

Restructured Freshman Year Initiative Evaluation Report #2



Research, Evaluation & Assessment
Evanston Township High School

May, 2015

Executive Summary

ETHS restructured its 1 humanities and biology courses and implemented a system that provides students with access to a challenging, guaranteed curriculum that focuses on skill development and is aligned with national standards. This includes students who, in the past, would have been placed in a regular or mixed-level regular course.

Prior to revisions to the courses, there was great variability in the curriculum experienced by students. This variability was independent of course level. In the new courses, the curriculum is aligned with Advanced Placement, Common Core and ACT College Reading standards, high-level skills are taught by all teachers and common assessments are administered to students. Through revising these courses, ETHS is able to increase expectations and guarantee a curriculum.

A multi-year evaluation is underway and this is the second evaluation report. Like the first report, this is not a final, summative report. This report is formative and its purpose is to help adapt and improve the initiative. This report presents findings for three courses taken in the freshman year: English, history, and biology.

A majority of grade 9 students put forth effort in their English, history, and biology courses. Locus of control is the extent to which individuals believe they can control events that affect them. Students with a high locus of control believe they have command over their learning. White students are more likely than African American/Black or Hispanic/Latino students to put forth effort and to have a high locus of control in their English, history, and biology class. It is too early in the evaluation to make any generalizations about what these findings mean. Future evaluation reports will include grade 11 locus of control results. At that time a more complete analysis and interpretation will be possible.

A primary goal of the initiative is for more students to have access to and be successful in honors and AP courses as they progress through grades 11 and 12. Across all of the historical placement groups there was an increase in the percent of students enrolling in at least one honors or AP course. There was also an increase in students enrolling in at least one AP course in grade 11.

Evaluation Reports #3 and #4 will provide an analysis of two cohorts that have gone through the full restructured freshman year experience. These reports will provide more evidence of long-term outcomes and success of the restructured freshman year initiative.

Background and Overview

Evanston Township High School's (ETHS) goal is to ensure the greatest number of students take challenging classes and develop the academic skills and capital required to succeed in the competitive and rapidly changing 21st century. Before this initiative, students in 1 humanities-English, 1 humanities-history and biology course were not guaranteed access to a curriculum that was rigorous and challenging, and that prepared them for success in future honors and AP-level courses.

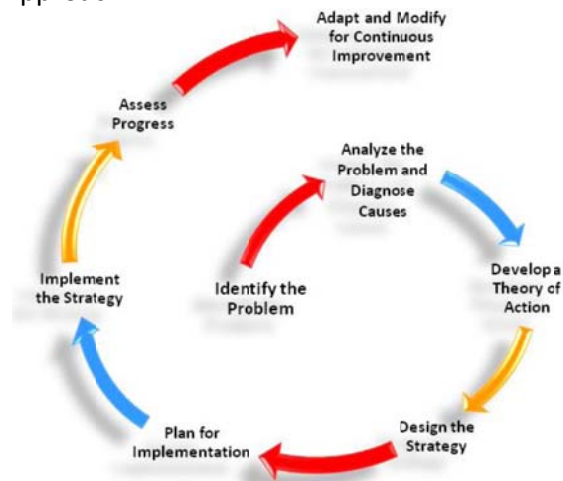
To address this, ETHS restructured its 1 humanities and biology courses. In the new courses, the curriculum is aligned with Advanced Placement, Common Core and ACT College Reading standards, high-level skills are taught by all teachers and common assessments are administered to students. In addition, new course placement criteria were established.

The District 202 Board of Education directed the school's administrators to evaluate the initiative beginning with the 2012-13 cohort of students. A multi-year evaluation is underway and this is the second evaluation report. Like the first report, this is not a final, summative report. This report is formative and its purpose is to help adapt and improve the initiative.

A Problem Solving Approach to Designing and Implementing a Strategy to Improve Performance

School administrators are using the model developed by the Harvard Business School and the Harvard Graduate School of Education to help with the implementation of the Restructured Freshman Year Initiative. The model is outlined in "A Problem Solving Approach to Designing and Implementing a Strategy to Improve Performance" (Childress & Marietta, 2010) and illustrated in Figure 1. Childress and Marietta recommend using the eight-step approach illustrated below. This is a widely accepted problem solving model that has been used successfully in other school districts, including Montgomery County Public Schools (Childress, 2009).

