



**STUDENT ASSESSMENTS
AND ASSOCIATED GROWTH MODELS FOR
TEACHER AND PRINCIPAL EVALUATION**

FORM C

PUBLICLY AVAILABLE SERVICES SUMMARY

This form will be posted on the New York State Education Department’s Web site and distributed through other means for all applications that are approved in conjunction with this RFQ to allow districts and BOCES to understand proposed offerings in advance of directly contacting Assessment Providers regarding potential further procurements.

Assessment Provider Information	
Name of Assessment Provider:	FastBridge Learning, LLC
Assessment Provider Contact Information:	www.fastbridge.org 612-254-2534 sales@fastbridge.org
Name of Assessment:	aMath
Nature of Assessment:	<input type="checkbox"/> ASSESSMENT FOR USE WITH STUDENT LEARNING OBJECTIVES WITH A TARGET SETTING MODEL; OR <input type="checkbox"/> SUPPLEMENTAL ASSESSMENT WITH AN ASSOCIATED GROWTH MODEL: <input type="checkbox"/> GAIN SCORE MODEL <input type="checkbox"/> GROWTH-TO-PROFICIENCY MODEL <input checked="" type="checkbox"/> STUDENT GROWTH PERCENTILES <input type="checkbox"/> PROJECTION MODELS <input type="checkbox"/> VALUE-ADDED MODELS <input type="checkbox"/> OTHER:
What are the grade(s) for which the assessment can be used to generate a 0-20 APPR score?	Grades 1 to 5
What are the subject area(s) for which the assessment can be used to generate a 0-20 APPR score?	Mathematics
What are the technology requirements associated with the assessment?	FAST™ is a web-based, hosted SaaS solution. As such, with no hardware or software to install, implementing FAST is simple. FAST requires no network or computer-based installation. Our cloud-based system is easy to implement and supported with optional automated rostering and SIS integration, nothing to install or maintain, and multi-platform and device support. The infrastructure requirements of New York Schools will be minimal. For optimal performance, schools must have sufficient bandwidth for the aMath Computer-Adaptive Tests. Performance testing has shown that 75Mbps of available bandwidth is optimal if a school district planned to test 500 students simultaneously on aMath. At this range, the average page response is in the 2–5 second range.

<p>Is the assessment available, either for free or through purchase, to other districts or BOCES in New York State?</p>	<p><input checked="" type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>
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Please provide an overview of the assessment for districts and BOCES. Please include:

- **A description of the assessment;**
- **A description of how the assessment is administered;**
- **A description of how scores are reported (include links to sample reports as appropriate);**
- **A description of how the Assessment Provider supports implementation of the assessment, including any technical assistance. (3 pages max)**

aMath (Adaptive Math) is a simple, efficient, fully automated computer adaptive measure of broad math and component skills. aMath is designed to identify those students with deficits in math achievement in need of additional instruction and predict performance on state accountability measures. It is individualized for each student, but may be group administered. Items tap a variety of skills including counting and cardinality, operations and algebraic thinking, number and operations in base ten, numbers and operations, measurement and data, and geometry. These assessments adapt and individualize to the skills of each student. Students typically complete the assessments in 20-30 minutes, reducing testing time by up to 50-95% compared to traditional tests. Our extensive research has enabled the aMath test of 30 items to replace a traditional 100-item test, with high accuracy and actionable results. aMath includes fully automated administration and scoring of individualized assessments for purposes of universal screening and instructional leveling. It also provides skill-based diagnostic reports of strengths and weaknesses along with progress monitoring and instructional evaluation.

The type of questions and response format is substantially similar to many state-wide assessments (i.e., multiple choice, fill in the blank). There are both auditory and visual stimuli presented for each question. Although the test is individualized for each student, typically developing kindergarten students receive items related to number and quantity identification. Typically developing students in fourth and fifth grades receive items related multi-step problem solving and advanced calculation.

The assessment is highly researched and based the recommendations of the National Math Panel (2008) and National Common Core Standards (2010). The domains of math achievement measured by aMath are directly linked with the CCSS and the six domains listed above are described in more detail below.

