**Title :** AIMSweb, GRADE, and GMADE Analysis for Possible School-wide

 Adoption

**Topic :** Progress Monitoring Tools

**Submitted :** August 25, 2012

**Submitted To :** Sr. Somayyah Nahidian, Alim Academy Asst. Principal

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**School Levels :** Elementary (primarily), Middle and High School (secondary)

**Format :** Report

**Description :** The purpose of this report is to conduct a literature review and follow-up

 on the possible adoption of Pearson’s AIMSweb as progress monitoring

 platform, and the possibility of replacing the current Stanford 10

 Standardized Test with Pearson’s GRADE and GMADE benchmarking

 assessment tools.

**Suggestions**

1. Invite Sr. Baghaee for a point-by-point comparison of her suggested format/tools to what the school is currently using in its practice.
2. Upon acquisition of the AIMSweb, GRADE, and GMADE samplers requested from

Ms. Michelle Winter, evaluate the products for possible use for SY 2013-2014.

1. Continue using the DRA-2 as a tool to gain data on students’ writing ability and progress.
2. Administer the DRA-2 as benchmarking assessment to yield data that helps target instruction, and proceed with progress monitoring on a bi-weekly or monthly basis using running records and materials from the McGraw-Hill/McMillan resources/program.
3. Create a database for the bi-weekly/monthly progress monitoring. At the end of the year, evaluate the effectiveness of the school-generated progress monitoring database THEN proceed to comparison of the AIMSweb database for possible adoption for the next school year (2013-2014).
4. Distinguish between the DRA-2 benchmark progress monitoring and the monthly progress monitoring as separate entities.

**Introduction**

 Alim Academy implemented a progress monitoring program last school year (2011-2012). The primary purpose of the progress monitoring during the first year is to set a baseline using data from the Stanford 10 Standardized Testing from March of 2011 and to determine where the students are by November of 2011. For this purpose, the Developmental Reading Assessment 2nd Edition (DRA-2) and Qualitative Reading Inventory 5th Edition (QRI-5) were used to monitor student progress in the areas of reading and writing. As a benchmarking tool, DRA-2/QRI-5 were administered to gather initial, mid-year, and end-of-the-year data and Lexile reading levels for each student in the K-12 continuum. At the end of school year 2011-2012, the school was able to gather five (5) entry points: three data gained from the DRA-2/QRI-5, and two from the previous year’s (March 2011) Stanford 10 Lexile® level and the March 2012 Stanford 10 Lexile® scores.

 In one of the Educational Committee meetings held for the SY 2012-2013 planning, one parent brought to the committee’s attention the possible use of Pearson’s AIMSweb as a progress monitoring tool and the possibility of considering GRADE and GMADE as replacement to the current Stanford 10 Standardized Testing practice, citing that Stanford 10 is a summative test primarily used to identify gifted students. Upon the given recommendations from the parent, Dr. Ghaderi requested that further study be conducted on the three items before making a school-wide decision on whether to adopt and/OR combine to existing practice and/OR reject the new platform for the SY 2012-2013.

**Role of Assessment**

 Assessment is a common practice that schools employ to gather pertinent data that enable the school and its teachers to know, understand, and support the learning and development of all students. Assessment comes in different forms—formal and informal assessments. Informal assessments come in the form of observation and anecdotal records of students in their natural learning environments, while formal assessments utilize standard tools and/or instruments that measure the students’ performance as compared to a group (norm-referenced or criterion-referenced). Assessment tools provide a structure for accessing and organizing information about a student. Overall, assessment results can describe some informative details of what students know and can do.

 There are four purposes for using formal and informal assessments: screening; instructional; diagnostic; and program evaluation/accountability. Each purpose provides different levels of information to answer specific questions about student learning and development. Below is a brief description on each purpose:

* **Screening** **Assessment**–to identify potential problems in development; ensure development is on target. Screening instruments are quickly and easily administered to identify students who need more extensive assessments.
* **Instructional Assessment** –to inform, support, and monitor learning. This level of assessment yields information about what children know and are able to do at a given point in time and guides the “next steps” and needed feedback on the learning progress.
* **Diagnostic Assessment** –to diagnose strengths and areas of need to support development, instruction, and/or behavior. Used to determine eligibility for specific support services, interventions, and special education. Diagnostic assessment is a formal procedure governed by federal and state law.
* **Program Evaluation/Accountability** –to evaluate programs and provide accountability data on program outcomes for the purpose of program improvement. It focuses on the performance of *groups* of students.

