, on-time performance and the delivery of high-quality work. JHU CTE also has a proven history of collaborative problem-solving with our IDOE colleagues in cases where non-optimal situations have arisen. Johns Hopkins University is an institution with a long-standing reputation for quality and excellence, and we understand that this reputation is our university's most important asset. If selected to work with Indiana on its Kindergarten Readiness Assessment initiative, JHU CTE welcomes the inclusion of additional mechanisms to clarify quality assurance processes related to all work products, and fine-tune any existing processes as needed in collaboration with IDOE. Should any work products JHU CTE delivers be found to contain defects or errors, JHU CTE will work diligently to rectify the situation as quickly as possible.

With regards to technology *implementation*, JHU CTE will continue to follow the collaboratively-created IDOE Escalation Protocol for JHU Assessments that was developed for ISPROUT (see Appendix L), which details the key contacts from JHU CTE and IDOE, communication protocols related to service disruptions or outages, actions to be taken by each partner, timelines for those actions, communication protocols based on the severity, and the role of the help desk in tracking and monitoring the situation. In addition, JHU CTE and IDOE have an established process for an Incident Postmortem that was created after a four-hour disruption occurred on the morning of 1/6/2021. The postmortem format includes a summary of the incident, the impact, the root cause, lessons learned, and a log of communication related to the event.

With regards to technology *development* of any updated KReady functions or reports, the technical team will follow a rigorous Quality Assurance process to ensure that any changes, enhancements, fixes, or new features are thoroughly tested and vetted before being pushed to a production environment. Development is guided by Agile software principles, an industry-standard Software Development Life Cycle (SDLC), and SCRUM methodologies among the programming team. For any new development, JHU CTE will ensure that tasks have documented requirements, acceptance criteria, and testing scenarios to ensure that product deliverables can be properly validated. During release testing, the QA team validates requirements and document test results. Upon QA testing completion, the Project Manager reviews and approves the work product.

When new features or reports are released to production, training and support materials and resources are updated accordingly, and communication is provided to stakeholders and support staff to ensure those in the field are aware of any changes in functionality.

Question 1.30

(7.1.2) Response to Identified Error

JHU CTE recognizes and acknowledges the importance of notifying IDOE immediately should any item, scoring, or reporting error be discovered. The *IDOE Escalation Protocol for JHU Assessments* that was collaboratively developed by JHU CTE and IDOE provides an effective structure that could be leveraged for any potential incident that involves technology or data. In the case of an item, scoring, or reporting error, the incident would be categorized as Priority 1 which requires immediate notification and action according to the protocol. JHU CTE suggests modifying the existing procedures to encompass any urgent issue related to KReady, whether related to technology or data. In addition to having a protocol to handle urgent issues, the use of the existing Postmortem format could also be applied to ensure appropriate lessons are learned, processes refined, and any necessary steps are taken to mitigate the issue and minimize the chance of it happening again. JHU CTE welcomes the opportunity to discuss these recommendations and adjust the protocols as needed.

Question 1.31

(7.1.3) Technical Advisory Committee

WestEd has direct experience corresponding with the Indiana Technical Advisory Committee (TAC) through its work on the ISPROUT and I AM assessments. When the need arises, WestEd will participate in TAC meetings, providing all background materials and TAC-specific questions at least three weeks in advance of the meeting. WestEd anticipates discussing the following topics with the Indiana TAC: frameworks/blueprints, Rasch scaling and equating, and performance level descriptors and standard-setting requirements. WestEd also anticipates that the Indiana TAC will review and approve the technical reports on an annual basis.

Question 1.32

(7.1.4) Technical Analyses

[redacted]

[redacted]

Question 1.33

(7.1.5) Technical Reports

WestEd will produce technical reports after each year's operational administration of the Early Learning Assessment (ISPROUT), including the infant/toddler components, and KRA. The Early Learning Assessment (ISPROUT) technical reports will be completed annually by November 15 following each school year (e.g., the technical report for the 2023–2024 Early Learning Assessment (ISPROUT) administration will be completed by November 15, 2024). The KRA technical report will be completed by April 1 following the fall administration (e.g., the technical report for the fall 2024 KRA administration will be completed by April 1, 2025).

The technical reports will include the following sections:

- Assessment Overview
- Development and Framework/Blueprint
- Administration, including Professional Development, Security, Reporting, and Field Test (if necessary)
- Classical Analyses and IRT Calibration, including Scoring, Scaling, and Standard Setting
- Validity and Reliability
- References
- Appendices, including all relevant data and results

WestEd anticipates that IDOE will share the technical reports with the TAC for review and approval. Any additional sections requested by IDOE or the TAC can be added to the technical reports. The proposed budget includes costs for three rounds of review for each technical report.

[redacted]

Question 1.34

(7.1.6) Third-Party Alignment Study

WestEd and JHU CTE acknowledge that alignment between the Early Learning Assessment (ISPROUT), the KRA, and the Indiana Early Learning Standards is critically important. We will fully support the independent third-party alignment studies by providing all content and support materials required by IDOE and/or the independent evaluator on a timeline determined by IDOE. These materials would also include the ISPROUT alignment report written by EdMetric, LLC, based on their alignment study that was conducted in 2020. This report is also included as an attachment to this proposal.

Question 1.35

(7.1.7) Comparability Study

Given that our proposed solution is the current ISPROUT, the comparability study described in this requirement would not be necessary. However, should IDOE decide to amend or revise the current ISPROUT framework/blueprint, as this possibility is described in Question 1.5/Section 3.1.2 (Alignment), Question 1.8/Section 3.1.5 (Item Acceptance Review), and Question 1.9/Section 3.1.6 (Addressing Gaps in Measurement), WestEd will evaluate whether the revised version would remain comparable to the original ISPROUT. If significant changes to the ISPROUT framework/blueprint are to be made, then it is possible that a new scale would be developed, necessitating a comparability study to link the new scale to the original scale. WestEd will collaborate with IDOE and the TAC to ensure that analyses associated with comparability are sound and of high technical quality.

While not a comparability study as described in this requirement, WestEd could provide IDOE with analyses that compare Early Learning Assessment (ISPROUT) results with the beginning-of-the-year KRA results. WestEd has completed similar analyses for Maryland, showing strong correlations between Early Learning Assessment SKB ratings and KRA scores and performance levels. These types of analyses not only contribute substantive validity evidence but also provide critical information to early childhood programs about how best to support children for kindergarten and beyond.

Question 1.36

(7.1.8) Validity

[redacted]

Question 1.37

Question 1.38

(7.1.10) Scaling and Equating

[redacted]

Question 1.39

(7.1.11) Inter-Rater Reliability Study

[redacted]

Question 1.40

(8.1) Training and Communication

JHU CTE will provide a comprehensive training approach for educators, trainers, data managers, and administrators. JHU CTE brings expertise in developing and delivering professional development that aligns with key principles of adult learning theory. Professional development materials are interactive, hands-on, highly rated by participants, and designed to provide participants with opportunities for practice and reflection.

Educators who will administer the ELA and KRA must successfully complete respective trainings. The trainings are available in a variety of delivery formats as described below:

- Synchronous – All training content is delivered by trainers in a live setting (in-person or virtual).
- Asynchronous – All training content is delivered through self-paced online modules that individuals complete on their own.
- Blended – Training content is delivered through a mix of live instruction and self-paced online modules.

Early Learning Assessment Trainings

The Early Learning Assessment Essentials Training is designed to prepare educators to administer the Early Learning Assessment in their classroom/program with fidelity and use the KReady technologies to enter evidence and ratings. By the end of the training, educators will be able to:

- Define formative assessment and how it can be used to inform and guide instruction
- Create a plan for monitoring student learning and planning instruction
- Use a variety of documentation methods to collect relevant observations of children to describe their skills, knowledge, and behaviors

- Rate children at a level that describes their most typical behavior or performance.

This 8-hour training will be facilitated by JHU CTE-trained trainers and can be delivered in a synchronous, asynchronous, or blended format. Participants must complete the training content and successfully pass two culminating assessments (Simulation Exercise and Content Assessment) to be certified to administer the Early Learning Assessment.

Educators must renew their ELA-certification each year after their initial training by completing a refresher training module and successfully passing a recertification content assessment.

Kindergarten Readiness Assessment Trainings
The Kindergarten Readiness Assessment Teacher Training is designed to prepare educators to administer the Kindergarten Readiness Assessment in their classroom with fidelity and use the KReady technologies to enter scores. By the end of the training, educators will be able to:

- Administer the KRA with fidelity
- Use the online system to collect data
- Access the online resources.

This 8-hour training will be facilitated by JHU CTE-trained trainers and can be delivered in a synchronous, asynchronous, or blended format. Participants must complete the training content and successfully pass two culminating assessments (Simulation Exercise and Content Assessment) to be certified to administer the Kindergarten Readiness Assessment.