Counting & Cardinality (CC)

The CC domain addresses students' basic knowledge of numbers. For example, students are expected to know number names, count to tell the number of objects, and compare numbers. The CC domain serves as a fundamental building block for the development of more complex math skills. For example, students may first be able to count a series of objects, later recognize the count of small groups without explicit counting, and still later, group large numbers of objects into meaningful groups (e.g. by tens) to arrive at a total.

Operations & Algebraic Thinking (OA)

The OA domain extends from kindergarten through fifth grade and deals largely with the representation and solution of basic math facts. In kindergarten, students are expected to begin parsing out the differences in meaning between "addition" and "subtraction." As students progress, they are expected to solve increasingly complex problems that may require addition, subtraction, multiplication, or division. Upon reaching grades four and five, students are expected to be familiar with the concepts of multiples and factors. In addition, students may be asked to interpret numerical expressions or analyze relationships using knowledge of the four operations developed in grades K-3.

Number & Operations in Base Ten (NBT)

The NBT domain extends from kindergarten through fifth grade and includes knowledge of place value and its applications. In kindergarten through second grade, students are expected to gain knowledge of place value and apply it to counting and basic operations involving addition and subtraction of whole numbers. At higher grade levels, students extend this knowledge to interpret the relationships between the digits of a single number. Students are eventually expected to do multi-digit operations involving whole numbers and decimal numbers. For example, students may be asked to find the sum, difference, or product of 2.34 and 10 using their knowledge of place value.

Number & Operations – Fractions (NF)

The NF domain is a part of the standards for students in third through fifth grade. In third grade, fractions are introduced to students as a new set of numbers in addition to whole numbers. Students are expected to understand fractions as partitions and compare fractions by reasoning about their size. Students at this level use math models involving equal parts or partitions to develop their understanding of fractions. For students in fourth grade, the ability to compare fractions is required. Students may also need to convert between decimal numbers and fractions. In fourth and fifth grade, students continue to extend their knowledge on operations of fractions with whole numbers and of fractions with fractions. By the end of fifth grade, students are expected to solve real-world problems with operations including multiplication, division, addition and subtraction.

Measurement & Data (MD)

The MD domain extends from kindergarten through fifth grade and addresses conversion of units as well as the interpretation of data. At kindergarten, students are tested on classifying and comparing objects with measurable attributes. In first and second grades, students develop their ability to work with variables such as time, length, and volume. By fourth grade, students are required to convert various units in a given measurement system. Through all grade levels, students are expected to develop and understanding of data on diagrams. By the end of fifth grade, students may be asked to complete tasks such as creating a line plot of data or using different operations to calculate measurements.

Geometry (G)

The G domain extends from kindergarten through fifth grade and covers knowledge ranging from comparison of shapes to the interpretation of coordinate planes. Through all grade levels, students are expected to build on their ability to classify and create shapes and solids by understanding the attributes of each category. As students reach higher grade levels, they are asked to work with more specific categories and more abstract figures. For example, students may be tested on the differences between an obtuse angle and an acute angle.

As noted, the representation of the CCSS domains differs by grade. That is, one domain may be overrepresented in one grade and underrepresented in another. In some cases, such as the CC domain, standards from a particular domain are only present in one grade.

aMath is often used by teachers to screen all students and estimate annual growth with tri-annual assessments (fall, winter & spring). Benchmark Standards (i.e., “cut scores” or “targets”) are built into the system to assist in determining which students are at-risk for academic failure versus those who are on track to be successful. Students with deficit achievement are quickly identified for additional intervention. The data also identify and inform instructional decisions for on-track and high-performers. aMath is quick to administer, predictive of risk, and provides teachers with data to inform instruction. aMath is administered and scored with browser-based software. It may be administered individually or by group. Students are set-up with earphones and a laptop, desktop, or mobile tablet device. A teacher or other staff person logs into FAST, selects the student(s) name(s), and proctors the assessment. Administration and scoring are fully automated.

Reports are available to evaluate student performance against local norms, mastery criterion, and predictions of risk to meet proficiency standards on state tests. Reports provide a summary of student performance on a scale that spans grades 1 to 5. Student performance is on a scale of 150 to 700 with an average of 400. Benchmark/criterion standards are specified for each grade level, which are used to identify students at risk.