**Progress Monitoring**

Progress monitoring is a scientifically based practice that teachers can use to evaluate the effectiveness of their instruction for individual students or their entire class. Throughout the year, teachers identify goals for what their students will learn over time, measure their students’ progress toward meeting these goals by comparing expected and actual rates of learning, and adjust their teaching as needed. The benefits of progress monitoring include accelerated learning for students who receive more appropriate instruction and more informed instructional decisions and higher expectations for students by teachers. Overall, the use of progress monitoring results in more efficient and appropriately targeted instructional techniques and goals, which, together, move all students to faster attainment of important state standards for their achievement (Virginia Department of Education, 2006).

Progress monitoring is conducted frequently, at least monthly to enable the identification of students who are not demonstrating adequate progress after changing instruction. It typically uses a curriculum-based measure (CBM) which provides the strongest evidence base since it hinges upon the instructional program provided to the students and the materials used within the curriculum. CBM likewise allows teachers to use student data to quantify short- and long-term goals throughout the school year.

The use of progress monitoring results in delivering targeted instruction, thus improving teaching practices and helping students improve their learning enabling them to meet their learning goals. Furthermore, progress monitoring creates a system of documenting student progress that can be used for program evaluation/accountability at the end of the year.

**Terminologies to Consider**

It is important to consider the purpose of any assessment given to students. Clearly identifying the type of data needed and how the data collection will be interpreted to inform instruction are key factors in choosing the kind of assessment to use in any school practice. Likewise, it is important to understand that because each assessment has a specific purpose, it will be unfair to use result from one assessment to serve the purpose of another (e.g., screening instrument to meet the need to inform/monitor instruction).

 The following terminologies are provided for the purpose of clarification and to avoid potential misuse of information:

**Standardized assessment** involves a predetermined set of assessment items that represents “standards” of knowledge and/or skills. It may be norm or criterion referenced, and items are presented to all students in the same sequence, using the same administration procedures and materials. Scoring and interpretation of performance is standardized.

**Norm-referenced assessment** compares a student’s score to the scores of a group of same-age peers (norm group). *Such a comparison is only meaningful if the norm group includes students who share the language, culture, and/or (dis)abilities of those being assessed*. Norm-referenced tests are almost always standardized to preserve a consistent basis for comparison of scores.

**Criterion-referenced assessment** measures a student’s performance against a predetermined set of criteria, generally developmentally sequenced or task analyzed skills. These instruments may be standardized, as in the case of oral reading fluency timings in primary grades, but for developmental content usually allow flexibility in administration procedures and assessment materials.

**Curriculum-referenced assessments** are criterion-referenced instruments that are packaged with an aligned set of curriculum goals. It serves to place students in a curriculum sequence and the same items are used to monitor progress toward learning objectives.

**Readiness assessments** are tests that gather information to determine how well a student is prepared for a specific program.

**Reliability** refers to the accuracy and stability of assessment scores. Every assessment contains some degree of error (in administration, scoring, and interpretation) and error decreases accuracy of scores. Assessment developers ensure reliability by testing the same students twice, *by having multiple people score the same child, and by statistical analysis of items.*

**Validity** is an indication of how closely the assessment measures what it is intended to measure (e.g. a screening instrument demonstrate validity if students who are identified by screening to have a problem also receive low scores on a comprehensive test of development).

**Technical adequacy** describes the degree of demonstrated reliability and validity of a test. Technical information is often included in the assessment guide.

Understanding each terminology is essential in determining assessment tools/ instrument to be used in any school system. The plethora of pre-packaged assessment instruments in the market necessitates an investigative stance when choosing what to adopt in the practice. Consideration of the school’s needs and goals is likewise important when making a decision on what instrument to use. It is important to understand that some assessment instrument and procedures are better than others. What is important is to determine what information the school needs and how the result of chosen assessment will help improve student learning and teaching practices through the quality of information gathered.

**AIMSweb, GRADE, and GMADE Literature Review**

 To address the request made by Dr. Ghaderi in response to Sr. Baghaee’s suggestions, review was done regarding the product overview, benefits, and administration of Pearson’s AIMSweb®, GR*A*DE® and GM*A*DE®. Ms. Michelle Winter, the contact person of Sr. Baghaee from the Pearson group, was likewise contacted on August 24, 2012 to gain more information about the three Pearson products.