Educators must renew their KRA-certification each year after their initial training by completing a refresher training module and successfully passing a recertification content assessment.

A comprehensive professional development plan with additional information can be found in Appendix P.

Question 1.41

(8.1.1) Professional Development

Professional Development for Educators
In addition to the teacher trainings to become certified to administer the assessments (described in section 8.1), educators will be provided additional professional development around data and reports.

An ELA Data and Reports Training will be provided for educators administering the ELA each year. In this live webinar, participants will learn how to access ELA reports, analyze ELA data, and use the reports to communicate and share information with families. Topics in this training include:

- What ELA reports are available for teachers?
- How do I access classroom and individual student ELA reports?
- How can I use my ELA data to identify areas of growth and need?
- How can I use ELA reports to communicate with families?

A KRA Data and Reports Training will be provided for educators administering the KRA each year. In this live webinar, participants will learn strategies for reviewing classroom KRA reports and then using the results to plan instruction to meet students' needs. In this training, participants will:

- Use real time data to differentiate instruction
- Discuss ways to review KRA data during data chats
- Use KRA data to set instructional goals
- Identify ways to use KRA data during collaborative planning
- Identify various ways to communicate KRA data results with families

Professional Development for Trainers
The ELA and KRA professional development utilizes a train-the-trainer approach for large scale training of educators. JHU CTE will prepare trainers to deliver the assessment trainings and will provide all necessary training materials and resources. Trainers play a critical role in the successful implementation of the assessments by educators. They are key to ensuring that educators have the knowledge and skills to administer the assessment with reliability, so their data is useful for decision-making.

The Training-of-Trainers (ToT) for both the KRA and ELA is a blended training with a mix of asynchronous online modules and a synchronous virtual session. Two sessions of the ELA ToT and the KRA ToT will be delivered each year. These trainings will prepare trainers to deliver the respective trainings to educators. New trainers must complete the training and successfully pass the culminating assessments to receive a certificate of completion and become certified to train on the assessment.

JHU CTE will develop and provide materials for the trainers to deliver teacher trainings in a synchronous, asynchronous, or blended format. All materials will be available through a "Trainer Site" in the KReady Online Professional Development portal that trainers will gain access to during the ToT.

In subsequent year after completing the ToT, trainers will be required to complete a Trainer Refresher online module to receive administration tips and reminders, technology updates, and training logistics. Trainers are encouraged to attend the Data and Reports webinars to extend their knowledge of the assessment as they support educators.

Professional Development for Administrators
Each year, JHU CTE will deliver a KRA Implementation Webinar for principals and school administrators. This live virtual session will provide information on KRA implementation and ways to support kindergarten teachers as they administer the assessment. The webinar will also provide guidance on how administrators access and utilize KRA data. In this training, participants will:

- Learn about the KRA including the purpose, item types, test security, how teachers administer, and available resources for teachers and administrators
- Review professional development and technology enhancements
- Review the processes and logistics involved with accessing the KReady Online system where reports are retrieved
- Review important dates and processes related to the current year's KRA administration.

JHU CTE will provide Data and Reports training for administrators on both the KRA and ISPROUT. These live virtual sessions will show participants how to access and analyze the reports available in KReady system and how to use them to make data-informed decisions.

Professional Development for Data Managers
Data managers create user accounts and load teacher, student, and enrollment data into the KReady Online system. JHU CTE will provide two virtual training sessions for ISPROUT data managers and for KRA data managers. The live training will prepare individuals who will serve as the data manager to upload teacher, student, and enrollment data so educators can participate in professional development and administer the respective assessment (ISPROUT or KRA).

A comprehensive professional development plan with additional information can be found in Appendix P.

Question 1.42
(8.1.2) Communication Plan

The comprehensive communication plan in the table below outlines JHU CTE's strategy for outreach and communication around the implementation of the KRA and ISPROUT in Indiana.

What	Date Planned	Audience	Goal & Information	Frequency	Owner	Format
Project Management & Meetings						

What	Date Planned	Audience	Goal & Information	Frequency	Owner	Format
Kick-off meeting	Within ten business days after the issuance of a purchase order	State project team, WestEd, JHU CTE leadership, project manager, technical lead, and professional development lead	Align stakeholders, communicate project objectives, establish roles and responsibilities, review scope and deliverables, timeline, and milestones, and set the project on a clear and successful path from the very beginning	Once a year (Year 1 Only)	JHU CTE Project Manager	1-hour virtual meeting
Project status meeting	Following the kick-off meeting	State project team, WestEd, JHU CTE project manager, technical lead, and professional development lead	Communicate and check-in on the status of deliverables Discuss deliverables and seek clarification, if needed	Weekly	JHU CTE Project Manager	1-hour virtual meeting
Weekly status report	Following the kick-off meeting	State project team, WestEd, JHU CTE project manager, technical lead, and professional development lead	Provide a written status and timeline of deliverables	Weekly	JHU CTE Project Manager	Email
Annual project plan	By May 1 of each contracted year	State project team	Provide a plan with all activities, deliverables, and timeline for the next year	Once a year	JHU CTE Project Manager	Smartsheet PDF
Project plan updates	Following the kick-off meeting	State project team	Provide and highlight any necessary changes and updates to the project plan	Weekly	JHU CTE Project Manager	Smartsheet PDF
Lessons learned meeting	At the end of year 1	State project team, WestEd, JHU CTE leadership, project manager, technical lead, and professional	Discuss successes and what went well in year 1 Discuss improvements and changes for subsequent contract years	Once a year (Year 1 only)	JHU CTE Project Manager	1-hour virtual meeting

What	Date Planned	Audience	Goal & Information	Frequency	Owner	Format
		development lead				
Planning meetings	Midpoint and endpoint of year	State project team, WestEd, JHU CTE leadership, project manager, technical lead, and professional development lead	High-level planning, scheduling, setting the vision, making necessary adjustments, identifying enhancements, and engaging in collaborative problem-solving for the upcoming administration(s)	Twice a year	JHU CTE Project Manager	1-hour virtual meeting
Risk assessment documentation	Following the kick-off meeting	State project team	Risk and issue management plan, escalation process, and risk/issue register or list	Monthly	JHU CTE Project Manager	Smartsheet PDF
Professional Development						
PD and Technology Roadmap	Spring	State project team	Dates and logistics for all training events Enhancements and updates to the technology with targeted timeline	Once	JHU CTE PD Team and Tech Team	PD Roadmap Technology Roadmap
PD Update	May	State project team, KRA and ISPROUT educators	Training materials available in the KReady system	Once	JHU CTE PD Team	Materials in KReady system
Training flyers	Once training dates are set	KRA and ISPROUT educators	Information and logistics of each training session, including links	One flyer for each training	JHU CTE PD Team	PDF
Newsletter resources	Ongoing	KRA and ISPROUT educators	Provide IDOE with resources to share in newsletter (videos, messaging, how-to guides, links, etc.)	Quarterly	JHU CTE PD Team	Mixed media
Training community announcements	Before and during administration window	KRA and ISPROUT trainers	Provide KRA and ISPROUT trainers with updates and announcements	As needed	JHU CTE PD Team	KReady System PD Component
FAQ	Ongoing	KRA and ISPROUT educators	Continually updated list of frequently asked questions from the field on the KRA and ISPROUT with videos	Updated as needed	JHU CTE PD Team	KReady System PD Component

What	Date Planned	Audience	Goal & Information	Frequency	Owner	Format
			and links to supporting resources.			
Data Manager Manual	Ongoing	KRA and ISPROUT data managers	Provide KRA and ISPROUT data managers with a comprehensive how-to manual and videos	Updated as needed	JHU CTE PD Team and Tech Team	Mixed media
Family Outreach	July	Families	Flyers and videos for families with information about the assessment and details about the Individual Student Report.	Once	JHU CTE PD Team	Mixed media

