

Regular Board Meeting – June 15, 2010

SUBJECT: SPRING 2010 MAP REPORT IN READING AND MATHEMATICS**BACKGROUND**

The May, 2010 administration of the computerized adaptive test, Measures of Academic Progress (MAP) of the Northwest Evaluation Association (NWEA), completes the fourth, fall-to-spring cycle in grades 2-7 in reading and mathematics and the second, eighth grade fall-to-spring cycle. District 68 administers the MAP tests to all students with the exception of those in the ELL center classes, who primarily are comprised of students learning the English language for two years or less.

Four types of assessments are currently used in District 68: universal screening, diagnostic, progress monitoring, and yearly outcome. MAP assessments provide information to teachers, parents, administrators, and Board of Education members in the latter three areas. As a diagnostic assessment, it helps pinpoint individual and group strengths and weaknesses for targeting instruction. For progress monitoring purposes, it permits examination of how students are doing at three points in the school year for special education populations and those receiving intervention services. As an assessment of yearly outcome, student, grade level, and district performance are examined in relation to national norms and expected annual growth targets. District 68 uses these assessments to see curricular strengths and weaknesses in the content areas of reading and mathematics in conjunction with ISAT scores.

DEMOGRAPHIC CONSIDERATIONS

During the past four years, demographic shifts have included a 12% increase in the Free/Reduced Lunch (F/R Lunch) status of District 68 students, from 29% to 41%, a 3% increase in the number of ELL students to 12.3%, and a 4% decrease in special education students with IEP's to 13.8%. Other shifts have included a change in ethnicity with a 1-2% increase in both Hispanic and Black/Non-Hispanic students to 11% each, a 5% increase in multi-racial students accompanied by a 2% decrease in Asian/Pacific Islander students to 34% and a decrease of 7% in White/Non-Hispanic students to 37%. The mobility rate has fluctuated between 7% and 9% during the last four years with approximately an 8% mobility rate in 2010.

These shifts continue to challenge us to serve an increased number of students who have not been a part of our curricular foundation balanced with meeting the needs of those who remain in District 68 for many years and are ready for the next level of instruction in the curriculum.

In grade 2, for example, only 70% of the students have attended schools in District 68 for all three of their years in school as they emerge from non-readers to beginning readers; by grade 8, only 48% have been enrolled since kindergarten or grade one. During the 2009-2010 school year, 45% percent of eighth graders have been in the district four years or less as compared with 34% the previous year.

DISTRICT 68 STUDENT PERFORMANCE IN RELATION TO NATIONAL NORMS

Chart A summarizes results in performance on the MAP reading assessment in Spring, 2010 in terms of grade and ethnicity, and Chart B summarizes results in performance of the ELL, Free/Reduced Lunch (F/R), gifted, and special education (with an IEP) groups. The scores are reported in relation to the latest NWEA norm group published in 2008 and expressed in Rasch UnITs (RIT), or equal interval units. In reading, District 68 mean scores at each grade closely approximated NWEA national norms ranging from +1.3 RIT units higher to + 5.8 RIT units above the national norm with the exception of the gifted group which performed as a group between +16.2 and +22.2 units higher than the NWEA norm group. *Over the past four years, mean performance at each grade level has been within this range, indicative of stable performance despite the shifting demographics and an increase in our low-income population.*

Specific group performance showed greater variability between and among grade level counterparts. Racial group performance of students as well as IEP, ELL, and F/R Lunch groups in each grade remained fairly similar from the Spring 2007 to Spring 2010 testing. Black/African American students and Hispanic students begin below NWEA norms in the primary grades. The performance of ELL students is interpreted with caution because placement in the ELL program is based on ACCESS scores below a composite of 4.8 indicating beginning or intermediate English language learning skills. Hispanic students reach the NWEA norms as a group by fifth grade and remain close to or above the NWEA mean RIT. Black/African American students' performance varies greatly. In grades 3-5, they slowly approximate the NWEA mean and actually meet it in grade 5; conversely, the gap between the NWEA norm and the group norm begins to widen in grade 6 and increases to a level of significance in grade 8. A similar pattern is evident for IEP students in the upper grades. The F/R Lunch population approaches the norm group beginning in grade 3 and remains fairly close to the NWEA norm through grade 8 although the gap widens considerably between the F/R Lunch population and District 68 norms in grades 7 and 8. The performance of gifted students increases steadily from grade 2 where their norm group mirrors the NWEA norm of grade 4 and the gap widens positively through grade 8.