 **AIMSweb®** is a benchmark and progress monitoring system for grades K-8. It can be administered in 1-8 minutes per assessment and follows the RTI (Response to Intervention) framework. It offers multiple assessments for *universal screening* and *progress monitoring*, and a web-based data management, charting, and reporting system. It is a curriculum-based measurement (CBM) utilizing a method of monitoring student progress through direct, continuous assessment of basic skills. It also includes Benchmark probes for universal screening and Targeted Progress Monitoring probes that enable frequent progress monitoring.



Figure 1. *AIMSweb overview*

AIMSweb® has three components that follow the RTI framework:

Tier One: Benchmark—assess all students three times per year for universal

 screening (early identification), general progress monitoring,

 and AYP accountability.

Tier Two: Strategic Monitor—monitor at-risk students monthly and evaluate the

 effectiveness of instructional changes.

Tier Three: Progress Monitoring—write individualized annual goals and monitor more

 frequently for those who need intensive instructional services.

**GR*A*DE®** (*Group Reading Assessment and Diagnostic Evaluation*) is a normative diagnostic reading assessment that determines what developmental skills students from PreK-12 have mastered and where they need instruction or intervention. It addresses the special needs of RTI students, is compliant with the federal Reading First early reading initiative, and it enables timely instructional intervention (Pearson, 2012). It is group administered and covers analysis in the areas of pre-reading, reading readiness, vocabulary, comprehension, and oral language.

**GM*A*DE®** (*Group Mathematics Assessments and Diagnostic Evaluation*) is a norm-referenced, group-administered diagnostic mathematical assessment that provides both individual and group results. It is based on national mathematics standards (NCTM) with tests designed to build students’ success. Using the *GMADE’s* assessment data, educators can place students, analyze their strengths and weaknesses, plan instruction, monitor growth from grade to grade, among others. It clearly adheres to state standards, curriculum benchmarks, scope and sequence plans of common math textbook series, and research on best-practices for teaching and learning math concepts and skills (Pearson, 2012).

It is important to note that *GRADE* and *GMADE* are marketed as *complementary solutions* to enrich student learning by enabling educators the ability to provide meaningful assessment data, frequent feedback, and actionable results. Furthermore, information made available through the Pearson website cites that both systems save time through whole-group administration with on-site scoring that provides assessment results immediately*. GRADE* and *GMADE* track students’ growth using the Growth Scale Values (GSVs) and communicates assessment data in a variety of meaningful ways (norm-referenced, criterion-referenced, group/class reporting). Last, both use the instructional cycle following a 4-step format: Step 1-Assess, Step 2-Analyze, Step 3-Intervene, and Step 4-Reassess.

 In conversing with Ms. Winter, she validated the following assumptions about the three products:

***Assumption 1:*** All three products are not computer adaptive platforms and will still require teachers administering the test and entering data to the database for checking and reporting.

***Assumption 2:*** *GMADE* and *GRADE* are benchmarking tools similar to what McMillan/ McGraw-Hill provides as part of their program packaging. Both uses Form A and Form B Benchmark Assessment that is recommended to be administered 3 / 4 times within the school year for benchmark progress monitoring.

***Assumption 3:***AIMSweb do have an open-response section in its assessment, however, the comprehensiveness of the task is yet to be determined following the evaluation of the samplers Pearson will provide the school in the next two weeks.

 Ms. Winter did emphasize that all three products offer great benefits since it clearly aligns with the RTI framework when addressing the learning needs of students with IEPs. She further emphasized the ability of frequent assessment (as often as weekly/bi-weekly) offered by the AIMSweb probes that has the potential to create a more reliable progress monitoring database. In terms of *GRADE* and *GMADE,* she emphasized the ability to generate reports timely—primarily due to the fact that teachers do the data-entry themselves as oppose to submitting the test to outside vendors (Pearson) for checking and reporting—thus being able to use the data result right away to plan for instruction.

**Comparative Analysis**

***AIMSweb versus DRA-2/QRI-5***

 Alim Academy currently uses the DRA-2/QRI-5 as benchmark progress monitoring assessment tools to serve both screening and informational purposes. The data results are used to determine students who are not meeting grade-level expectations and plan for their instruction to help move them along their learning continuum and meet the aforementioned expectations. Both instruments are administered 3x a year. A supplemental benchmarking tool from the McGraw-Hill/McMillan teacher resource can be used to compare results and analyze trends within the school year.