Figure 1: Problem Solving Approach



Background and Overview

Theory of Action

As Figure 1 illustrates, the problem solving model required administrators to develop a Theory of Action. When recommending the Restructured Freshman Year Initiative to the D202 Board of Education, Dr. Witherspoon's summarized its Theory of Action as follows:

This recommendation to restructure the freshman experience is designed to benefit all students by creating a stronger learning environment—to assure that high achievers are challenged at the highest level and held to the highest standards; to assure that far more 9th graders are taking challenging classes; to create pathways for many more students to take honors and advanced classes at ETHS; and to raise expectations for all students. Those achieving at the top will benefit from increased academic standards and skills, and those capable of greatly improved achievement will be supported in meeting much higher expectations.

The Theory of Action is the foundation of the evaluation and its reports. Figure 2 illustrates each of the Theory of Action's five major components which are described below.

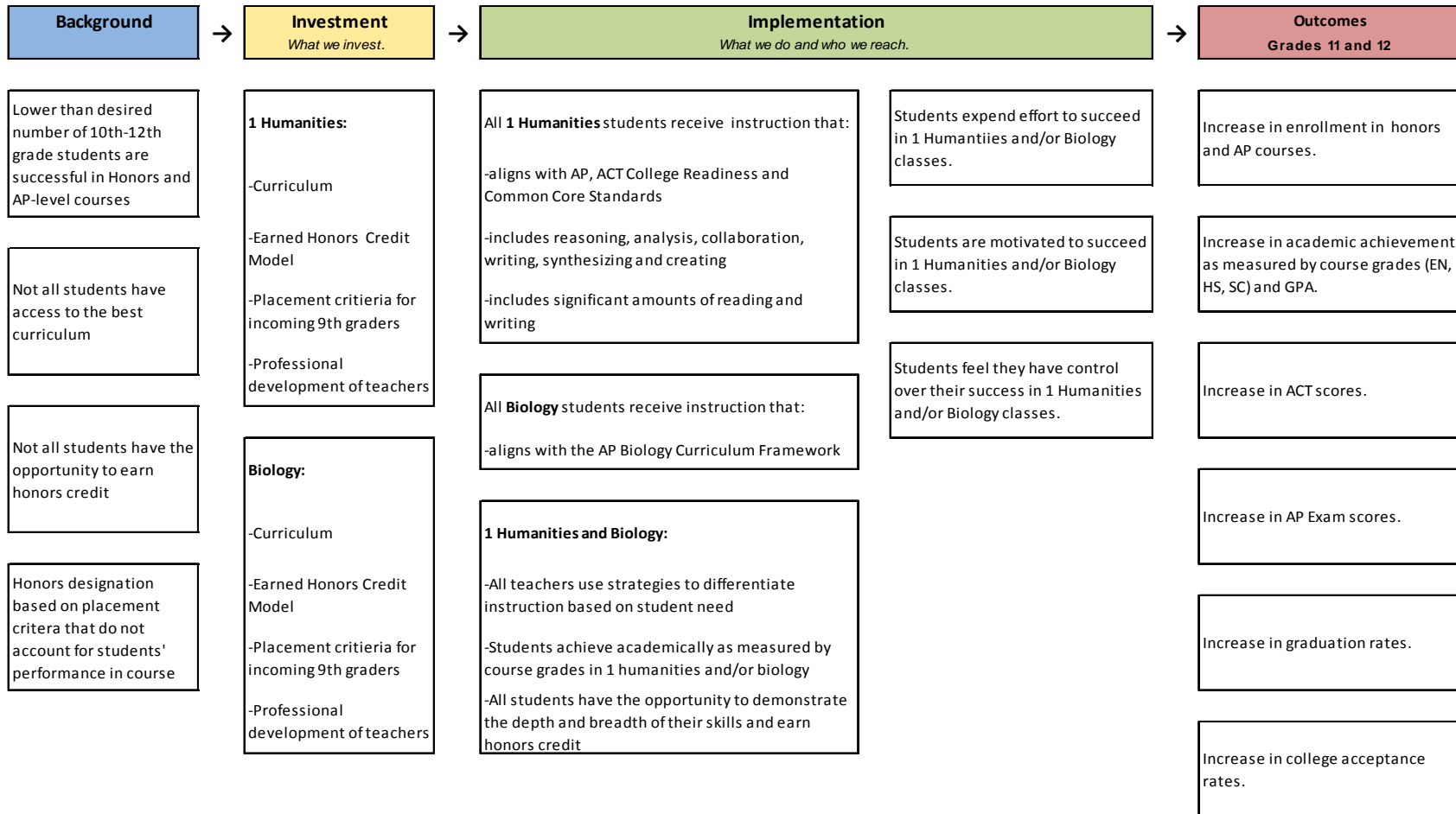
Investment is the time, money, and personnel needed to develop the foundation of the initiative; it is required to plan, promote, and implement it. A lack of adequate investment is an obstacle to an effective program implementation. Investment includes revised curricula; earned honors credit models; placement criteria for incoming ninth grade students; and professional development for teachers.