FAST provides information on student proficiency, as well as growth reporting over time. Our easy-to-generate, carefully structured reports are instantly available for teachers. These reports are instantly applicable to instruction, offering rich information about student strengths, areas

needing improvement, and growth trends within and across school years. District Managers, School Managers, and Specialists within the FAST system may run grade-wide reports from the FAST Reports Manager. District Managers also have access to run reports for multiple schools in the district at once. In addition to the standard FAST reporting, FastBridge Learning offers additional ad-hoc and custom reporting capabilities via our “Off-Line Reporting” feature. These data may be exported for use in other systems if desired, and scheduled custom exports may be requested.

FastBridge Learning provides tailored options for training, professional development (PD), and ongoing learning that are designed to be efficient, effective, and engaging. We believe that in order for teachers to provide high quality instruction for their students, we must provide high quality professional development for our participants. We use multiple approaches to facilitate learning, including digital technologies, interaction, hands-on learning, small group activities, Q&A, live modeling, certification, and more to create a learner-centered environment that maximizes engagement and knowledge retention. Training and Professional Development Service Options delivered by FastBridge Learning Consultants:

- Onsite services in single or two-day packages designed specifically to provide guidance, instruction, and assistance to support action planning and implementation delivered in a train-the-trainer model.
- Webinar-style services: "Ask the Expert" consultation/training by-the-hour provides a flexible delivery model with affordable, just-in-time PD when you need it most.

The FAST Knowledge Base also offers extensive online support to users via a searchable database of written articles, screenshots, step-by-step tutorials, archived webinars, and tutorial videos about FAST. The Knowledge Base includes general FAQs, Getting Started Guides and Videos for all user roles in FAST, Archived Webinars, Login Access Guides, Overviews, FAQs, Data Interpretation Guides, and other Resources for each of the FAST measures, resources to support screening and progress monitoring set-up and administration, report guides, Benchmark and Norm information, and tools to support School Managers and District Managers. From the FAST Knowledge Base, users may also submit a request for assistance from our School Support team either via email or using the Knowledge Base’s “Live Chat” feature (available during business hours).

Please provide an overview of the student-level growth model or target setting model for SLOs for districts and BOCES, along with how student-level growth scores are aggregated to the create teacher-level scores, and how those teacher-level scores are converted to New York State’s 0-20 metric.

Educator effectiveness was estimated for evaluation purposes using medians of SGP, i.e., median growth percentiles (MGP), for those students associated with a given educator. MGP are expressed on the same metric as SGP, and, like SGP, range from 0.01 to 0.99. MGP can then be converted to an Annual Professional Performance Review score (APPR) using the crosswalk tables presented below for each assessment. APPR values are also linked to HEDI ratings (4 = highly effective, 3 = effective, 2 = developing, and 1 = ineffective). Note that these crosswalk tables are based on preliminary norming data for educators, and will be updated at the completion of the 2015/2016 and annual thereafter based on updated norming data.

An aMath crosswalk table is provided on page 16 of the Growth Report in Appendix A-1. APPR scores were assigned to educator median growth percentiles (MGP) so that a HEDI rating of “Ineffective” corresponded to APPR scores from 0 to 12, “Developing” corresponds to APPR scores from 13 to 14, “Effective” to APPR scores from 15 to 17, and “Highly Effective” to scores from 18 to 20. Based on this crosswalk, MGP for the “Ineffective” category extend to 0.59, and MGP for “Developing” then extend from 0.60 to 0.74. “Effective” MGP range from 0.75 to 0.89, and “Highly Effective” MGP range from 0.90 to 0.99.

The FAST online system handles the administration and scoring of assessments and reporting of results. Norming data collected during the 2015/2016 school year will be integrated into the online reporting functionality prior to the 2016/2017 school year. Student growth estimates over screening periods will be reported with standard errors, and SGP will be provided for any students enrolled for at least 70% of the school year having fall and spring assessment scores. Educators having SGP results from at least 15 students meeting these criteria will then be provided with MGP APPR scores, and HEDI ratings using updating crosswalk tables.