 This school year, a move towards frequent progress monitoring was introduced by Dr. Ghaderi. As part of the Literacy Plan Year Two Proposal, a similar progress monitoring system was proposed to help students flagged as either not meeting grade-level expectation OR not gaining more than 100 in the Reading Lexile score reporting from last school year’s Stanford 10 results. All these plans took place prior to the meeting with Sr. Baghaee.

 There are clear differences between AIMSweb and the DRA-2/QRI-5. AIMSweb stands to offer a complete package that can be adopted easily with the absence of existing structures. However, given the fact that a prior structure is already in place and motion, and the fact that this is the first time for the school to actually have a progress monitoring platform, teachers need more time and practice to be more fluent in administering school-wide assessment tools. DRA-2 is another program product of Pearson and as such, it likewise offers the same packaging with online web-base database program that can generate the same reporting format. Because the DRA-2/QRI-5 are benchmark assessment tools, it does not have the progress monitoring probes that comes with the AIMSweb package. Progress monitoring, as mentioned earlier, is generally curriculum-based, in the absence of such probes offered by AIMSweb or DIBELS, running records could be used to serve the purpose of progress monitoring.

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| **Indicator** |  | **AIMSweb** | **DRA-2 / QRI-5** |
| Purpose | Tier One: Benchmarking |  |  |
|  | Tier Two: Strategic Monitoring |  |  |
|  | Tier Three: Progress Monitoring |  |  |

Table 1. *Comparison Between AIMSweb and DRA-2/QRI-5*

 The main difference between the AIMSweb platform from the DRA-2/QRI-5 is the way AIMSweb is packaged to have all the components made available to its users whereas with the DRA 2 an online management database needs to be purchased while the QRI 5 will require creating a database and reporting program using Microsoft products. A reporting program has been satisfied as part of last year’s initial implementation. Another difference is AIMSweb ability to offer different format of reporting and the ability to specifically identify areas of strengths and weaknesses based on preselected clusters built-in the probes to be used.

***GRADE & GMADE versus Stanford 10***

 Stanford 10 is a summative, standard-based assessment administered once a year to gain a snapshot of what students know and can do. Stanford 10 is typically used for its program evaluation/accountability purpose and/or to determine if AYP is achieved. On the other hand, *GRADE* and *GMADE* are benchmarking tools/instruments that help inform instruction throughout the year. Both show the progression of student towards mastery of curricular skills.

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| **Indicator** | ***GRADE / GMADE*** | **Stanford 10** |
| Purpose | Instructional and Diagnostic  | Summative and Program Evaluation/Accountability |
| Administration | 3-4 times a year | 1 time at the end of the year |
| Checking  | Teacher generated*\*Subject to entry errors\** | Vendor generated |
| Reporting | Timely generated through on-site printing | Vendor returns results and reports after 10 business days. |
| *Other notes* |  | Comparative to MCPS’ Maryland State Assessment (MSA) Reading and Math; HSA |

Table 2. *Comparison Between Stanford 10 and GRADE/GMADE.*

 The decision to choose between the two platforms solely relies on the purpose the school wants satisfied. Administering the Stanford 10 completely aligns with Maryland State Department of Education’s MSA/HSA administration at the end of the school year to determine if school systems meet AYP. The McMillan/McGraw-Hill/Glencoe programs the school currently uses provide the assessment tools similar to what *GRADE* and *GMADE* offers (further research to be conducted upon receipt of the samplers from Pearson).

**Recommendations**

 In the effort to find the right tools that will help Alim Academy’s teachers to better respond to their students’ unique individual needs, a comparative analysis was conducted to determine if the adoption of AIMSweb, *GRADE* and *GMADE* should be considered for SY 2012-2013. The following criteria were used to help evaluate the possibility of this action: cost of tool, technology requirements, staff training, content area/grade level offering, frequency of administration, and reliability/validity.

***Cost of Tool***

* Although the cost of AIMSweb was relatively affordable at about $8 per student/year, the school can save money and funding by using resources made available using the McMillan/McGraw-Hill program at this point in time. The school can purchase the DRA-2 Online Data Management System from Pearson to provide the database similar to what AIMSweb offers.
* The total yearly cost for the *GRADE* and *GMADE* is yet to be determined.

***Technology Requirements***

The school meets the technology requirements needed by all products—AIMSweb, *GRADE, GMADE* and DRA-2.

***Staff Training***

* The ELA staff has been trained to use the DRA-2. They have also received training in conducting running records—a requisite in creating a progress monitoring system/program using different materials available in the curriculum. Pearson’s representative Michelle Winter will provide webinar trainings in the use of AIMSweb, *GRADE* and *GMADE* if the school decides to use the three products. The cost for staff training is not yet determined at this point in time.
* Given the timing of this report and possible action, recommendation to conduct more research on the products upon receipt of the samplers from Pearson is strongly advised.