Implementation describes how the initiative is enacted and the stakeholders it reaches. Implementation includes all students having a rigorous educational experience; all students having the opportunity to demonstrate the depth and breadth of their knowledge and earn honors credit; all teachers meeting the range of student needs; and students achieving academically. Implementation includes grade 9 students expending effort and being motivated to succeed in the courses and students feeling that academic success is within their reach.

Outcomes are the initiative's goals and include student enrollment in honors and AP courses, academic achievement, ACT scores, AP exam scores, graduation rates, and college acceptance rates.

Background and Overview

Figure 2: Restructured Freshman Year Initiative – THEORY OF ACTION



Definitions and Evaluation

Report #2 - Contents and Structure

This report includes information about the initiative's implementation, and preliminary information about its outcomes. .

The 1 humanities sections and biology sections summarize findings by student cohort.

1 Humanities. Cohorts include the grade 9 students who completed both semesters of the 1 humanities English and history course in a given school year. Analyses include the comparison of the two full implementation cohorts (2012-13 and 2013-14) to the mean of the three comparison group cohorts (2008-09, 2009-10, 2010-11). This mean is called the Comparison cohort or group.

Biology. Cohorts include the grade 9 students who completed both semesters of the biology course in a given school year. Analysis includes comparing the one full implementation cohort (2013-14) to the mean of the three comparison group cohorts (2009-10, 2010-11 and 2011-12). This mean is called the Comparison cohort or group.

The cohorts by school year are summarized in Table 1. The numbers of students in cohorts and groups are summarized in the Appendix.

Some analyses report on the race/ethnicity of students. To save space they may be abbreviated as follows:

African American/Black	AA/B
Hispanic/Latino	H/L
White	W

Research Methods

This report's findings are based on data collected through surveys of grade 9 students, and analysis of students' courses and grades.

All grade 9 students enrolled in 1 humanities were surveyed each spring from 2008-09 through 2013-14. The constructs explored in

the grade 9 survey included locus of control and effort.

Student survey data is analyzed using Pearson's chi-square test. Differences reported are statistically significant and have a p value of less than .05.

Student outcomes are analyzed using a cohort comparison design that explores the relationship between students' participation in the initiative and outcomes.

Student Cohorts

1 Humanities. In 2008-09 through 2010-11, grade 9 students were sorted into academically leveled tracks. These are the Comparison cohorts. 2011-12 was the first year grade 9 students participated in the restructured 1 humanities course. This cohort is the start-up cohort because it was the first year of the initiative and the courses were being developed and adjusted during this time. This cohort is excluded from the evaluation results. In 2012-13 and 2013-14, grade 9 students participated in the restructured 1 humanities course. These are the Full Implementation cohorts.

Biology. In 2009-10 through 2011-12, grade 9 students were sorted into academically leveled tracks. These are the Comparison cohorts. 2012-13 was the first year grade 9 students participated in the restructured biology course. This cohort is the start-up cohort because it was the first year of the initiative and the new course was being developed and adjusted. This cohort is excluded from the evaluation results. In 2013-14, grade 9 students participated in the restructured biology course. This is the Full Implementation cohort.

Definitions and Evaluation

Table 1: Cohorts by School Year

Cohort/Year	1 Humanities	Biology
2008-09	Comparison	
2009-10	Comparison	Comparison
2010-11	Comparison	Comparison
2011-12	Start-Up	Comparison
2012-13	Full Implementation	Start-Up
2013-14	Full Implementation	Full Implementation

Student Placement in Courses

1 Humanities. Before 2011-12, students were placed in courses based on their grade 8 EXPLORE reading assessment score. Courses and scores are summarized in Table 2.