For additional details, please reference *Formative Assessment System for Teachers: Growth Modeling for Educator Evaluation* submitted as part of Appendix A.

New York State Next Generation Assessment Priorities

Please provide detail on how the proposed supplemental assessment I or assessment to be used with SLOs addresses each of the Next Generation Assessment Priorities below.

Characteristics of Good ELA and Math Assessments (only applicable to ELA and math assessments):

The aMath assessment is consistent with best practices in measuring the New York State Learning Standards in mathematics. Reliability and validity evidence supports the use of aMath for the purpose of measuring student growth across the following domains, which are aligned with NYS standards in mathematics: Counting and Cardinality, Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations, Measurement and Data, and Geometry.

aMath item development followed the process and standards presented by Schmeiser and Welch (2006) in the fourth edition of Educational Measurement (Brennan, 2006). Research assistants, teachers from each grade level (1st through 5th), and content experts in the area of math served as both item writers and reviewers. After items were written they were reviewed for feasibility, fairness, construct relevance, and content balance. A stratified procedure was used to recruit a diverse set of item writers from urban, suburban and rural areas. The

	<p>item writers wrote, reviewed, and edited assessment materials. Item writing for aMath was a multi-year, collaborative, and iterative process. First the literature on item writing guidelines typically used in developing assessments was reviewed. Next, the literature on multiple-choice item writing was reviewed. Once the literature was reviewed, the guidelines were applied to aMath to examine relevance and utility. Extensive guidelines were provided to item writers and the process outlined above was followed. The aMath project uses a research-based skills hierarchy and unified construct of broad math achievement to establish an instructionally relevant assessment. The importance and emphasis on each component skill (domain) varies across children. Each assessment is individualized by the aMath software and built-in assessment algorithms. As a result, the information and precision of measurement is optimized regardless of whether a student functions at, above, or below grade level (i.e., same age and grade peers). The grade labels and content balancing that are proposed in the a-priori model derive from the recommendations of expert panels and are subject to empirical evaluation and refinement. Additional information about aMath item development is included in the Technical Manual submitted with Appendix A-2 starting on page 157.</p>
<p>Assessments Woven Tightly Into the Curriculum:</p>	<p>We believe the best assessments are those that are able to be seamlessly administered in conjunction with regular classroom instruction and in support of the day-to-day academic goals of the teacher. Designed for Multiple Systems of Support (MTSS) and Response to Intervention (RtI), FAST makes program implementation easy and efficient with automated scoring, analysis, norming and reporting; customizable screening, benchmarking, instructional recommendations and progress monitoring.</p> <p>Immediate, on-demand reporting within FAST provides actionable data specifically designed to guide instruction and remediation. Our assessments help teachers collect data that answer their critical questions about student skills, instructional needs, and growth at the student, group, class, grade, school, and district levels. A variety of reports are provided to inform instruction. FAST assessments yield reports with scores compared to color-coded norms (class, school, district, national) and benchmarks (high risk, some risk, low risk that predict state test performance). Norms and benchmarks are available for both level of achievement and rate of growth. Rate of growth norms are provided for aggregated (all students) and disaggregated (high, typical, low achieving). These results are presented in automated reports. Reports help evaluate district, school, grade, and teacher level success.</p>