Chart A
Reading RIT Mean Scores by Grade & Ethnicity in Grades 2-8
Compared with District 68 & NWEA Norms for All Students Enrolled in Spring 2010

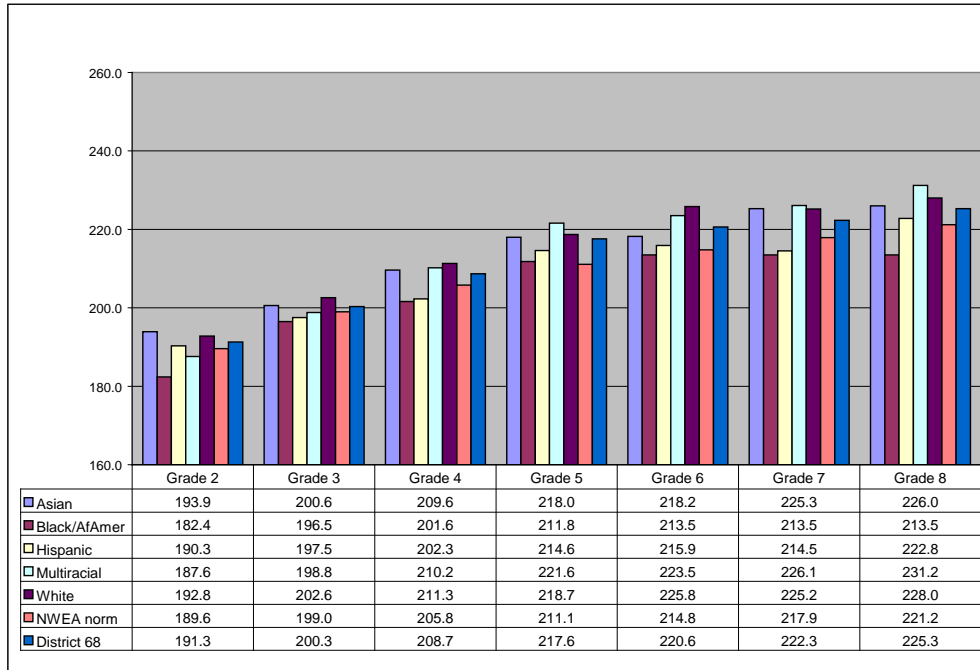
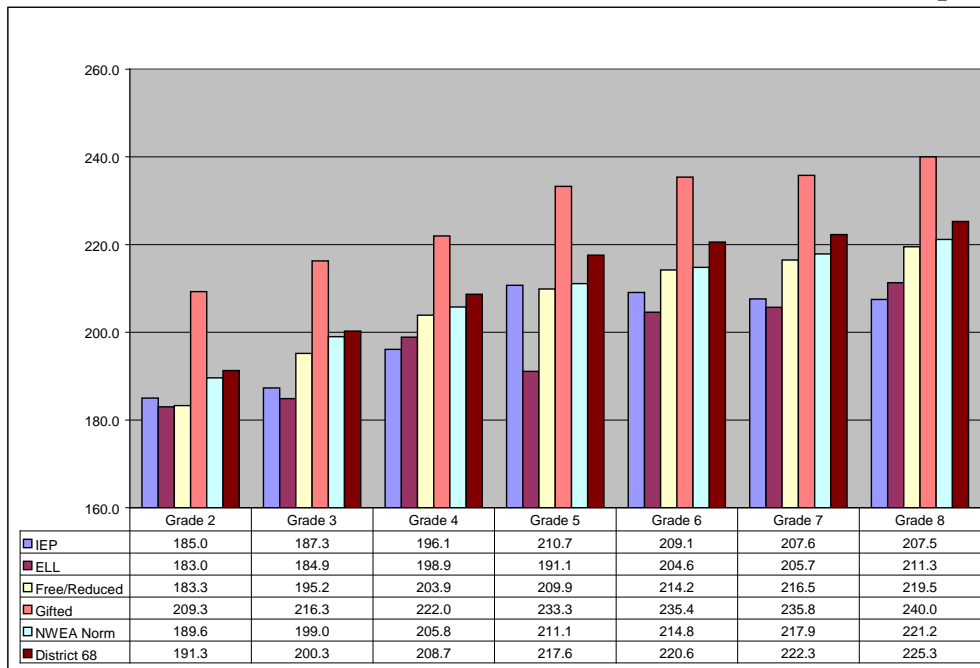