Table 2: 1 Humanities – Historic Placement Criteria

1 Humanities Course	EXPLORE Reading National Norm
Regular	40-50
Mixed Level-Regular	51-69
Mixed Level-Honors	70-94
Honors	>=95

Beginning in 2011-12, students earning an EXPLORE score of 40 or greater were all placed in the same 1 humanities course.

Biology. Before 2012-13, grade 9 students were placed in courses based on their grade 8 EXPLORE reading and math assessment scores. Students earning an EXPLORE reading score below 50 did not take the biology course while in grade 9. Courses and scores are summarized in Table 3.

Table 3: Biology – Historic Placement Criteria

Biology Course	EXPLORE Reading National Norm
No Biology Course (grade 9)	<50
Regular	50-66
Mixed Level-Regular	67-74
Mixed Level-Honors	75-89
Honors	>=90

Beginning in 2012-13, grade 9 students earning an EXPLORE score of 50 or greater were placed in the same biology course.

Common Grading Scale

Prior to the initiative, there were two grading scales used in the 1 humanities and biology courses. Students assigned the course for regular credit were on the A(90) scale, and students assigned the course for honors credit were on the A(93) scale. As part of the initiative, all students are evaluated on the A(93) grading scale.

Earning Honors Credit

Earned honors credit models were implemented in 1 humanities and biology. To earn honors credit in a semester, a student must demonstrate the depth and breadth of their skills by successfully completing a series of assessments and by earning a course grade of C or better. A student who has earned honors credit has a command of the skills taught in the course.

Effort

The student survey includes items that assess students' effort in 1 humanities and biology classes. A chi-square test of independence was performed on these items and statistically significant findings are reported.

Locus of Control

Locus of control is the extent to which individuals believe they can control events that affect them.

The student survey includes items designed to measure students' locus of control in 1 humanities and biology classes. The items come from the national Educational Longitudinal Survey of 2002. Examples of items:

- I'm certain I can understand the most difficult material presented in my textbooks

Definitions and Evaluation

- I'm confident I can do an excellent job on my assignments

Measures of locus of control were calculated for each student for 1 humanities-English, 1 humanities-history and biology. Students who score high on a measure exhibit an internal locus of control where they believe they have command over their learning. Students who score low exhibit an external locus of control and believe that external factors have command over their learning.

Students were sorted into three groups based on their score on each measure. A student was assigned to a group based upon their measure relative to the other respondents. Students in the Low group have measures from 1.00 through 2.40; those in the Medium group have measures from 2.50 through 3.40; and those in the High group have measures ranging from 3.40 through 4.00.

Curriculum, Instruction & Assessment – 1 Humanities and Biology

How is the new course different? How does this course compare to the previous courses?

Prior to revisions to the 1 humanities and biology courses, there was great variability in the curriculum experienced by students. This variability was independent of course level. Inconsistency of expectations, assessments, and semester exams resulted in a student experience that was teacher dependent.

The revised 1 humanities and Biology courses are designed to increase the depth in which students reason, analyze, collaborate, write, and synthesize. The courses emphasize deep understanding of content and ensure that both teachers and students recognize what is essential for students to know, understand and do. They focus on the process of moving students to deeper levels of understanding while focusing on their work. This is not about doing the 11th grade curriculum in the 9th grade.

Through revising these courses, ETHS is able to increase expectations and guarantee a

curriculum. Common assessments support a guaranteed curriculum since they provide a set of expectations for students in a course.

Common assessments include earned honors assessments, Advanced Placement aligned rubrics, and semester exams which are all both valid and reliable. Advanced Placement and International Baccalaureate use similar mechanisms to guarantee the curriculum.

Table 4 displays the difference in curriculum, instruction, assessment and grading between the current restructured 1 humanities and biology courses and the course before the restructured initiative. Unlike the previous courses, the current restructured courses are now aligned to Common Core and ACT College Readiness standards, Advanced Placement Framework, and Next Generation Science Standards. The courses included more writing, literature analysis, research, and skills. There are common exams, earned honors assessments, and a common grading scale.

