**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:	earlyMath

Nature of Assessment:	☐ ASSESSMENT FOR USE WITH STUDENT LEARNING OBJECTIVES WITH A TARGET SETTING MODEL; OR
	
	☒ SUPPLEMENTAL ASSESSMENT WITH AN ASSOCIATED GROWTH MODEL:
	    ☐ GAIN SCORE MODEL
	    ☐ GROWTH-TO-PROFICIENCY MODEL
	    ☒ STUDENT GROWTH PERCENTILES
	    ☐ PROJECTION MODELS
	    ☐ VALUE-ADDED MODELS
	    ☐ OTHER:

What are the grade(s) for which the assessment can be used to generate a 0-20 APPR score?	Grades K to 1
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.
Is the assessment available, either for free or through purchase, to other districts or BOCES in New York State?	☒ YES ☐ NO

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)**

The earlyMath measure is designed to assess early numeracy skills for students in Kindergarten and 1st grade. Early numeracy is broadly defined as the understanding of numbers and the relationships between numbers. Informal mathematics skills are developed early on and provide the basis for more advanced math skills. earlyMath was developed to enable efficient screening and progress monitoring across three domains of early numeracy associated with later mathematics achievement (i.e., Number, Relations, and Operations; Purpura and Longinan, 2013; National Research Council, 2009). Examples of early numeracy skills measured within the three domains include: naming numerals, using the mental number line, counting with one-to-one correspondence, understanding the relation between numerals and quantiles, composing and decomposing numbers, basic verbal fact fluency, and understanding of place value, and knowledge of symbols in solving problems. These skills are assessed by various measures designed to align with the Common Core State Standards. Over the past decade, research has emerged on the assessment of early numeracy skills. As the research in early mathematics achievement continues to increase, the development and conceptualization of early numeracy assessments has improved. The objective of earlyMath measures is to extend and improve on the quality of currently available assessments for early numeracy. More specifically, earlyMath was developed to be an efficient, instructionally relevant, and technically adequate assessment to identify students who may have difficulties in mathematics and monitor student progress.

Uses and Applications: earlyMath consists of 17 assessments for screening: subitizing, numeral identification (K and 1), match quantity, quantity discrimination most, quantity discrimination least, number sequence (K and 1), composing, decomposing (K and 1), counting objects, equal partitioning, verbal addition, verbal subtraction, place value, and story problems. Selected assessments are also available for monitoring student progress. There are recommended combinations of subtests for fall, winter, and spring screening aimed to optimize validity and risk evaluation. FAST provides recommendations for specific combinations of up to four sub-tests to be given per benchmark period. This composite varies from fall, winter, or spring per grade level to best match math skill development and reliably assess performance. The composite is typically completed in 5-10 minutes per student. Supplemental assessments may be used to diagnose and evaluate skill deficits. Results from supplemental assessments provide guidance for instructional and intervention development.

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, on-target for success, or may need enrichment instruction. Reports provide profiles of students' strengths and areas of difficulty relating to literacy and can provide useful information to plan instruction. Each individual and group report within FAST is available instantly, expediting the process for teachers.

earlyMath is uniquely designed to accommodate quick, easy, and flexible monitoring on a frequent basis. Progress monitoring data help teachers evaluate instructional effects and determine if differentiated instruction or interventions are effective.

earlyMath assessments are individually administered. The teacher (or other staff) mark student responses electronically as the student completes the brief assessment. Paper-and-pencil versions are also available. Performance data are reported instantly and stored in the database

for longitudinal analysis. Reports are available to evaluate student performance against local norms, national aggregate norms, mastery criterion, and predictions of risk to meet proficiency standards on state tests. Reports also inform instruction by providing the accuracy rate, completion time, information about errors, and other essential data pertaining to the student's performance for both screening and progress monitoring.

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. 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.

APPR scores range from 0 to 20, and were assigned to rank-ordered MGP so as to maintain the approximate distribution of MGP across educators in the norming samples. HEDI rating categories were then assigned to maintain a certain level of MGP at the three cutoffs that denote the four HEDI rating categories. The highly effective range was set to denote educators with MGP at or above 0.65. The effective range was set to capture MGP from 0.45 to 0.64. The developing range was set to capture MGP from 0.20 to 0.44. Finally, the ineffective range was set with MGP below 0.20. These ranges for MGP by HEDI then corresponded to slightly different APPR score ranges, depending on the assessment.