***Content area and grade level offering***

* Standards alignment to MCPS Curriculum was initiated last school year for Math while the ELA alignment commenced this school year. This alignment allowed for a review of the assessment tools that came with the program currently used by AA. In essence, AA has all the tools needed to establish a weekly/bi-weekly/monthly progress monitoring system using the resources we currently have.
* In terms of *Stanford 10 vs. GRADE/GMADE*, the assessment and instructional tools for all core subjects follows the same instructional cycle offered by *GRADE/GMADE.*

***Frequency of administration***

* Using the tools we already have, we can follow the *GRADE/GMADE* benchmarking schedule to be part of our instructional/diagnostic assessment on top of our DRA-2/QRI-5 progress monitoring schedule which complements MCPS’s MAP-R and MAP-M schedules.
* To follow the components of AIMSweb, running records and spelling/vocabulary tests can be administered weekly/bi-weekly for students who are determined to be needing tier two/three monitoring.

***Reliability/Validity***

In terms of reliability and validity, it is strongly recommended to continue the practice of submitting tests to outside vendor for checking and reporting. This is deemed to be the most reliable way to score test objectively which makes the report more valid by eliminating the chance of error if done on-site.

Overall, adopting the three products to complement what we currently offer will translate to over-assessment/testing of students. As it stands, the different programs offered by McMillan/McGraw-Hill are research-based and are completely packaged systems that offer similar OR comparative assessment tools/instruments and instructional delivery.

**Conclusion**

 The initiative and research done by Sr. Baghaee is highly appreciated as it moved Alim Academy to conduct its own research of the tools currently used in assessing students as compared to the AIMSweb, *GRADE* and *GMADE* programs available in the market. The ability to compare all three products to existing products used by Alim Academy made us aware of the different assessment tools out there and review the products we believe to meet the needs AA currently have.

To date, Alim Academy has identified that reading and writing are the main areas that need improvement school-wide. DRA-2 and QRI-5 are the tools/instruments currently used which incorporate writing as part of the assessment. The data generated provides the information the teachers need to diagnose and plan for instruction. The school is on its second year of using these instruments, while it will be on its first year of implementing a monthly progress monitoring system and multigenre portfolio as evidence of targeted instruction. Changing the structure at this point in time by adding OR changing the program being used is highly discouraged.

The road to school improvement takes time and practice. Plans are often spread in a 3 year to 5 year cycle. Sr. Baghaee’s suggestion to use other tools/instrument will require more research on the school’s part as adoption of these systems has top-down consequences to the school’s overall program. As the teachers of AA gain more experience in using formative tools as part of its progress monitoring, it is the hope of the school that the recommended systems will be put in place in the future after the needed research study and other information are made available to make an informed and actionable decision.

**REFERENCES**

GMADE and GRADE (2012). Retrieved August 23, 2012 from [www.pearsondiagnostic.com/](http://www.pearsondiagnostic.com/)

Making sense of math and reading response to intervention (rti) with GRADE and GMADE from pearson.  *(*2009). Retrieved August 23, 2012 from [http://www.educationnews.org/articles/making-sense-of-math-and-reading-response-to-intervention-(rti)-with-grade-and-gmade-from-pearson.html](http://www.educationnews.org/articles/making-sense-of-math-and-reading-response-to-intervention-%28rti%29-with-grade-and-gmade-from-pearson.html)

Product-Aimsweb® benchmark and monitoring system (2012). Retrieved August 23, 2012 from

 [http://www.pearsonassessments.com/HAIWEB/Cultures/en- us/Productdetail.htm?Pid=aims01&Mode=summary](http://www.pearsonassessments.com/HAIWEB/Cultures/en-%20us/Productdetail.htm?Pid=aims01&Mode=summary)

Safer, N., Bootel, J., & Coviello, R. H. (2006). *Improving student outcomes through progress monitoring* [PowerPoint Presentation]. Retrieved August 23, 2012 from.

 [www.**studentprogress**.org/doc/VASEA9-28-06.ppt](http://www.studentprogress.org/doc/VASEA9-28-06.ppt)

Slentz, K. L., Early, D. M. & McKenna, M. (2008). *Washington state: A guide to assessment in early education.* Washington State Office of Superintendent of Public Instruction.