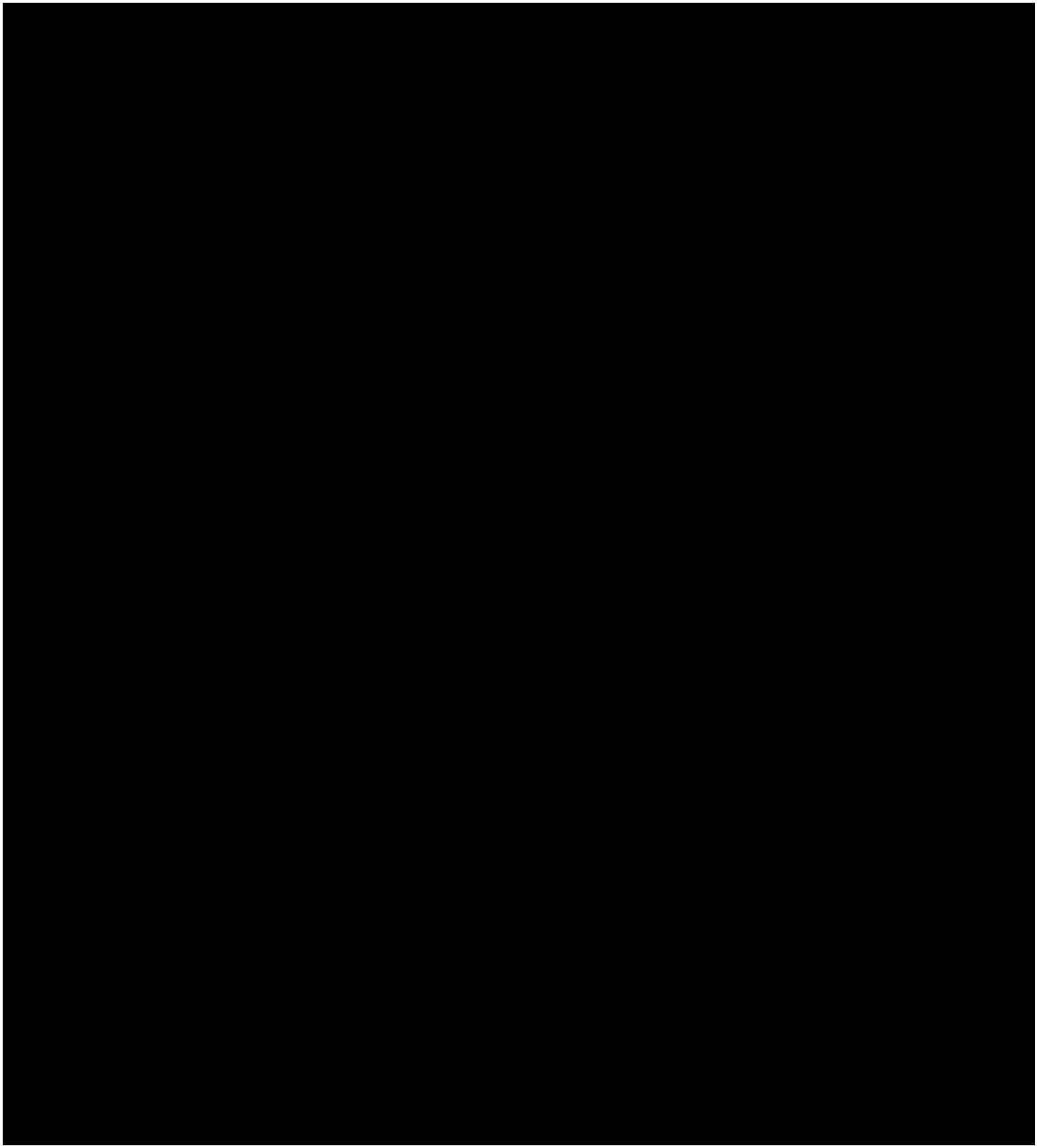
Section 2. Assessment Criteria and Evidence Questions

Part A. Meet Overall Assessment Goals and Ensure Technical Quality

Question 2.1

(A.1) Ensuring that assessments are valid for required and intended purposes: Assessments produce data, including student-level achievement data and student growth data required under Federal Indicator 7 of the U.S. Department of Education's Office of Special Education Programs, that can be used to validly inform the following: Positive Social-Emotional skills; Acquisition and use of knowledge and skills; Use of appropriate behaviors to meet needs; and Other purposes defined by the state.

[redacted]



[redacted]

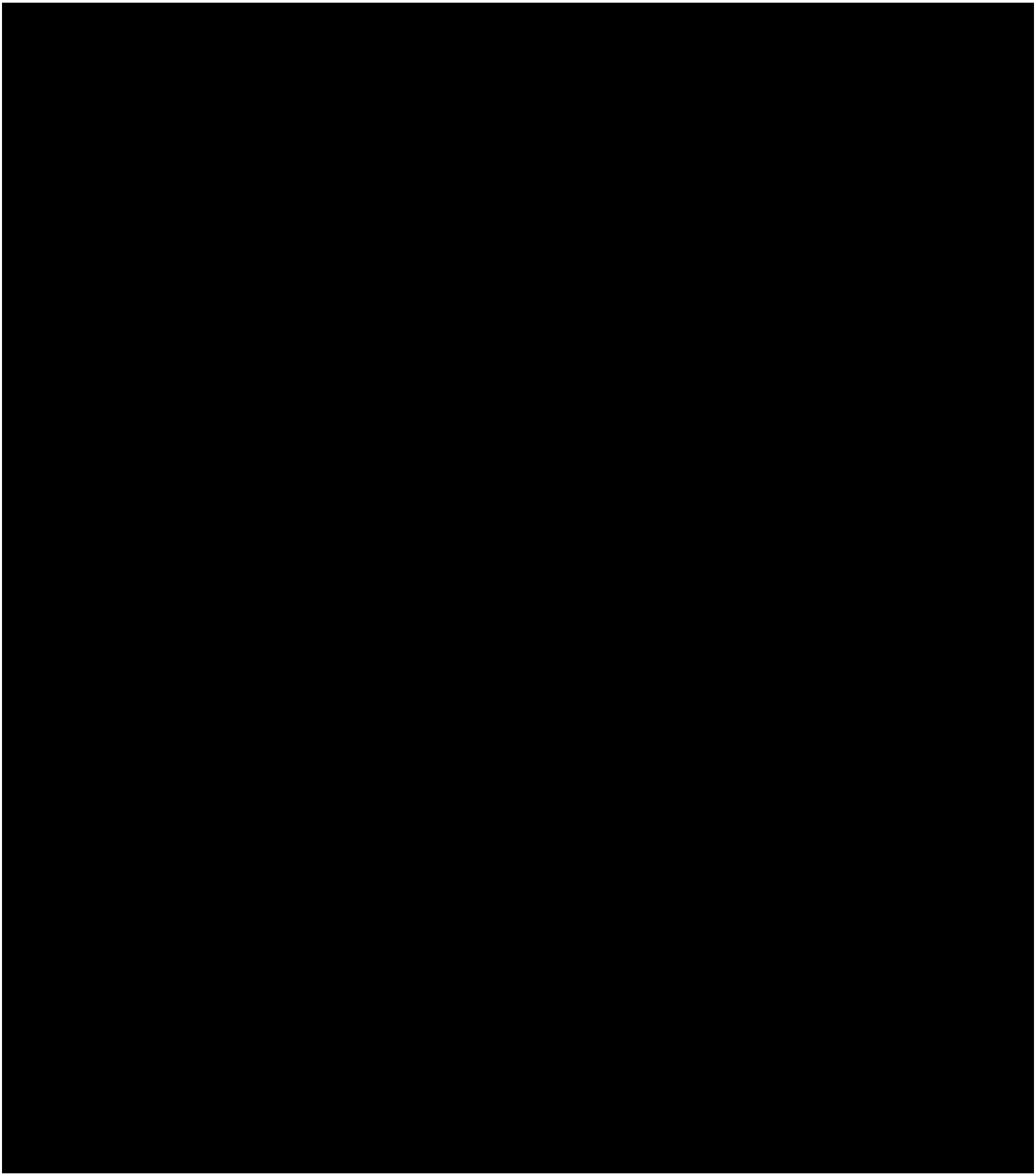
2.1 A.1.b Indiana Student Performance Readiness and Observation of Understanding Tool (ISPROUT):

[redacted]

Evidence Based on Response Processes: Evidence based on response processes typically involves analyses of individual responses to items and whether their responses fit the construct of interest (AERA, APA, & NCME, 2014). Given that ISPROUT is an observation-based assessment, students are not aware that they are being assessed, and evaluations of students' processes of responding to items are not warranted. However, studies of response processes are not limited to the students, and relevant validity evidence includes the extent to which the observers' processes are consistent with the intended interpretation of ratings or scores (AERA, APA, & NCME, 2014).

The KReady online system allows teachers to upload artifacts (e.g., photos of student work) that support a SKB (skills, knowledge, & behavior) rating. In addition, teachers can also enter detailed comments that support their ratings, which can also be used to discuss progress with other educators or students' families. After the 2019–2020 and the 2020–2021 school years, WestEd conducted a review of the evidence and artifacts that teachers uploaded to the KReady online system to better understand whether teachers were evaluating and applying SKB ratings appropriately. The results of the 2019–2020 analysis were provided in the *ISPROUT Annual Technical Report 2019–2020* (WestEd, 2020), and the results of the 2020–2021 analysis were provided in the *ISPROUT Annual Technical Report 2020–2021* (WestEd, 2021). An additional interrater reliability study was conducted during the 2021–2022 school year, and results were provided to IDOE in the [redacted] see Appendix N).