Chart B
Reading RIT Mean Scores by Grade & IEP, ELL, Free/Reduced, Gifted
Compared with District 68 & NWEA Norms for All Students Enrolled in Spring 2010



Charts C and D summarize results on the MAP mathematic assessment in Spring 2010 in terms of grade, ethnicity, and specific groups. In mathematics, mean scores approximated national norms in all grades ranging from -8.4 units lower to +13.7 with the exception of the gifted group which performed from +17.8 to +25.0 units above the NWEA norm group. Hispanic students perform close to NWEA norms throughout grades 2-8 and actually exceed the norm in grade 6. Black/African American students are closest to the NWEA norm as a group in grade 6 but range from -2.2 to -8.4 RIT units below the NWEA norm as a group between grades 2-8. Scores slowly increase for ELL and F/R Lunch students from grades 2-8 but only reach NWEA norms in grade 8 for ELL. Mean scores for each group are fairly similar from 2007 through 2010.

IEP, ELL, Hispanic, and Black/African American group performance still lag behind Asian and White group performance mirroring national trends; F/R Lunch group reached the NWEA norm by grade 6 in 2010 as it had in prior years, but neither grade 7 nor grade 8 groups were able to sustain this level of performance. Students served in the gifted program ranged from +14.5 to +25 points above the NWEA and District 68 norms.

Chart C
Math RIT Mean Scores by Grade & Ethnicity in Grades 2-8
Compared with District 68 & NWEA Norms for All Students Enrolled in Spring 2010