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-2.

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 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 annually thereafter based upon norming data.

An earlyMath crosswalk table is provided on page 40 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-2.

New York State Next Generation Assessment Priorities
Please provide detail on how the proposed supplemental assessment l 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 earlyMath assessment is consistent with best practices in measuring the New York State Learning Standards in mathematics. Reliability and validity evidence supports the use of earlyMath for the purpose of assessing early numeracy skills associated with Kindergarten and 1st grade math achievement across the

	domains of numeracy as well as a general estimate of overall math achievement. The development of earlyMath is based on a thorough examination of the most recent research literature and professional consultation in test development and mathematics education. Each of the subtests is aligned with National Common Core State Standards (CCSS, 2010) and three domains of number sense: (a) number, (b) relations, and (c) operations (Purpura & Lonigan, 2013; National Research Council, 2009). The objective of earlyMath measures is to extend and improve on the quality of currently available assessments of early numeracy skills. Please see the Technical Manual (Appendix A-2) starting on page 172 for a detailed description of the item development and test construction process across each of the subtests in earlyMath.
Assessments Woven Tightly Into the Curriculum:	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. 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.
Performance Assessment:	Reliability and validity evidence supports the use of earlyMath for the purposes of measuring early numeracy skills associated with kindergarten and first grade math achievement. The Technical Manual (Appendix A-2) beginning on page 209 provides a detailed description of the reliability evidence for earlyMath. Evidence for validity of the earlyMath subtest measures was examined using two measures: 1) Measures of Academic Progress for

	Primary Grades (MAP), and 2) the Group Mathematics Assessment and Diagnostic Evaluation (GMADE), a norm-referenced diagnostic mathematics assessment. A detailed description of the validity evidence for earlyMath begins on page 216 of the Technical Manual. 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.

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 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. |
| **Efficient Time-Saving Assessments:** | Each earlyMath assessment is designed to be highly efficient and to the early numeracy skills associated with kindergarten and first grade math achievement and provide a general estimate of overall math achievement. earlyMath can be administered one-on-one in |

	approximately 5-7 minutes per seasonal composite of four subtests for screening and in approximately 1 minute per subtest for progress monitoring. The assessment is computer administered (optional paper-and-pencil version available) with automated browser-based scoring. The automated output of each assessment gives information on the accuracy and fluency of passage reading which can be used to determine instructional level to inform intervention.
Technology:	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.
Degree to which the growth model must differentiate across New York State's four levels of teacher effectiveness (only applicable to supplemental assessments):	earlyMath can be used to support teacher and principal evaluations in grades K through 1. 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. An earlyMath crosswalk table is provided on page 40 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.

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)**

The earlyMath measure is designed to assess early numeracy skills for students in Kindergarten and 1st grade. Early numeracy is broadly defined as the understanding of numbers and the relationships between numbers. Informal mathematics skills are developed early on and provide the basis for more advanced math skills. earlyMath was developed to enable efficient screening and progress monitoring across three domains of early numeracy associated with later mathematics achievement (i.e., Number, Relations, and Operations; Purpura and Longinan, 2013; National Research Council, 2009). Examples of early numeracy skills measured within the three domains include: naming numerals, using the mental number line, counting with one-to-one correspondence, understanding the relation between numerals and quantiles, composing and decomposing numbers, basic verbal fact fluency, and understanding of place value, and knowledge of symbols in solving problems. These skills are assessed by various measures designed to align with the Common Core State Standards. Over the past decade, research has emerged on the assessment of early numeracy skills. As the research in early mathematics achievement continues to increase, the development and conceptualization of early numeracy assessments has improved. The objective of earlyMath measures is to extend and improve on the quality of currently available assessments for early numeracy. More specifically, earlyMath was developed to be an efficient, instructionally relevant, and technically adequate assessment to identify students who may have difficulties in mathematics and monitor student progress.