Curriculum, Instruction & Assessment – 1 Humanities and Biology

Table 4: Rigor of Courses –Pre- and Post-Initiative Comparison of Curriculum, Instruction, Assessment, and Grading

	Pre-Initiative		Post-Initiative		
	Regular and Mixed Regular	Mixed Honors and Honors	1 Hum English	1 Hum History	Biology
Curriculum: Aligned to...					
-Common Core (EN, HS)	No	No	Yes	Yes	NA
-ACT College Readiness (EN, HS)	No	No	Yes	Yes	NA
-Advanced Placement Framework (EN, HS, BIO)	No	No	Yes	Yes	Yes
-Next Generation Science Standards (BIO)	No	No	NA	NA	Yes (ongoing)
-Illinois Learning Standards (EN, HS,BIO)	Yes	Yes	NA	NA	NA
Instruction: Guaranteed...					
-Writing (EN, HS)	No	No	Yes	Yes	NA
-Literature Analysis (EN)	No	No	Yes	NA	NA
-Research (HS)	No	No	NA	Yes	NA
-Skill Application and Inquiry (BIO)	No	No	NA	NA	Yes
-Conceptual Understanding and Reasoning (BIO)	No	No	NA	NA	Yes
-Laboratory Skills (BIO)	No	No	NA	NA	Yes
Assessment and Grading: Common...					
-Final Exam (EN, HS, BIO)	Yes (EN only)	Yes (EN only)	Yes	Yes	Yes
-Honors Assessment (EN, HS, BIO)	No	No	Yes	Yes	Yes
-Grading Scale (EN, HS, BIO)	A(90)	A(93)	A(93)	A(93)	A(93)

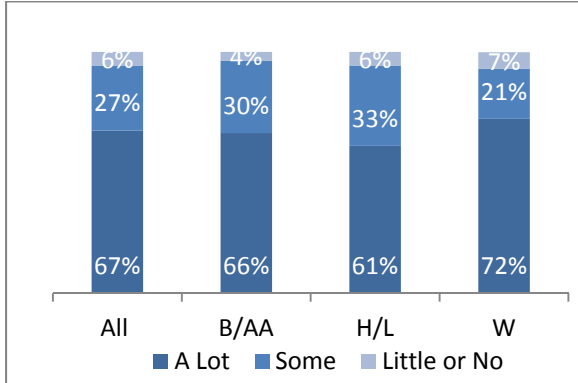
Effort and Locus of Control – 1 Humanities and Biology

1 Humanities English

Effort

67% of the 2013-14 cohort put forth effort in English class. White students are more likely than African American/Black or Hispanic/Latino students to put forth effort in English class.

Figure 3

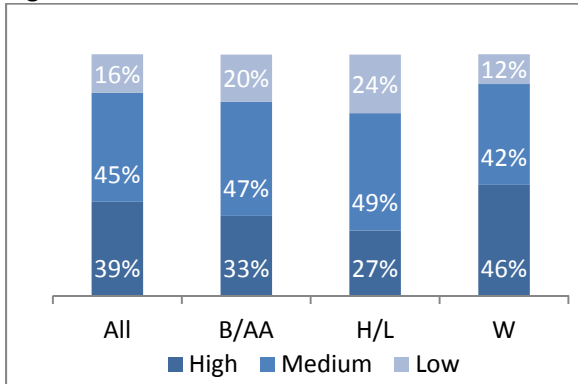


n=540

Locus of Control

White students are more likely than African American/Black and Hispanic/Latino students to have a high locus of control in their English class.

Figure 4



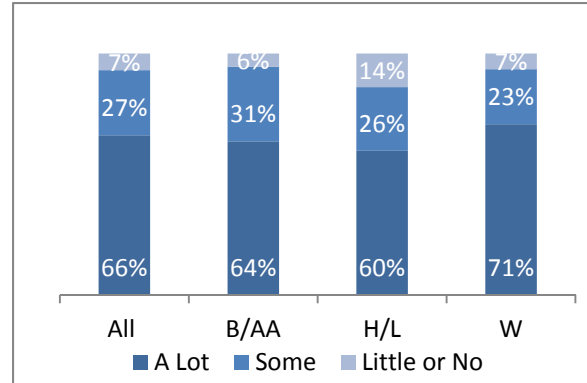
n=550

1 Humanities History

Effort

66% of the 2013-14 cohort put forth effort in history class. White students were more likely than African American/Black or Hispanic/Latino students to put forth effort in history class.