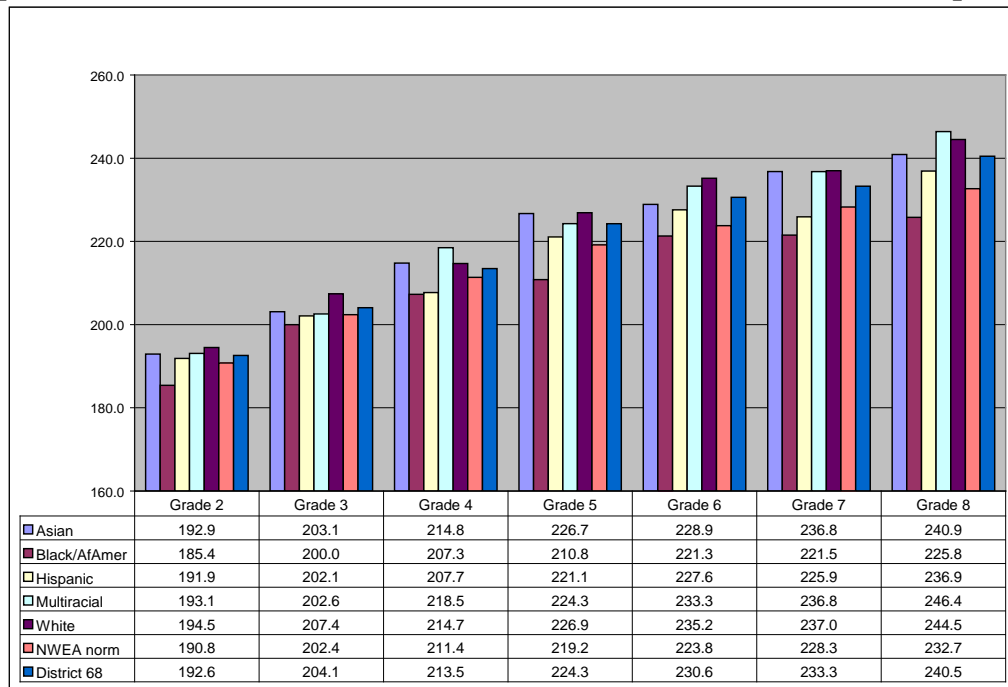
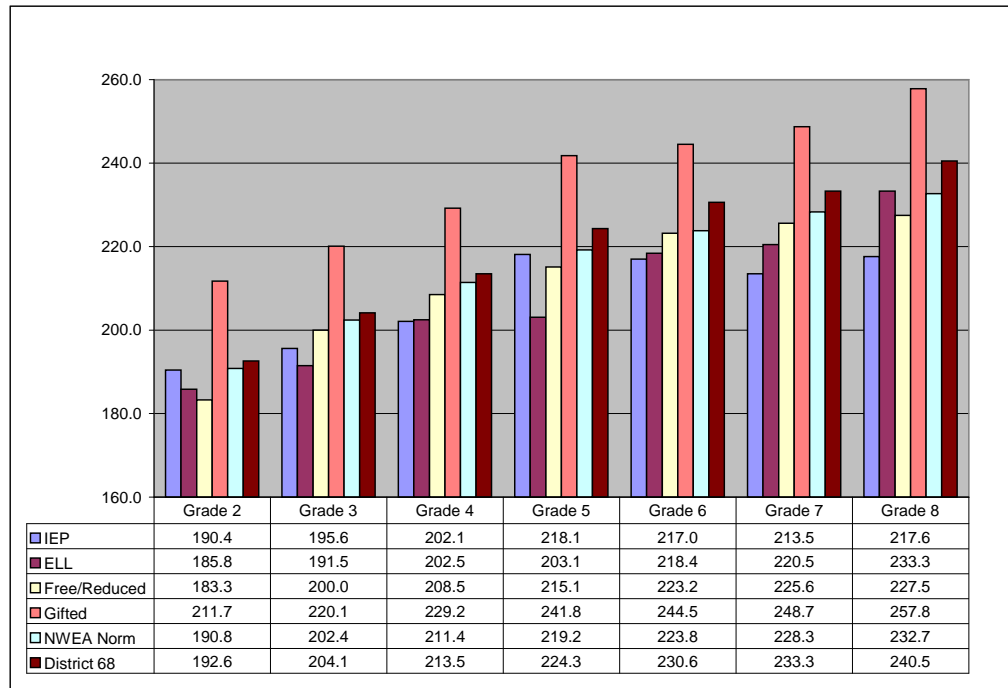


Chart D
Math RIT Mean Scores by Grade & IEP, ELL, Free/Reduced, Gifted
Compared with District 68 & NWEA Norms for All Students in Spring 2010



DISTRICT 68 STUDENT GROWTH IN RELATION TO GROWTH TARGETS

MAP assessments compare groups and individuals based on growth targets that are calculated for the year after students complete a dynamically adjusted test. Each student has his/her own growth target and each group has its own growth target with which to make comparisons. The points are again measured in terms of a Rasch UnIT (RIT), which is an equal interval scale. In District 68, the growth target is established in the fall, can be checked in the winter, and is analyzed in the spring to ascertain if the target has been met, has fallen short, or has been exceeded.