[redacted]



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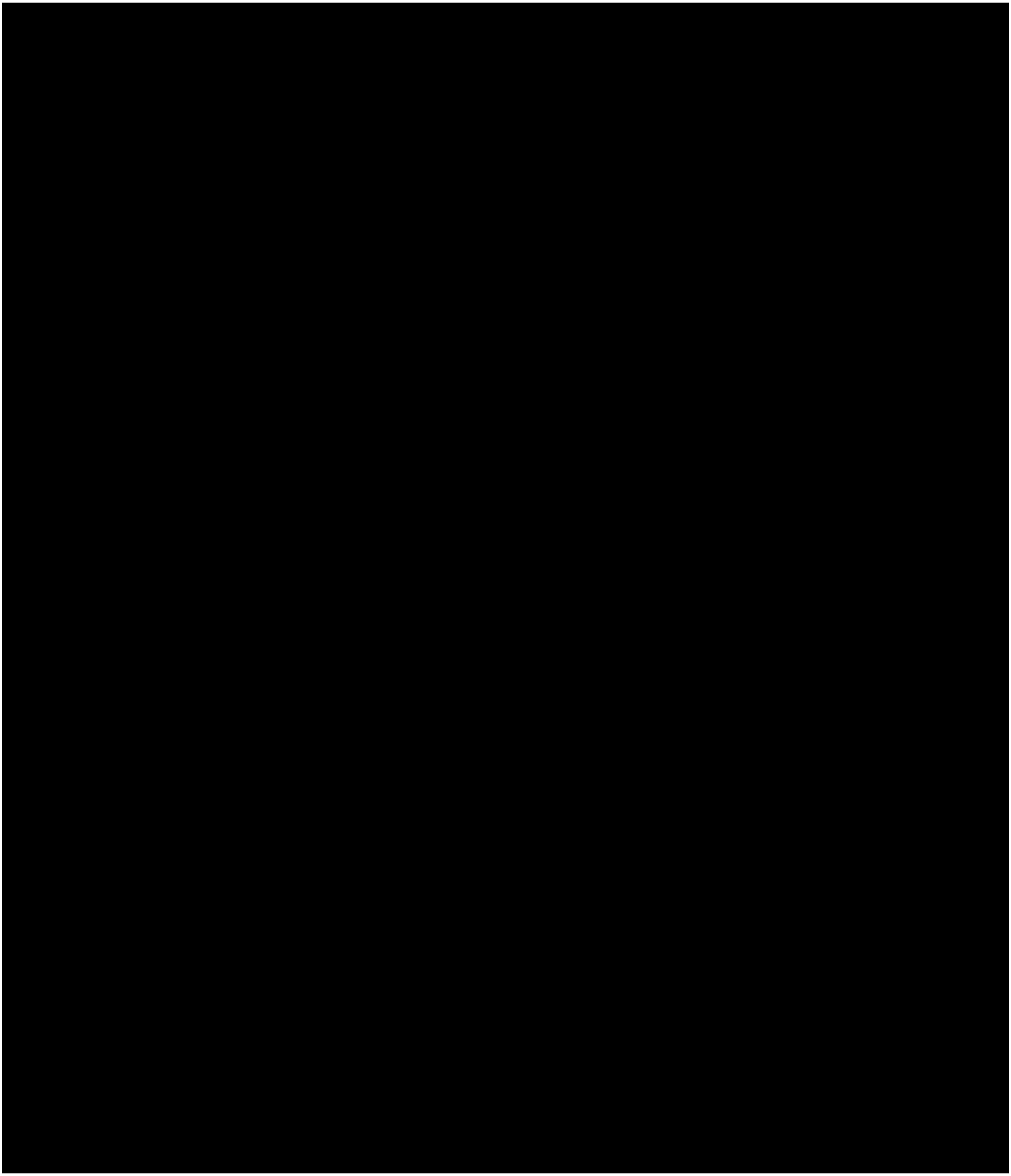
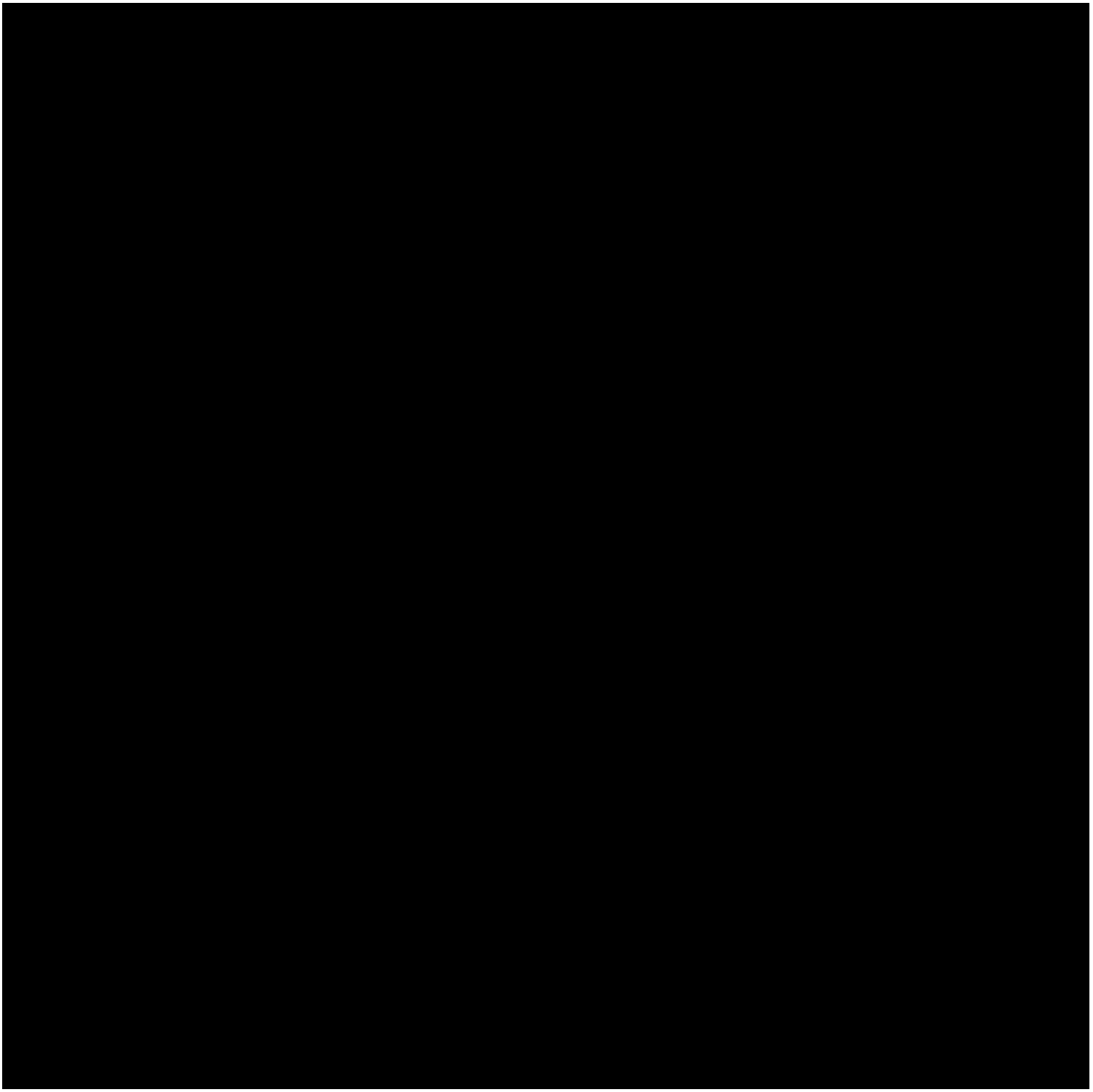
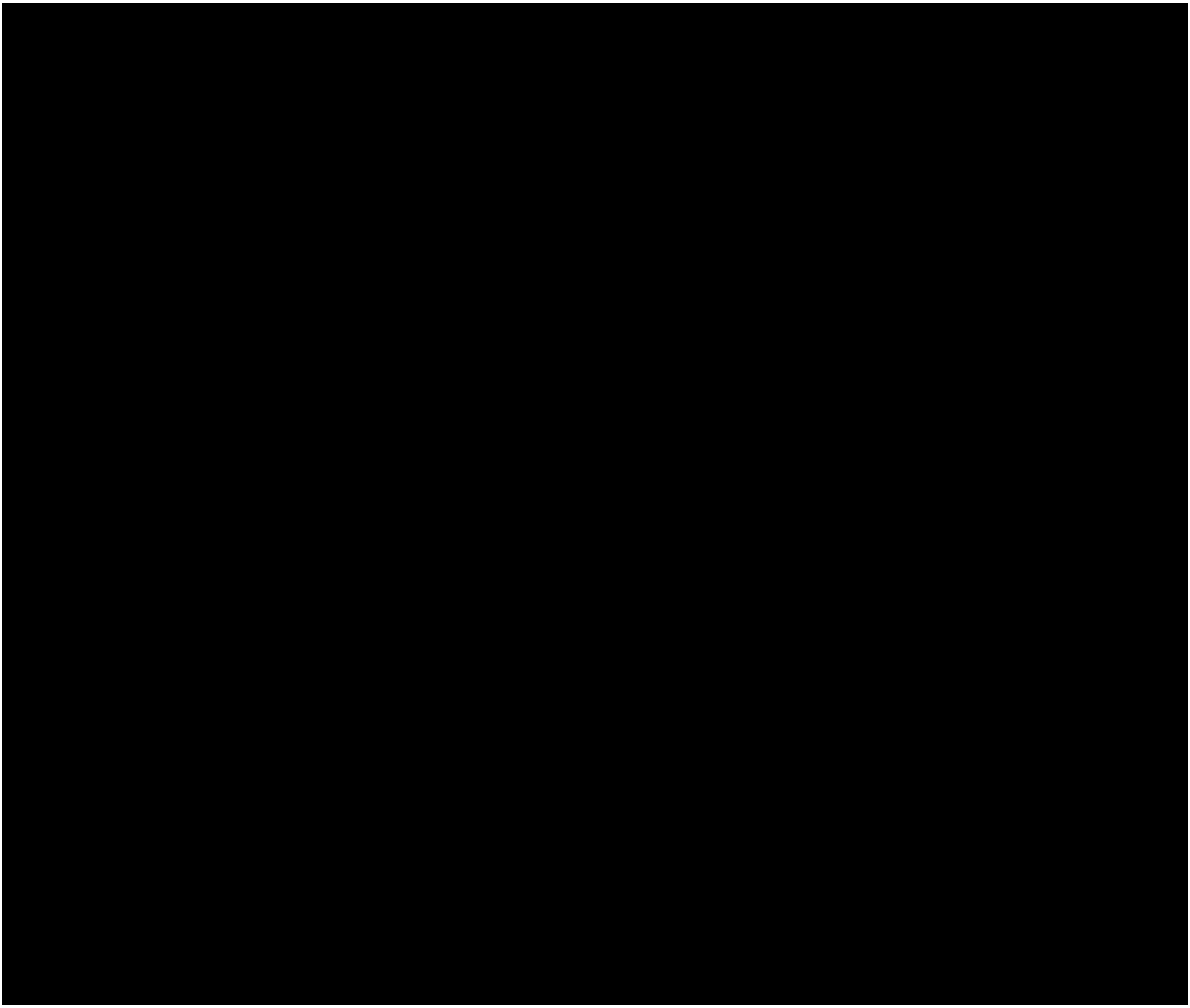
Question 2.2