Uses and Applications: earlyMath consists of 17 assessments for screening: subitizing, numeral identification (K and 1), match quantity, quantity discrimination most, quantity discrimination least, number sequence (K and 1), composing, decomposing (K and 1), counting objects, equal partitioning, verbal addition, verbal subtraction, place value, and story problems. Selected assessments are also available for monitoring student progress. There are recommended combinations of subtests for fall, winter, and spring screening aimed to optimize validity and risk evaluation. FAST provides recommendations for specific combinations of up to four sub-tests to be given per benchmark period. This composite varies from fall, winter, or spring per grade level to best match math skill development and reliably assess performance. The composite is typically completed in 5-10 minutes per student. Supplemental assessments may be used to diagnose and evaluate skill deficits. Results from supplemental assessments provide guidance for instructional and intervention development.

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, on-target for success, or may need enrichment instruction. Reports provide profiles of students' strengths and areas of difficulty relating to literacy and can provide useful information to plan instruction. Each individual and group report within FAST is available instantly, expediting the process for teachers.

earlyMath is uniquely designed to accommodate quick, easy, and flexible monitoring on a frequent basis. Progress monitoring data help teachers evaluate instructional effects and determine if differentiated instruction or interventions are effective.

earlyMath assessments are individually administered. The teacher (or other staff) mark student responses electronically as the student completes the brief assessment. Paper-and-pencil versions are also available. Performance data are reported instantly and stored in the database

for longitudinal analysis. Reports are available to evaluate student performance against local norms, national aggregate norms, mastery criterion, and predictions of risk to meet proficiency standards on state tests. Reports also inform instruction by providing the accuracy rate, completion time, information about errors, and other essential data pertaining to the student's performance for both screening and progress monitoring.

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. 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.

APPR scores range from 0 to 20, and were assigned to rank-ordered MGP so as to maintain the approximate distribution of MGP across educators in the norming samples. HEDI rating categories were then assigned to maintain a certain level of MGP at the three cutoffs that denote the four HEDI rating categories. The highly effective range was set to denote educators with MGP at or above 0.65. The effective range was set to capture MGP from 0.45 to 0.64. The developing range was set to capture MGP from 0.20 to 0.44. Finally, the ineffective range was set with MGP below 0.20. These ranges for MGP by HEDI then corresponded to slightly different APPR score ranges, depending on the assessment.

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-2.

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 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.

APPR scores range from 0 to 20, and were assigned to rank-ordered MGP so as to maintain the approximate distribution of MGP across educators in the norming samples. HEDI rating categories were then assigned to maintain a certain level of MGP at the three cutoffs that denote the four HEDI rating categories. The highly effective range was set to denote educators with MGP at or above 0.65. The effective range was set to capture MGP from 0.45 to 0.64. The developing range was set to capture MGP from 0.20 to 0.44. Finally, the ineffective range was set with MGP below 0.20. These ranges for MGP by HEDI then corresponded to slightly different APPR score ranges, depending on the assessment.

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-2.

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 earlyMath assessment is consistent with best practices in measuring the New York State Learning Standards in mathematics. Reliability and validity evidence supports the use of earlyMath for the purpose of assessing early numeracy skills associated with Kindergarten and 1st grade math achievement across the

	domains of numeracy as well as a general estimate of overall math achievement. The development of earlyMath is based on a thorough examination of the most recent research literature and professional consultation in test development and mathematics education. Each of the subtests is aligned with National Common Core State Standards (CCSS, 2010) and three domains of number sense: (a) number, (b) relations, and (c) operations (Purpura & Lonigan, 2013; National Research Council, 2009). The objective of earlyMath measures is to extend and improve on the quality of currently available assessments of early numeracy skills. Please see the Technical Manual (Appendix A-2) starting on page 172 for a detailed description of the item development and test construction process across each of the subtests in earlyMath.
Assessments Woven Tightly Into the Curriculum:	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. 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.
Performance Assessment:	Reliability and validity evidence supports the use of earlyMath for the purposes of measuring early numeracy skills associated with kindergarten and first grade math achievement. The Technical Manual (Appendix A-2) beginning on page 209 provides a detailed description of the reliability evidence for earlyMath. Evidence for validity of the earlyMath subtest measures was examined using two measures: 1) Measures of Academic Progress for