<p>Performance Assessment:</p>	<p>Reliability and validity evidence supports the use of aMath for the purpose of measuring student growth across the following domains, which are aligned with NYS standards in mathematics: Counting and Cardinality, Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations, Measurement and Data, and Geometry.</p> <p>The FAST assessments are evidence-based. Numerous studies were completed with diverse samples of students across many geographic locations and LEAs (e.g., NY, GA, MN, IA, and WI). Consistent with the definitions of “evidence-based,” there are many large, multi-site studies with student samples from the populations and settings of interest (i.e., K–12 students). The samples size for almost all studies well-exceeded the requirement of 50 students per condition (e.g., assessment, grade, LEA, instructional condition). On aggregate, more than 15,000 students participated in well-controlled psychometric research. In addition, norms were developed from samples of approximately 8,000 students per grade (K to 8th) per assessment, which aggregates to 72,000 student participants. Consistent with the requirements for evidence, the psychometric qualities for reliability and validity were statistically significant, and the various assessments are meaningful and statistically robust indicators of relevant outcomes, such as state tests and future performance in school.</p> <p>FastBridge Learning uses standard setting processes to summarize student performance. Standards may be used to inform goal setting, identify instructional level, and evaluate the accuracy of student performance. The FastBridge Learning software provides various resources to assist administrators with test result interpretations. For example, a Visual Conventions drop down menu is available to facilitate interpretation of screening and progress monitoring group and individual reports. Percentiles are calculated for local school norms unless otherwise indicated. Local school norms compare individual student performances to their same grade and school peers. Methods of notation are also included to provide information regarding those students predicted to be at risk. Exclamation marks (! and !!) indicate the level of risk based on national norms. One exclamation mark refers to some risk, whereas two exclamation marks refer to high risk of reading difficulties or not meeting statewide assessments benchmarks, based on the score. Interpreting FastBridge assessment scores involves a basic understanding of the various scores provided in the FastBridge Learning software and helps to guide instructional and intervention development. FastBridge Learning offers individual, class, and grade level reports for screening, and individual reports for progress</p>
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	<p>monitoring. Additionally, online training modules include sections on administering the assessments, interpreting results, screen casts, and videos. Results should always be interpreted carefully considering reliability and validity of the score, which is influenced by the quality of standardized administration and scoring. It important to consider the intended purpose of the assessment, its content, the stability of performance over time, scoring procedures, testing situations, or the examinee. The FastBridge Learning system automates analysis, scoring, calculations, reporting and data aggregation. It also facilitates scaling and equating across screening and progress monitoring occasions.</p>
<p>Efficient Time-Saving Assessments:</p>	<p>Students typically complete the aMath assessments in 20-30 minutes, reducing testing time by up to 50-95% compared to traditional tests. Our extensive research has enabled the aMath test of 30 items to replace a traditional 100-item test, with high accuracy and actionable results.</p>
<p>Technology:</p>	<p>aMath can be group administered in a computer lab setting, or a student can complete an administration individually at a computer terminal set up in a classroom, or with the use of a tablet device. aMath test sessions typically last 15 to 30 minutes, depending on grade, student ability, and other factors. The test terminates on its own informing students they have completed all items. aMath administrations are typically completed following 30 items.</p>
<p>Degree to which the growth model must differentiate across New York State’s four levels of teacher effectiveness (only applicable to supplemental assessments):</p>	<p>aMath can be used to support teacher and principal evaluations in grades 1 through 5. Student scaled scores are converted to student growth percentiles (SGP) using national norming data, including students from NY schools. Student SGP are aggregated by educator and then converted to APPR scores and HEDI ratings.</p> <p>An aMath crosswalk table is provided on page 16 of the Growth Report in Appendix A-1. APPR scores were assigned to educator median growth percentiles (MGP) so that a HEDI rating of “Ineffective” corresponded to APPR scores from 0 to 12, “Developing” corresponds to APPR scores from 13 to 14, “Effective” to APPR scores from 15 to 17, and “Highly Effective” to scores from 18 to 20. Based on this crosswalk, MGP for the “Ineffective” category extend to 0.59, and MGP for “Developing” then extend from 0.60 to 0.74. “Effective” MGP range from 0.75 to 0.89, and “Highly Effective” MGP range from 0.90 to 0.99.</p>



**STUDENT ASSESSMENTS FOR
TEACHER AND PRINCIPAL EVALUATION**

FORM G

**ATTESTATION OF TECHNICAL CRITERIA – SUPPLEMENTAL ASSESSMENTS
WITH CORRESPONDING GROWTH MODELS**

Please read each of the items below and check the corresponding box to ensure the fulfillment of the technical criteria outlined in the Technical Application on “FORM B-2”.

PLEASE SUBMIT ONE “FORM G” FOR EACH APPLICANT. CO-APPLICANTS SHOULD SUBMIT SEPARATE FORMS.