(A.2) Ensuring that assessments are reliable: Assessments minimize error that may distort interpretations of results, estimate the magnitude of error, and inform users of its magnitude.





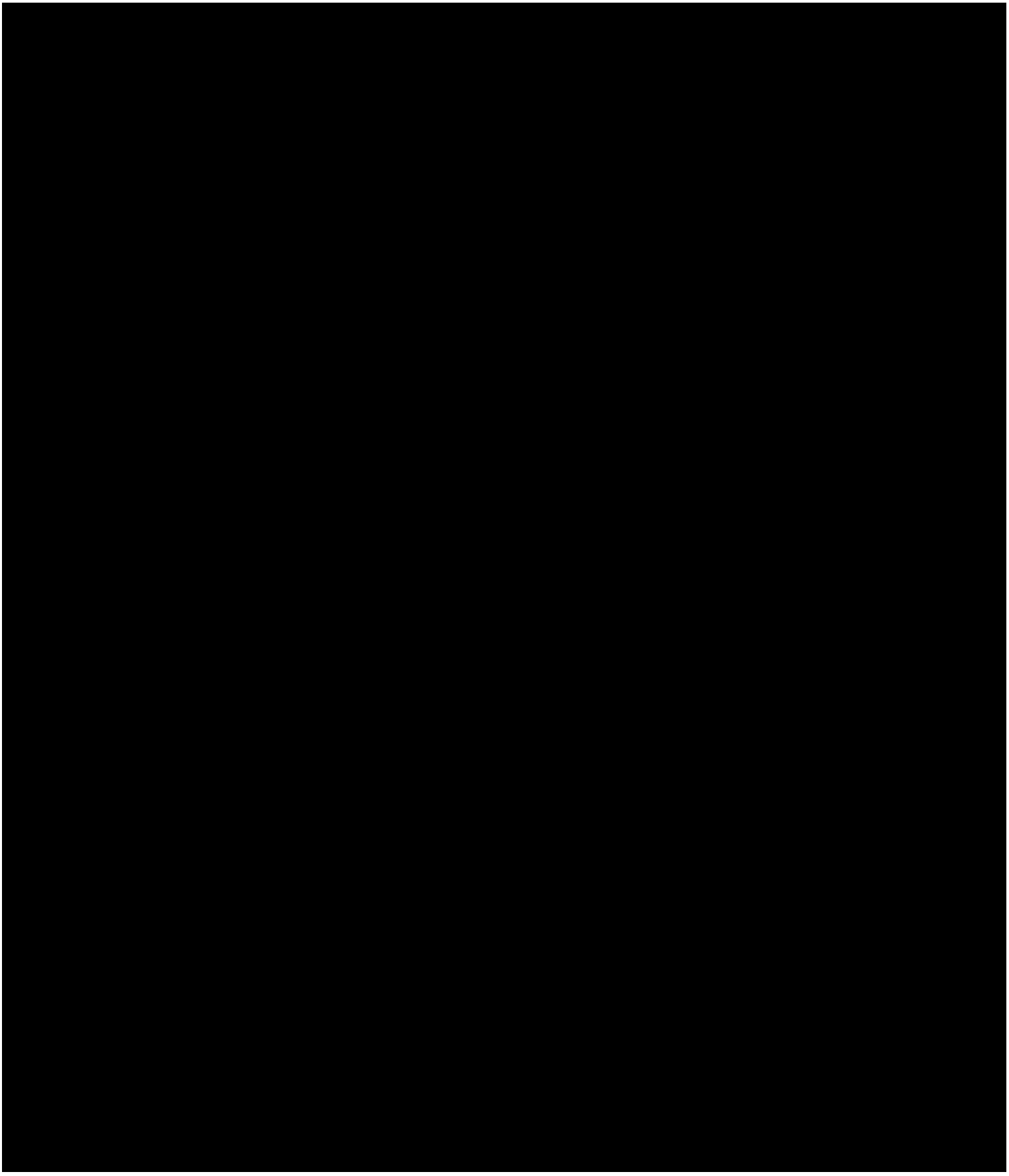


[redacted]