Chart E reveals the mean growth target for each grade for the 2009-10 school year. *For the second time since students were administered the MAP assessments in reading in 2006-07, all grade levels met their percent of targeted growth in the aggregate.* Grades 2, 3, 4, 5, 6, 7, 8 were expected to grow 13.8, 9.3, 6.7, 4.5, 4.2, 3.9, and 3.2 points, respectively and met their targets. NWEA norm group targets are similar to these growth expectations with more growth points expected at the earlier levels, 11-14 units, and decreasing to the 3-4 unit range by grade 8. The target points are indicated in red and joined by the red line. The yellow bars indicate the means of growth for grades 2-8. The targets for each student in the class are combined and averaged; the growth units for the class are combined and averaged.

Chart E
Student Growth in Reading
Fall to Spring 2010

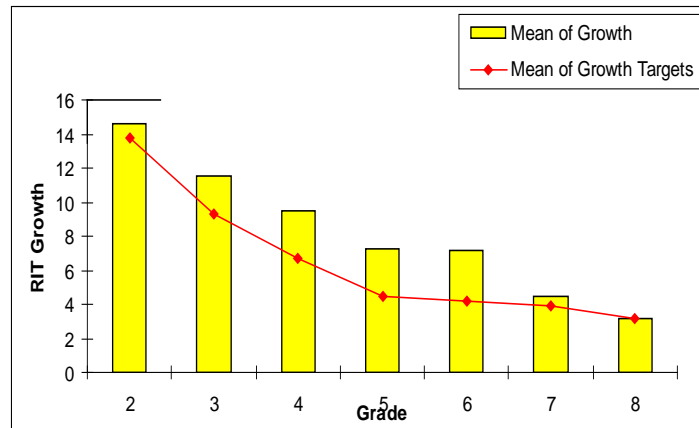


Table 1 presents additional information regarding reading growth in relation to targets and compares the current year to the prior years. First, an examination of the mean growth from 2007 through 2010 is undertaken. ***It should be noted that the mean growth expected increased yearly for almost every group from 2006 to 2009 with 2010 mean growth returning to 2008 levels. This means that most groups had more RIT points to grow than students at the same grade level in the previous year in order to meet group targets.*** As a whole, groups are beginning at a lower point and having to grow more RIT units. The scores of transfer students contribute significantly to the means being lower in the fall. Next, an examination of the columns, “Percentage of Target Met,” reveals that the group as a whole is meeting its target in the aggregate. Individual grade levels met these targets in twenty-one of twenty-six annual measures during the last four years; the groups did not meet targets in the grades and years indicated in yellow, but approached the target above the ninety percent level. Several factors appear to be contributing to this performance. First, while about 14% to 22% of our students perform below the 30th percentile on the MAP spring assessment, the remaining 78-86% performs above this level with almost 40% in each grade level scoring at or above the 75th percentile. The performance of our most capable students increases the likelihood that the target will be met by the group. Second, parent support continues to be strong for most students and increases the likelihood that homework and positive attitudes toward school are reinforced. Finally, content revisions in the main academic areas over the last five years, the honing of research-based instructional practices, the development of intervention programs, and the commitment of the staff to improve the performance of students, contributes to helping students succeed.

Table 1
Student Growth in Reading*
Grades 2-8, Targets for Spring 2010, 2009, 2008, & 2007

Gr	Target for Spring 2010			Target for Spring 2009			Target for Spring 2008			Target for Spring 2007		
	Mean Growth	Percent of Target Met	Percent Met Individual Growth	Mean Growth	Percent of Target Met	Percent Met Individual Growth	Mean Growth	Percent of Target Met	Percent Met Individual Growth	Mean Growth	Percent of Target Met	Percent Met Individual Growth
2	13.8	105.9	58.3	14.0	96.9	51.0	14.3	103.2	50.3	12.3	95.5	51.3
3	9.3	123.5	64.6	10.8	116.8	63.0	8.7	116.1	50.1	8.8	92.6	51.6
4	6.7	142.1	65.4	8.6	140.0	64.4	6.3	128.3	63.4	5.7	126.8	61.1
5	4.5	159.9	63.5	6.9	137.5	62.9	4.6	150.7	67.3	4.8	104.2	52.0
6	4.2	170.4	67.8	4.9	119.5	61.7	3.8	130.8	59.4	3.8	126.3	62.0
7	3.9	114.9	54.4	3.4	91.9	52.2	3.0	127.5	56.0	3.1	93.6	55.7
8	3.2	100.6	53.6	4.5	143.1	58.6						

*Student growth is calculated by analyzing RIT scores of students who completed testing at both the beginning and at the end of the school year.