Figure 5

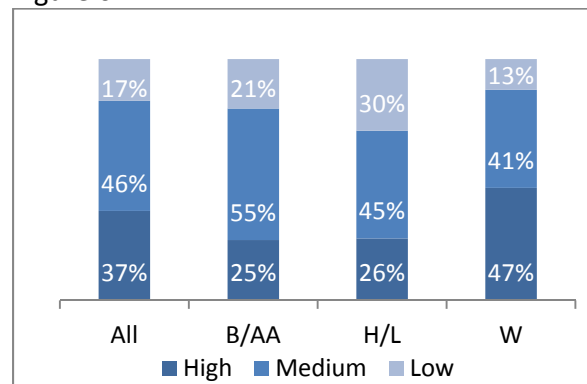


n=537

Locus of Control

White students are more likely than African American/Black and Hispanic/Latino students to have a high locus of control in their history class.

Figure 6



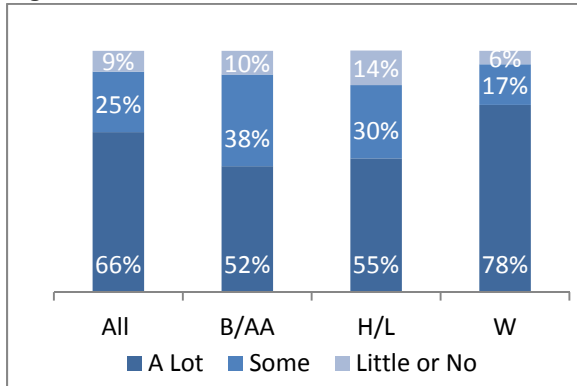
n=550

Biology

Effort

66% of the 2013-14 cohort put forth effort in their biology class. White students were more likely than African American/Black or Hispanic/Latino students to put forth effort in their biology class.

Figure 7

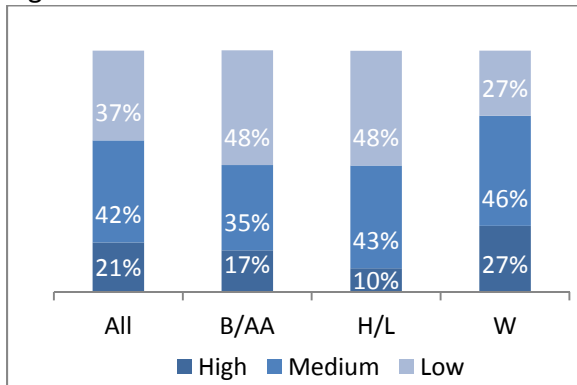


n=478

Locus of Control

White students are more likely than African American/Black and Hispanic/Latino students to have a high locus of control in their biology class.

Figure 8



n=503

Grade 9 – 1 Humanities and Biology

All students now have access to a challenging, guaranteed curriculum. This includes students who, in the past, would have been placed in a regular or mixed-level regular course. The charts below summarize the percent of each historic placement group who earned honors credit. To earn honors credit is to meet the course's high expectations and demonstrate command of the skills taught.

English

Regular: In 2013-14, 28% of the students (n=31) who would have historically been placed in a regular level course demonstrated mastery in at least one semester of their English course, which is slightly less than the 2012-13 cohort (32%, n=36).

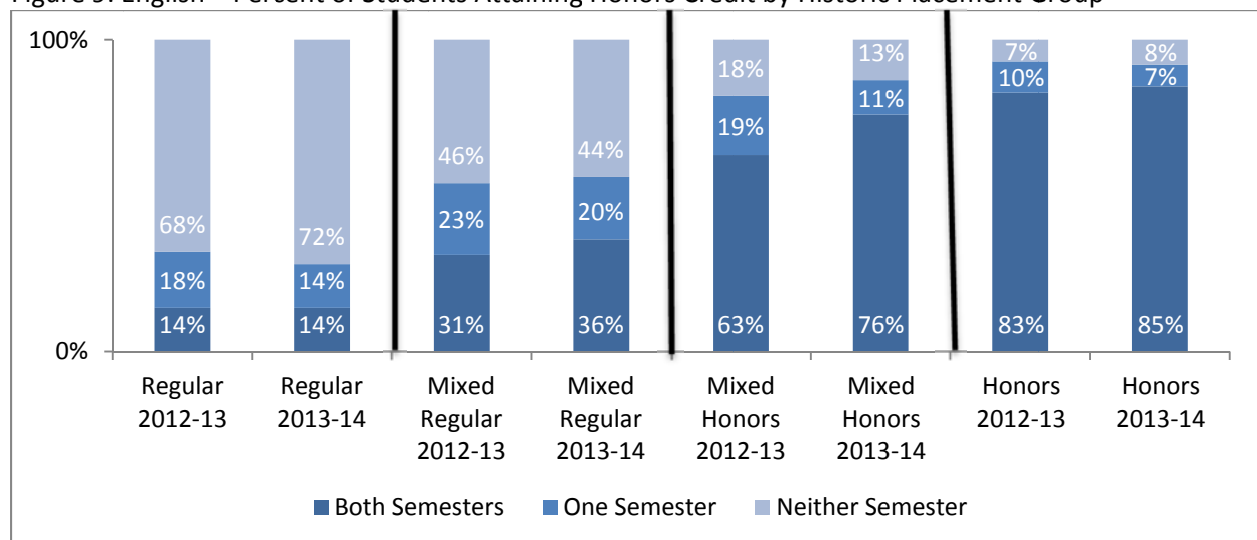
Mixed-Level Regular: In 2013-14, 56% of the students (n=69) who would have historically been placed in a mixed-regular course demonstrated mastery in at least one semester. This is an increase over the 2012-13 cohort of 54% (n=78).