	Primary Grades (MAP), and 2) the Group Mathematics Assessment and Diagnostic Evaluation (GMADE), a norm-referenced diagnostic mathematics assessment. A detailed description of the validity evidence for earlyMath begins on page 216 of the Technical Manual. 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.
	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 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.
Efficient Time-Saving Assessments:	Each earlyMath assessment is designed to be highly efficient and to the early numeracy skills associated with kindergarten and first grade math achievement and provide a general estimate of overall math achievement. earlyMath can be administered one-on-one in

	approximately 5-7 minutes per seasonal composite of four subtests for screening and in approximately 1 minute per subtest for progress monitoring. The assessment is computer administered (optional paper-and-pencil version available) with automated browser-based scoring. The automated output of each assessment gives information on the accuracy and fluency of passage reading which can be used to determine instructional level to inform intervention.
Technology:	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.
Degree to which the growth model must differentiate across New York State's four levels of teacher effectiveness (only applicable to supplemental assessments):	earlyMath can be used to support teacher and principal evaluations in grades K through 1. 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. An earlyMath crosswalk table is provided on page 32 of the Growth Report in Appendix A-1. earlyMath APPR scores ranged from 0 to 20 and were assigned so as to approximate the distribution of MGP with the constraint that APPR scores of 0, 4, 9, 14, and 20 were linked directly to MGP cutoff values of 0.01, 0.20, 0.45, 0.65, and 0.99. A cubic spline function was used to interpolate APPR between these cutoff values. The MGP cutoff values corresponded to the four HEDI categories, where MGP below 0.20 are well below average (ineffective), MGP between 0.20 and 0.45 are below but approaching average growth (developing), MGP between 0.45 and 0.65 are average (effective), and MGP above 0.65 are above average (highly effective).

**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	
This application contains a short overview of the assessment being proposed, including the intended purpose of the assessment, and how the assessment is administered.	■
For supplemental assessments, this application contains a description of the growth model and how it is used in conjunction with the assessment.	■ ☐ N/A
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."	■ ☐ N/A
2.2(B) Evidence of Capability	
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.	■
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.	■ ☐ N/A
2.2(C): Evidence of Copyright Owner/Assessment Representative History of Assessment Development	
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.	■ ☐ N/A

2.2(D)-i: Technical Documentation Related to Assessment and Student Growth Score Properties: RELIABILITY
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.

	Check all that apply:
For supplemental assessments used in conjunction with growth models: This application contains evidence of the *minimum* criteria for reliability: • Student test scores have adequate levels of reliability (e.g., coefficient alpha > 0.75).	■
This application contains evidence of the *desired* criteria for reliability: • Standard errors provided for students growth scores. • Student growth classifications have adequate decision consistency. • Teacher effectiveness classifications demonstrate adequate consistency. *Examples include agreement statistics (e.g., kappa coefficients) based on simulation studies.*	☐ ☐ ☐

2.2(D)-ii: Technical Documentation Related to Assessment and Student Growth Score Properties: VALIDITY – ALIGNMENT
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.

	Check all that apply:
For supplemental assessments used in conjunction with growth models: This application contains evidence of the *minimum* criteria for alignment validity: • Evidence that test content is sufficiently aligned with New York State Learning Standards and covers a range of measurable standards. Documentation that demonstrates that: (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 *Note: Other relevant standards can be proposed if NYS Learning Standards do not apply to subject area.*	■
This application contains evidence of the *desired* criteria for alignment validity: • 100% alignment between NYS Learning Standards and assessment.	☐

2.2(D)-iii: Technical Documentation Related to Assessment and Student Growth Score Properties: VALIDITY – RELATIONS TO OTHER VARIABLES
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.

	Check all that apply:
For supplemental assessments used in conjunction with growth models: This application contains evidence of the *minimum* criteria for validity in relation to other variables: • Evidence students' growth scores are correlated with other measures of student progress (e.g., r > .5 with measures such as the number of objectives mastered by a student over the course of the year, teachers' ratings of	

students' progress, or scores from other assessments). ■

This application contains evidence of the *desired* criteria for validity in relation to other variables:
- Evidence teacher effectiveness ratings are positively correlated (e.g., r > .5) with other measures of teaching effectiveness.