Another feature of Table 1 is the percent of students within the grade level who met individual targets of expected growth in reading. This will be the emphasis as NCLB is reauthorized under the Elementary and Secondary Act (ESEA). The percent meeting individual growth targets should be in the 70's consistently, moving toward the 90's. Although there appears to be a slow but steady increase in most grades in the percentage of students meeting individual targets over the past four years with percentages currently in the 60's, there are *notable exceptions in grades 7 and 8 shown in red, as well as in grade 2*. NWEA analysts were contacted to see if these patterns were evident in other districts with our demographic configurations or at similar grade levels. They were not. Further analysis was then conducted to see if there was a greater percentage of special education, ELL, or F/R lunch at these grades consistently over three or four years. This was not the case. Grade 2 may be impacted by several factors including lack of experience with the MAP computerized format which is taken for the first time in grade 2 and a shift in emphasis from decoding to comprehension in the MAP test. Also, the prevalence of multiple choice items as a testing form does not reflect our current practice which relies on oral forms of assessment more than written forms. A shift has begun and must continue to emphasize fill-in, multiple choice, and written sentences/paragraphs in grade 2 to prepare our students for the variety of assessments they will encounter.

Both the curriculum and literacy practices in grades 7 and 8 were examined in an effort to analyze factors that may be contributing to the performance of our students in these grades. While common materials were used and similar standards were emphasized across these grades, common key assignments, formative assessments, and summative assessments were not utilized to ensure the same expectations; similarly, common rubrics were not developed by the group to examine student work as is the practice in grades two through six. Faculty in language arts, social studies, and science in the middle school met during the second half of the year to develop these common elements. In addition, the practice of meeting with small groups who are experiencing difficulty with a skill or concept is not yet a common practice in the middle grades as it is in the primary and intermediate grades. These research-based practices will be emphasized at the middle school next year in addition to our revised lesson study and data analysis initiatives.

Chart F reveals the growth targets for students in Grades 2-8 in mathematics. *Grades 2-8 met or exceeded their targets in aggregate for the first time in mathematics since MAP scores were administered in 2006-07.*

Chart F
Student Growth in Mathematics
Fall to Spring 2010

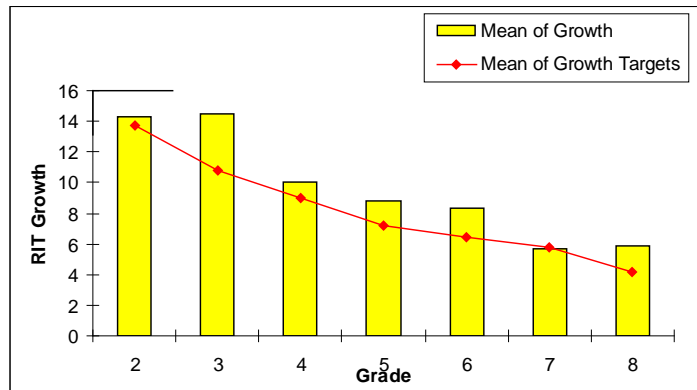


Table 2 displays “Percentage of Target Met” and individual growths met by grade. Some of the same patterns that were seen in reading are evident in mathematics. An examination of the “Percentage of Target Met” columns reveals that the group is meeting its target in the aggregate. Individual grade levels met their targets in nineteen of twenty-six annual measures during the last four years; the groups did not meet targets in the grades and years indicated in yellow. The percent of individuals meeting their individual growth targets hovers in the 60’s region with third and eighth grade moving into the 70’s.