COMPLETE THIS SECTION:

2.2(A) Narrative Overview of Proposed Supplemental Assessment and Associated Growth Model	
<p>This application contains a short overview of the assessment being proposed, including the intended purpose of the assessment, and how the assessment is administered.</p>	<input checked="" type="checkbox"/>
<p>For supplemental assessments, this application contains a description of the growth model and how it is used in conjunction with the assessment.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> N/A
<p>For K-2 assessments, this application contains evidence that the proposed assessment is consistent with this RFQ’s requirement that the assessment not be a “Traditional Standardized Assessment” as defined above in the section “Definitions of Key Terms Used in this RFQ.”</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> N/A
2.2(B) Evidence of Capability	
<p>This application provides an overview of services provided by the Assessment Provider, including a description of the range of support / technical assistance that the Assessment Provider would provide to an LEA if selected by an LEA for this service.</p>	<input checked="" type="checkbox"/>
<p>This application contains information as to whether the Applicant or Assessment Provider has been denied approval as a provider of assessment services in another state(s) and the reason(s) for such denial. If denied within New York State, the location and reason are indicated.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> N/A
2.2(C): Evidence of Copyright Owner/Assessment Representative History of Assessment Development	
<p>This application contains evidence that the Copyright Owner/Assessment Representative has a history of developing assessments of student learning (achievement or growth) for the purpose of making defensible judgments about educator effectiveness.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/> N/A

<p>2.2(D)-i: Technical Documentation Related to Assessment and Student Growth Score Properties: RELIABILITY <i>Both “minimum” and “desired” qualifications are listed. For the purposes of this RFQ, applications will only be rated against the “minimum” qualifications; however, NYSED’s aspirational “desired” qualifications are also listed to identify possible future requirements for assessments and associated growth models.</i></p>	
<p>For supplemental assessments used in conjunction with growth models: This application contains evidence of the <i>minimum</i> criteria for reliability:</p> <ul style="list-style-type: none"> • Student test scores have adequate levels of reliability (e.g., coefficient alpha > 0.75). <p>This application contains evidence of the <i>desired</i> criteria for reliability:</p> <ul style="list-style-type: none"> • Standard errors provided for students growth scores. • Student growth classifications have adequate decision consistency. • Teacher effectiveness classifications demonstrate adequate consistency. <p><i>Examples include agreement statistics (e.g., kappa coefficients) based on simulation studies.</i></p>	<p>Check all that apply:</p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>2.2(D)-ii: Technical Documentation Related to Assessment and Student Growth Score Properties: VALIDITY – ALIGNMENT <i>Both “minimum” and “desired” qualifications are listed. For the purposes of this RFQ, applications will only be rated against the “minimum” qualifications; however, NYSED’s aspirational “desired” qualifications are also listed to identify possible future requirements for assessments and associated growth models.</i></p>	
<p>For supplemental assessments used in conjunction with growth models: This application contains evidence of the <i>minimum</i> criteria for alignment validity:</p> <ul style="list-style-type: none"> • Evidence that test content is sufficiently aligned with New York State Learning Standards and covers a range of measurable standards. Documentation that demonstrates that: <ul style="list-style-type: none"> (a) at least 80% of the test measures content aligned with NYS learning standards, (b) no more than 20% of test content is aligned with other learning standards or objectives, and (c) a range of content from the NYS learning standards is measured <p><i>Note: Other relevant standards can be proposed if NYS Learning Standards do not apply to subject area.</i></p> <p>This application contains evidence of the <i>desired</i> criteria for alignment validity:</p> <ul style="list-style-type: none"> • 100% alignment between NYS Learning Standards and assessment. 	<p>Check all that apply:</p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>2.2(D)-iii: Technical Documentation Related to Assessment and Student Growth Score Properties: VALIDITY – RELATIONS TO OTHER VARIABLES <i>Both “minimum” and “desired” qualifications are listed. For the purposes of this RFQ, applications will only be rated against the “minimum” qualifications; however, NYSED’s aspirational “desired” qualifications are also listed to identify possible future requirements for assessments and associated growth models.</i></p>	
<p>For supplemental assessments used in conjunction with growth models: This application contains evidence of the <i>minimum</i> criteria for validity in relation to other variables:</p> <ul style="list-style-type: none"> • Evidence students’ growth scores are correlated with other measures of student progress (e.g., $r > .5$ with measures such as the number of objectives 	<p>Check all that apply:</p>