☐

2.2(D)-iv: Technical Documentation Related to Assessment and Student Growth Score Properties: VALIDITY – INTERNAL STRUCTURE
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.

	Check all that apply:
For supplemental assessments used in conjunction with growth models: This application contains evidence of the *minimum* criteria for validity of internal structure: • 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).	■
This application contains evidence of the *desired* criteria for validity of internal structure: • Evidence students' scores are on an interval scale. **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.*	☐

2.2(D)-v: Technical Documentation Related to Assessment and Student Growth Score Properties: UTILITY AND COMPREHENSIBILITY
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.

	Check all that apply:
For supplemental assessments used in conjunction with growth models: This application contains evidence of the *minimum* criteria for utility and comprehensibility: • Technical documentation that describes how student growth and educator effectiveness are calculated.	■
This application contains evidence of the *desired* criteria for utility and comprehensibility: • Student growth reports support instructional improvement. Resources and supporting materials available to the field.	■

2.2(E)-i: Technical Documentation Related to Aggregating Student-Level Growth Scores to Teacher-Level Scores: CREATION OF TEACHER LEVEL SCORES

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.	■ ☐ N/A

2.2(E)-ii: Technical Documentation Related to Aggregating Student-Level Growth Scores to Teacher-Level Scores: EXCLUSION RULES

This application includes a description of any exclusion rules that remove students associated with a given teacher from the teacher's teacher-level score (either through a growth model or in conjunction with an SLO).	■ ☐ N/A

2.2(F): Technical Documentation Related to Converting Teacher-Level Growth Score to New York State's 0-20 APPR Scale

This application includes a crosswalk that maps scores on the assessment's aggregated teacher-level growth score to the required New York State teacher and principal evaluation metric, which ranges from 0-20.	■
This application includes procedures for converting teacher-level growth scores to the 0-20 APPR scale comply with the New York Standards for each evaluation rating category, which are based on the following definitions.	■
For supplemental assessments used in conjunction with growth models: This application includes an explanation of the assignment of HEDI rating categories based on the following ranges: • Highly Effective: results are well-above State average* for similar students • Effective: results meet State average* for similar students • Developing: results are below State average* for similar students • Ineffective: Results are well-below State average* for similar students	■ ☐ N/A

2.2(G)-i: Technical Documentation Related to Fairness: TEST TAKERS
Consistent with the new Testing Standards (2014), there is an increased focus in the industry on fairness of assessments and their uses. Please provide evidence of fairness for both the proposed assessment and, if applicable, the proposed growth model.

This application includes evidence that the proposed assessments are fair to all test takers (e.g., Differential Item Functioning [DIF] / bias information, fairness evaluation / sensitivity review plan.)	■

2.2(G)-ii: Technical Documentation Related to Fairness: TEACHER GROWTH SCORES

This application includes evidence of fairness of the proposed aggregated teacher growth scores (e.g., lack of correlation between aggregated teacher growth scores and student demographics).	■
The evidence of fairness of the proposed aggregated teacher growth scores includes an explanation of how the growth model incorporates (a) prior academic history, (b) poverty, (c) students with disabilities, and (d) English language learners.	■ ☐ N/A

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

FastBridge Learning, LLC 1. Name of Organization (PLEASE PRINT/TYPE)	*[signature: Terri L Soutor]* 4. Signature of Authorized Representative (PLEASE USE **BLUE** INK)
Terri Lynn Soutor 2. Name of Authorized Representative (PLEASE PRINT/TYPE)	March 7, 2016 5. Date Signed
Chief Executive Officer 3. Title of Authorized Representative (PLEASE PRINT/TYPE)	

N/A 1. Name of LEA (PLEASE PRINT/TYPE)	4. Signature of School Representative (PLEASE USE **BLUE** INK)
2. School Representative's Name (PLEASE PRINT/TYPE)	5. Date Signed
3. Title of School Representative (PLEASE PRINT/TYPE)	