Question 2.3

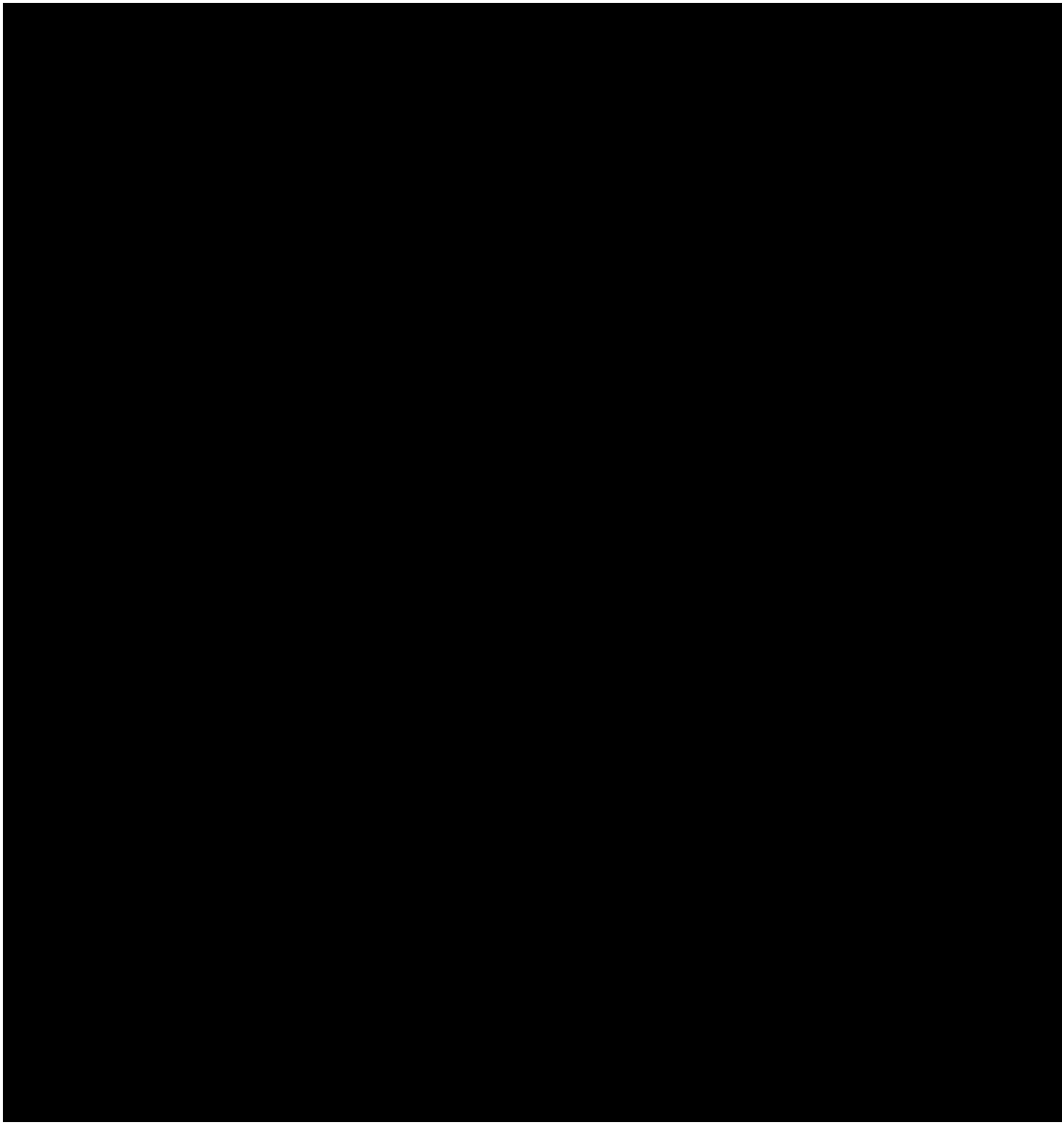
(A.3) Ensuring that assessments are designed and implemented to yield valid and consistent test score interpretations within and across years: Assessment forms yield consistent score meanings over time, forms within year, student groups, and delivery mechanisms (e.g., paper, computer, including multiple computer platforms.

[redacted]



Question 2.4

(A.3) Ensuring that assessments are designed and implemented to yield valid and consistent test score interpretations within and across years: Score scales used to facilitate accurate and meaningful inferences about test performance.



Question 2.5

(A.4) Providing accessibility to all students, including Multilingual learners and students with disabilities.

All students, including students with disabilities and students who are English learners, are required to participate in the KRA, and their results are a part of the summary reports. A fully accessible approach to assessment design and implementation is necessary to ensure that students with diverse learning characteristics have the opportunity to demonstrate their knowledge and skills. At the same time, the states need to be confident in the reliability of results obtained from the KRA when conducting analyses and making policy decisions. In addition, school administrators, teachers, and parents need to be knowledgeable of where their students are functioning developmentally, in order to identify focus areas for instruction that promote growth in individual students. The guidance document for administering the KRA to diverse populations of students is referred to as the Guidelines on Allowable Supports for the Kindergarten Readiness Assessment.

Recognizing the need for practitioners to fully understand the importance of differentiation of administration in order to meet the needs of diverse learners, a specific portion of the Professional Development (PD) training is devoted to instruction on these guidelines. These guidelines provide detailed information on the strategies and practices that support differentiated administration of the assessment. The KRA training ensures that trainers and teachers will learn about the Universally Designed Allowances that are available for all students, including materials, presentations, procedures, and settings that can be used to ensure that all students can access KRA items. These guidelines also provide an item-by-item decision-making process for providing support to students with disabilities and to English learners, called Level the Field supports. These supports provide equal access and opportunity for all students to participate in the KRA, without substantially altering what a student is expected to do. They are intended to reduce or even eliminate the effects of a

student's disability or limited English proficiency. Through in-depth review, practice, demonstration, and reflection, the PD ensures that participants understand how to appropriately administer the KRA to diverse populations of students.

Question 2.6

(A.4) Providing accessibility to all students, including Multilingual learners and students with disabilities: Offering appropriate accommodations: Allowable accommodations that maintain the constructs being assessed are offered where feasible and appropriate, and consider the access needs (e.g., cognitive, processing, sensory, physical, language) of the vast majority of students.

The guidance document for administering the KRA to diverse populations of students is referred to as the Guidelines on Allowable Supports for the Kindergarten Readiness Assessment. This item-by-item decision making process will outline additional allowable supports and procedures for further individualization that may be needed for students with disabilities or English learners. These additional supports and procedures will be emphasized as part of professional development. Please see Appendix F for the easy to use, printable KRA Quick Guides for teachers.

Question 2.7

(A.4) Providing accessibility to all students, including Multilingual learners and students with disabilities: Assessments produce valid and reliable scores for Multilingual learners.

2.5–2.8 A.4a Kindergarten Readiness Assessment (KRA 2.0):

Prior to field testing, every KRA 2.0 item went through a bias and content review. The bias and content review committees consisted of early childhood educators from the states. Staff from the state departments also reviewed and approved each item prior to field testing. Further, in an effort to ensure maximum accessibility for English learners, experts from the WIDA Consortium reviewed and provided feedback on every KRA 2.0 item prior to field testing. The extensive rounds of review and feedback ensure fidelity to the standards and appropriateness for use with children entering kindergarten. KRA 2.0 item development process and allowed the states to review and finalize the KRA 2.0 Blueprint. Item enhancements focused on maximizing accessibility for English learners.

All students, including students who are English learners, are required to participate in the KRA, and their results are a part of the summary reports. A fully accessible approach to assessment design and implementation is necessary to

ensure that students with diverse learning characteristics have the opportunity to demonstrate their knowledge and skills. At the same time, the states need to be confident in the reliability of results obtained from the KRA when conducting analyses and making policy decisions. In addition, school administrators, teachers, and parents need to be knowledgeable of where their students are functioning developmentally, in order to identify focus areas for instruction that promote growth in individual students. The guidance document for administering the KRA to diverse populations of students is referred to as the Guidelines on Allowable Supports for the Kindergarten Readiness Assessment.

Recognizing the need for practitioners to fully understand the importance of differentiation of administration in order to meet the needs of diverse learners, a specific portion of the Professional Development (PD) training is devoted to instruction on these guidelines. These guidelines provide detailed information on the strategies and practices that support differentiated administration of the assessment. The KRA training ensures that trainers and teachers will learn about the Universally Designed Allowances that are available for all students, including materials, presentations, procedures, and settings that can be used to ensure that all students can access KRA items. These guidelines also provide an item-by-item decision-making process for providing support to English learners, called Level the Field supports. These supports provide equal access and opportunity for all students to participate in the KRA, without substantially altering what a student is expected to do. They are intended to reduce or even eliminate the effects of a student's limited English proficiency. Through in-depth review, practice, demonstration, and reflection, the PD ensures that participants understand how to appropriately administer the KRA to diverse populations of students.

We currently have a grant with the Maryland State Department of Education to translate the KRA into Spanish by 2025. When that is complete we will be able to make that form available to IDOE. Additionally, as part of this grant, this year we are conducting a formal evaluation of the KRA and the Early Learning Assessment with a cultural, anti-bias, and anti-racist review in partnership with WestEd and the national Center for Measurement Justice. We will be incorporating feedback and cultural considerations for assessment into the assessment and professional development materials, and will share findings with States that are a part of the Ready for Kindergarten Collaborative.

Question 2.8

(A.4) Assessments produce valid and reliable scores for students with disabilities.

2.5–2.8 A.4a Kindergarten Readiness Assessment (KRA 2.0):

Prior to field testing, every KRA 2.0 item went through a bias and content review. The bias and content review committees consisted of early childhood educators from the states. Staff from the state departments also reviewed and approved each item prior to field testing. The extensive rounds of review and feedback ensure fidelity to the standards and appropriateness for use with children entering kindergarten. KRA 2.0 item development process and allowed the states to review and finalize the KRA 2.0 Blueprint. Item enhancements focused on maximizing accessibility for students with disabilities.