The reading performance pattern seen in grades 2 and 7 is again evident in mathematics. The shortfall in grade 2 targets appears to be most related to difficulties with number sense. Increased experiences with quantities and groupings of ones, tens, and hundreds combined with counting manipulatives and coins have been focused areas of teaching. Math packets to reinforce basic facts and number sense were developed last summer and appear to have impacted both aggregate and individual performance this year in grade 2. The reasons for the performance at grade 7 are less clear and will be part of the focus of the Math Learning Team and Math Implementation Team next year as we move to curricular revision in this area.

Table 2
Student Growth in Mathematics*
Grades 2-8, Targets for Spring 2010, 2009, 2008, & 2007

Gr	Target for Spring 2010			Target for Spring 2009			Target for Spring 2008			Target for Spring 2007		
	Mean Growth	Percent of Target Met	Percent Met Individual Growth	Mean Growth	Percent of Target Met	Percent Met Individual Growth	Mean Growth	Percent of Target Met	Percent Met Individual Growth	Mean Growth	Percent of Target Met	Percent Met Individual Growth
2	13.7	104.5	58.9	12.0	84.8	39.2	14.3	91.4	50.3	13.5	91.5	46.1
3	10.8	133.9	72.9	15.7	144.4	77.4	10.6	126.3	60.1	10.5	95.9	56.8
4	9.0	111.1	61.1	10.5	117.3	61.0	8.5	125.6	63.4	8.2	121.3	64.3
5	7.2	123.1	62.4	10.5	140.4	66.5	8.5	116.5	67.3	8.6	108.4	61.8
6	6.4	129.4	66.8	8.2	127.2	62.0	6.9	97.7	59.4	6.9	122.3	64.0
7	5.8	100.1	55.6	6.1	108.0	54.6	5.8	71.7	56.0	5.5	73.0	48.4
8	4.2	139.8	71.2	7.2	169.3	73.5						

*Student growth is calculated by analyzing RIT scores of students who completed testing at both the beginning and at the end of the school

MAP performance in both reading and mathematics is most affected by membership in a special education program and by the number of years a student attends District 68 schools, as we have noted previously with ISAT results. Approximately 50% of seventh and eighth graders who are in special education score below the 30th percentile. Approximately 90-95% of students not in special education but who score below the 30th percentile have been in District 68 less than one-half of their total years in school.

CONCLUSIONS

With the completion of the fourth, fall to spring MAP cycle in grades 2-7 and the second, fall to spring MAP cycle in grade 8, we have a solid foundation for future trend analysis in relation to group performance and individual student performance based on growth targets on a nationally administered assessment. It is expected that this MAP assessment, or one similarly constructed, will replace the ISAT in two to three years. Hispanic, African-American, IEP, F/R Lunch, and ELL groups trail other groups although there is stable or slight improvement in the performance of most sub-groups. Students served in the gifted program perform at high levels and exceed RIT targets consistently. Approximately 40% of our students perform at or above the 75th percentile on MAP reading and math assessments which assists our district in meeting growth targets in the aggregate. ***Growth targets for the grade levels as a whole are being met at a higher percentage than individual growth targets indicating that there is a greater potential for increasing individual student performance and our focus must continue on meeting the specific needs of each student through lesson study, student work sample examination, and data analysis.*** More focused intervention programs are planned in reading for all grades in 2010-2011. A Math Learning Team will be formed to revisit the curricular area of mathematics next year accompanied by AIMSweb probes administered in mathematics to better help us focus on the individual needs of our students.

Agenda Item 4a
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The final draft of the National Standards in reading and mathematics has been developed and approved in 48 of the 50 states with accompanying test exemplars and student work samples. Our teacher-leaders will assist faculty in utilizing them with our current Power Standards during the 2010-2011 school year to improve student performance through goal setting and data analysis each trimester in each building and at each grade level.