<p>mastered by a student over the course of the year, teachers’ ratings of students’ progress, or scores from other assessments).</p> <p>This application contains evidence of the <i>desired</i> criteria for validity in relation to other variables:</p> <ul style="list-style-type: none"> Evidence teacher effectiveness ratings are positively correlated (e.g., $r > .5$) with other measures of teaching effectiveness. 	<p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>2.2(D)-iv: Technical Documentation Related to Assessment and Student Growth Score Properties: VALIDITY – INTERNAL STRUCTURE <i>Both “minimum” and “desired” qualifications are listed. For the purposes of this RFQ, applications will only be rated against the “minimum” qualifications; however, NYSED’s aspirational “desired” qualifications are also listed to identify possible future requirements for assessments and associated growth models.</i></p>	
<p>For supplemental assessments used in conjunction with growth models: This application contains evidence of the <i>minimum</i> criteria for validity of internal structure:</p> <ul style="list-style-type: none"> Scale properties appropriate for growth model used (*see notes*). Total scores and subscores on student assessments should be supported by dimensionality analyses (e.g., IRT residual analyses, factor analyses). <p>This application contains evidence of the <i>desired</i> criteria for validity of internal structure:</p> <ul style="list-style-type: none"> Evidence students' scores are on an interval scale. <p><i>*Notes: If gain score model is used, evidence is needed that students' pretest and posttest scores are on the same scale. If student growth percentile model used, justification for the number of years included in the model should be provided. If growth-to-proficiency, projection, or value-added models are used, evidence is needed that the model explains a significant amount of variability in student achievement. Also, models should demonstrate robustness to missing data.</i></p>	<p>Check all that apply:</p> <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>2.2(D)-v: Technical Documentation Related to Assessment and Student Growth Score Properties: UTILITY AND COMPREHENSIBILITY <i>Both “minimum” and “desired” qualifications are listed. For the purposes of this RFQ, applications will only be rated against the “minimum” qualifications; however, NYSED’s aspirational “desired” qualifications are also listed to identify possible future requirements for assessments and associated growth models.</i></p>	
<p>For supplemental assessments used in conjunction with growth models: This application contains evidence of the <i>minimum</i> criteria for utility and comprehensibility:</p> <ul style="list-style-type: none"> Technical documentation that describes how student growth and educator effectiveness are calculated. <p>This application contains evidence of the <i>desired</i> criteria for utility and comprehensibility:</p> <ul style="list-style-type: none"> Student growth reports support instructional improvement. Resources and supporting materials available to the field. 	<p>Check all that apply:</p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>
<p>2.2(E)-i: Technical Documentation Related to Aggregating Student-Level Growth Scores to Teacher-Level Scores: CREATION OF TEACHER LEVEL SCORES</p>	
<p>For supplemental assessments used in conjunction with growth models: This application includes a narrative description of how student-level scores are aggregated to create a single teacher-level score for each teacher.</p>	<p><input checked="" type="checkbox"/> <input type="checkbox"/> N/A</p>

To be completed by the Copyright Owner/Assessment Representative of the assessment being proposed and, where necessary, the co-applicant LEA:

<p>FastBridge Learning, LLC 1. Name of Organization (PLEASE PRINT/TYPE)</p>	 4. Signature of Authorized Representative (PLEASE USE BLUE INK)
<p>Terri Lynn Soutor 2. Name of Authorized Representative (PLEASE PRINT/TYPE)</p>	<p>March 7, 2016 5. Date Signed</p>
<p>Chief Executive Officer 3. Title of Authorized Representative (PLEASE PRINT/TYPE)</p>	
<p>N/A 1. Name of LEA (PLEASE PRINT/TYPE)</p>	<p>4. Signature of School Representative (PLEASE USE BLUE INK)</p>
<p>2. School Representative's Name (PLEASE PRINT/TYPE)</p>	<p>5. Date Signed</p>
<p>3. Title of School Representative (PLEASE PRINT/TYPE)</p>	