All students, including students with disabilities, are required to participate in the KRA, and their results are a part of the summary reports. A fully accessible approach to assessment design and implementation is necessary to ensure that students with diverse learning characteristics have the opportunity to demonstrate their knowledge and skills. At the same time, the states need to be confident in the reliability of results obtained from the KRA when conducting analyses and making policy decisions. In addition, school administrators, teachers, and parents need to be knowledgeable of where their students are functioning developmentally, in order to identify focus areas for instruction that promote growth in individual students. The guidance document for administering the KRA to diverse populations of students is referred to as the Guidelines on Allowable Supports for the Kindergarten Readiness Assessment.

Recognizing the need for practitioners to fully understand the importance of differentiation of administration in order to meet the needs of diverse learners, a specific portion of the Professional Development (PD) training is devoted to instruction on these guidelines. These guidelines provide detailed information on the strategies and practices that support differentiated administration of the assessment. The KRA training ensures that trainers and teachers will learn about the Universally Designed Allowances that are available for all students, including materials, presentations, procedures, and settings that can be used to ensure that all students can access KRA items. These guidelines also provide an item-by-item decision-making process for providing support to students with disabilities, called Level the Field supports. These supports provide equal access and opportunity for all students to participate in the KRA, without substantially altering what a student is expected to do. They are intended to reduce or even eliminate the effects of a student's disability. Through in-

depth review, practice, demonstration, and reflection, the PD ensures that participants understand how to appropriately administer the KRA to diverse populations of students.

Printed braille kits with tactile graphics for the Kindergarten Readiness Assessment can be created at an additional cost or we can provide files and directions for assembly of those particular kits for children who are blind or visually impaired. We also have items available on video in American Sign Language.

2.5–2.8 A.4b Indiana Student Performance Readiness and Observation of Understanding Tool (ISPROUT):

The Early Learning Assessment is based on research-supported learning progressions aligned to early learning standards and seven domains of school readiness. Each SKB within the learning progression includes up to nine level descriptors (i.e., Levels A, B, C, D, 1, 2, 3, 4, 5) that represent the typical milestones of a child's development. Levels 1–5 describe a continuum of the typical skills and behaviors that children develop between 36 and 72 months of age. Levels A–D represent developmental stages that precede Levels 1–5, which allow teachers to assess children who may be at earlier stages of development, including children with disabilities and children who are English and dual-language learners.

Given that students with IEPs are required to participate in ISPROUT, a fully accessible approach to assessment design and implementation is necessary to ensure that students with diverse learning characteristics have the opportunity to demonstrate their abilities. At the same time, IDOE needs to be confident in the reliability of results obtained from ISPROUT. In addition, school administrators, teachers, and parents need to be knowledgeable of their students' development in order to identify focus areas for instruction that promote growth in individual students.

Recognizing the need for practitioners to fully understand the importance of differentiation of administration in order to meet the needs of diverse learners, a specific portion of the Professional Development (PD) training is devoted to instruction on this guidance. The PD training and resources, such as adaptations for each learning progression, provide detailed information on the strategies and practices that support the administration of the assessment to diverse populations of students. The ISPROUT PD and training activities promote an understanding of Universally Designed Allowances for all students, as well as allowable supports for diverse populations, including English learners and students with disabilities.

Question 2.9

(A.5) Meeting all requirements for data privacy and ownership: All assessments must meet federal and State requirements for student privacy, and all data is owned exclusively by the State.

2.9 A.5 Data privacy and ownership: Development, deployment, and support for both the KRA 2.0 and ISPROUT assessments are carried out by JHU CTE on the KReady online system. The deployment takes advantage of powerful maintenance tools provided by Amazon Web Services (AWS), including automatic full backups, point-in-time transactional logging, and industry-standard vulnerability scanning.

Assurances

JHU CTE will employ practices to ensure student privacy are protected. The KReady online system is designed with granular role permissions to limit access to data, in accordance with Family Educational Rights and Privacy Act (FERPA) requirements. All connections to KReady online are secured by Secure Socket Layer (SSL) to ensure that all data are encrypted in transit. The KReady online code and server environment is constantly monitored using Nessus Vulnerability Scanner to ensure that any hacking vulnerability is identified quickly for repair. The KReady online system is configured using both public and private subnets, so that only certain components are exposed to the internet. Access Control Lists limit inbound and outbound data. All data are stored in the KReady online database, not on individual computers or tablets. In addition to technical approaches, JHU CTE contracts with third-party security consultants for auditing and intrusion prevention. Lastly, individuals have permissions depending on their role for accessing data. Teachers, for example, access data for students on their roster, while district data managers can access data for students in the district or corporation.

IDOE will exclusively own all data from the administration of the kindergarten assessments proposed in this solution.

JHU CTE will provide data files containing all underlying data in a secure manner (i.e., secure FTP) to IDOE on a quarterly schedule for the Early Learning Assessment and after the completion of the statewide Kindergarten Readiness Assessment administration window. JHU CTE can also provide data files at any time as requested by IDOE.

Reports will be available for every user in the KReady system, including providers at the classroom level, the school/program level, the district level, and the state level. Reports will be available at any time throughout and after the administration period (as determined by the State). Because the system is permissions-based, individual users will only see data to which they have access. To help the State monitor and track completion of the assessment, JHU CTE will provide completion reports throughout the data collection period as requested by the State. JHU CTE will export a state-level data file to share with the State when requested by the State throughout or after the data collection period. The state will use this file to support OSEP reporting. The state level data file will be provided 1 month after the previous data collection period has closed. Monthly completion reports will be provided to monitor data entry for initial implementation. All state level reports are securely transferred by a State-level FTP account created for IDOE.

Additionally, JHU CTE will ensure that all data in its possession and in the possession of any subcontractors, or agents to which JHU CTE may have transferred data, are destroyed or transferred to the State when the data are no longer needed for their specified purpose, at the request of the State.

Performance metrics are monitored to identify and anticipate any potential areas of hardware degradation or failure. The KReady online system's AWS configuration is designed for automatic creation of new KReady online instances immediately upon server failure. Recovery via point-in-time snapshot is available within 30 days in the unlikely case of database corruption. Full nightly backups are carried out for all data and files. The last 50 versions of the KReady online application instance are kept ready for deployment at any time in the unlikely event of system software corruption or regression bugs caused by system updates.

Part B: Yield Valuable Reports on Student Progress and Performance

Question 2.10

(B.1) Focusing on student achievement and progress to readiness: Score reports illustrate a student's progress on the continuum toward kindergarten readiness, age by age, and domain by domain. Reports stress the most important content, skills, and processes, and how the assessment focuses on them, to show whether or not students are on track to readiness.

[redacted]

Question 2.11

(B.2) Providing timely data that inform instruction: Reports are instructionally valuable, easy to understand by all audiences, and delivered in time to provide useful, actionable data to students, families, and teachers.

Reports available for the KRA and the ISPROUT (Early Learning Assessment) are described in depth in Question 1.25/Section 6.1.1 (Reporting Results). Sample reports can be viewed in Appendix M.

Reports have been created and enhanced with feedback from users in the field including Indiana educators. The reports and training experiences are designed to help educators review data and take action for instruction, professional development, and interventions. Family friendly reports are available, as the KRA Individual Student Report is available in multiple languages.

The reporting structure can be supported by the assessment time. Section 2.1 details the evidence based on the internal structure of the KRA. Table 2.1 in that section summarizes the classical item statistics for the KRA in fall 2022 (in Maryland). These statistics fall within acceptable ranges. Additional detail is provided in Question 1.32/ Section 7.1.4 Technical Analyses.

The training provided for data managers, district and school administrators, and teachers provides in-depth information on how to interpret reports appropriately (and how not to), and protocols and strategies for determining next steps.

Part C: Adhere to Best Practices in Test Administration

Question 2.12

Maintaining necessary standardization and ensuring test security: In order to ensure the validity, fairness, and integrity of State test results, the assessment systems maintain the security of the items and tests as well as the answer documents and related ancillary materials that result from test administrations.

Test security is essential to obtain reliable and valid scores for accountability purposes. Test developers are well trained in best security practices. JHU CTE and WestEd do not share assessment materials with outside parties without a non-disclosure agreement and use secure means to store assessment materials through the stages of development (i.e., via a permissions-based folder in Box.com). Test administrators or educators must successfully pass a required training to administer the assessment(s). During the training session, the trainer must review test security policies and procedures with the teachers and require them to read all appropriate materials and documents provided to them. We propose to work with IDOE to develop a test security agreement that teachers must sign prior to administering the assessment. It is recommended that this agreement align with the test security policies and procedures used for other secure tests in the state.

Teachers are required to store test materials in a secure locked location. Additionally, all assessment materials and data are stored in the password-protected KReady online system and require a distinct password to access. District level accounts are approved by IDOE before created, and districts are responsible for creating school and teacher accounts. We propose to work with IDOE to develop a security agreement for district data managers when it comes to the creation of school and teacher system accounts to ensure the right people are gaining access to the online system.

Detecting testing irregularities before, during, and after testing is crucial to maintain the integrity and validity of assessments. Here are the methods used to detect irregularities before, during, or after testing:

Before Testing:

1. Pre-Test Training and Education: Provide test administrators, proctors, and staff with training on security protocols, procedures, and what constitutes irregular behavior. Ensure they understand their roles in maintaining test integrity.

2. Security Protocols: Establish and communicate strict security protocols for test materials, including secure storage, distribution, and tracking.

During Testing:

1. System passwords and accounts are not shared. Each individual accessor should have their own account to enter scores.
2. Testing notification or signs posted on classrooms so others are aware that testing is in progress.
3. Teachers or KRA App proctors are monitoring students at all times while they are using the KRA App.

After Testing:

1. Data analysis are conducted and data are thoroughly reviewed.

Part D: Meet State-Specific Criteria

Question 2.13

Ensuring item interoperability

Interoperability is essential for the smooth functioning of an assessment system, especially when it involves various software applications, databases, and platforms. Items within the KReady system are designed to allow the exchange of data from the applications to the KReady system without loss or distortion. This means that item responses, metadata, and scoring information can be shared between different parts of the technology ecosystem accurately and efficiently. Items work seamlessly with different browsers and operating systems. We are currently working in South Carolina to facilitate the interoperability of data with the KReady system following the Ed-Fi Data Standard.

Section 3. IT Related Questions

Question 3.1

Provide detailed information regarding the Respondent's current delivery infrastructure for services related to the delivery of the assessment(s) for which the Respondent is bidding, including: How will the Respondent handle significant increases in web traffic? Is this solution a manual or automatic adjustment? With either solution, what is the time period expected for implementing these adjustments?

The KReady system was designed with scalability as a critical requirement, as the system was developed to serve multiple States, beginning with all Kindergarten classrooms in Ohio and Maryland. Since the original launch of KReady, the system has also been used to facilitate the administration of the KRA in five States (Ohio, Maryland, South Carolina, Michigan, and Hawaii), as well as the formative Early Learning Assessment in Ohio, Maryland, and Indiana (ISPROUT). In order to ensure that KReady is capable of maintaining high levels of performance under conditions of heavy simultaneous usage across multiple States, the decision was made to host KReady servers in the Cloud using Amazon Web Services (AWS) infrastructure.

Question 3.2

Describe the Respondent's server scalability plan and capabilities in the event unforeseen traffic spikes. In the event the Respondent is unable to provide adequate redundancy and/or high availability of services, describe other plans the Respondent has made to secure additional resources in a timely manner.

KReady's server configuration has been refined over a decade of use across multiple States, limiting the probability of unforeseen traffic spikes. The administration of the KRA follows a mostly-predible pattern that includes a period of heavy use in the beginning of the school year, as data managers onboard student, teacher, and enrollment data from their local SIS, and another period of heavy usage towards the end of the scheduled administration window. In rare cases where unexpected spikes may occur, KReady employs a variety of techniques and strategies, including automatic and manual monitoring of performance metrics to quickly identify any area of concern.

AWS configuration tools provide failover redundancy in the event a server becomes unavailable for any reason. Should any unanticipated spikes in usage occur, AWS also supports the automatic creation of new server instances to boost capacity in response to degraded performance metrics or unexpected hardware malfunction. In addition, any degradation in performance triggers alerts to key technical staff capable of determining the cause of the performance issue and adjusting server resources manually if needed. Finally, KReady also utilizes servers across multiple AWS regions for redundancy and to mitigate the potential impact of regional Internet disruptions.

Question 3.3

In the event of an unforeseen high level of web traffic during any specific time period, describe how the Respondent will plan on satisfying the additional costs associated with continuing to provide a reasonable service level.

One benefit of utilizing a SaaS model that is shared across multiple States is that costs for hosting, maintenance and infrastructure are also shared. In the event of unexpected heavy traffic resulting in modest additional costs, the additional cost would likely be absorbed. Should a situation occur in which hosting and maintenance costs increase substantially in a manner that was not anticipated in the original scope of work, JHU CTE would propose a meeting of project leaders to discuss the increases and problem-solve workable solutions.

Question 3.4

Provide a description of the type of risk assessments that have been completed to prepare the Respondent's staff as well as the list of resources available to handle different scenarios. Describe recent steps the Respondent has taken to reduce IT related risks that the Respondent has found or become aware of.

Conducting ongoing risk assessments to identify potential threats and vulnerabilities is a critical component of any effective security model and will therefore be employed in this project to ensure that Indiana's data is secure and protected at all times. Proactive scans are conducted on a regular basis to identify potential weaknesses in server configuration or in the application itself. These proactive vulnerability scans are critical because the landscape of threats is always evolving. Intrusion detection tools are also employed that can identify unauthorized access (or attempts to access) the KReady application or the server environment. AWS provides a variety of tools and functionality to assist in the process of continuous system risk assessment monitoring.

[redacted]

Documented risk assessment processes and mitigation plans are reviewed on an ongoing basis including during the third party SOC 2 Type II audit that will be conducted annually.

Question 3.5

Describe any additional internal/external training that Respondent has completed in order to mitigate or reduce overall risks.

All staff at JHU CTE are trained in the critical aspects of the Family Educational Rights and Privacy Act (FERPA) to ensure comprehensive understanding of the importance of protecting personalized student data. All staff who work on technical projects that involve student data will sign a form acknowledging an understanding of FERPA guidelines, responsibilities, and best practices. In addition to general FERPA training, technical and professional development staff who interact with student data are trained in best practices in handling data in ways that minimize risk of accidental exposure. Technical staff with direct access to the KReady code and database complete AWS certification requiring substantial training related to data and application security.

Question 3.6

Has the Respondent utilized any third-party resources to complete any technology assessments of its IT systems? If so, what were the findings and how are they being addressed?

Beginning in the Summer of 2023, JHU CTE contracted with a 3rd party intendent security firm to conduct annual SOC 2 Type 2 audits covering all operations pertaining to the use of KReady. The report will be provided to the State within 30 days of its completion each year of the contract. Any identified issues or material weaknesses will be addressed and remedied at no cost to the State. Previous security audits were conducted internally with the support of external security consultants, and resulted primarily in expanded documentation of disaster recovery and incident response policies. JHU CTE has for years provided a SOC 2 Type 2 audit report to the State of Maryland covering our work on a separate, unrelated technical system, and is expanding our SOC 2 compliance to the KReady system this year.

Question 3.7

What measures have been put in place by the Respondent to detect and remedy any situation that may arise during the testing phases?

To support our work with ISPROUT in Indiana, JHU CTE developed in collaboration with IDOE the document: *Escalation Protocol for JHU Assessments* that details how any non-optimal situations are handled (see Appendix L). The policy includes a list of key contacts, communication protocols, actions to be taken by each partner, timelines for those actions, communication protocols based on incident severity, and the role of the help desk in tracking and monitoring a situation. In addition, JHU CTE and IDOE have an established process for an Incident Postmortem that was created after a four-hour disruption occurred on the morning of 1/6/2021. The postmortem format includes a summary of the incident, the

impact, the root cause, lessons learned, and a log of communication related to the event. In this proposal, JHU CTE recommends reviewing these protocols and expanding their use to the KRA to guide responses to any situation that may arise during testing or implementation phases.

Question 3.8

What improvements or process adjustments have recently come out of the Respondent's Quality Assurance department?

JHU CTE's Quality Assurance processes, described in detail in Question 1.29/Section 7.1.1 (Quality Assurance Protocols) are continually reviewed and refined as needed. Recent changes include having multiple staff members representing different areas of expertise participate in the formal QA testing, more rigorous and extensive documentation of QA testing results, and more granular documentation of acceptance criteria and testing scenarios. In addition, the technical development team has determined that pushing new code on the same day each week helps ensure adequate time for the QA process to be completed and reduces pressure to push a code modification as a hotfix before all acceptance criteria have been thoroughly vetted.

Another step taken to improve QA department processes involved sending key staff to additional training on Agile/Scrum development methodologies, with a substantial emphasis on QA best practices. Key staff have also completed Project Management Professional (PMP) training and infused the lessons learned into multiple processes involving quality control of all types of project deliverables.

Question 3.9

What specific I/O (input / output) performance tuning has been completed recently?

[redacted]

Question 3.10

From how many different physical sites can the Respondent provide the assessment?

Because KReady is hosted in the Cloud and employs the scaling and redundancy configurations described above, there is no technical limit to the number of physical sites in which the KRA can be administered.

Question 3.11

Describe the Respondent's disaster recovery process.

[redacted]

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