Mixed-Level Honors: In 2013-14, 87% of the students (n=238) who would have historically been placed in a mixed-honors course demonstrated mastery in at least one semester. This is an increase over the 2012-13 cohort of 82% (n=156).

Honors: 92% of students (n=79) who would have historically been placed in an honors level course demonstrated mastery in at least one semester in 2013-14; compared to 93% in 2012-13 (n=135).

The large difference across the cohorts in the number of students who would have been historically placed in an honors level course is partially a function of the difference in the nationally normed percentile for the EXPLORE test. The national norms and equivalent scale score in the EXPLORE test were not consistent from year-to-year.

Figure 9: English – Percent of Students Attaining Honors Credit by Historic Placement Group



Grade 9 – 1 Humanities and Biology

History

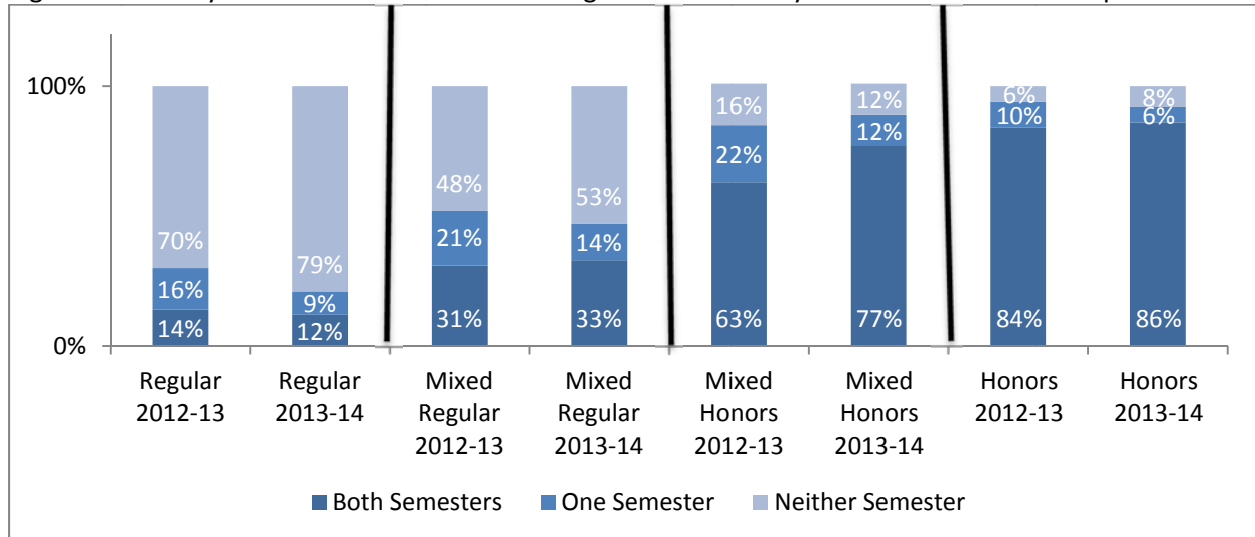
Regular: In 2013-14, 21% of the students (n=23) who would have historically been placed in a regular level course demonstrated mastery in at least one semester of their history course, which is slightly less than the 2012-13 cohort (30%, n=34).

Mixed-Level Regular: In 2013-14, 47% of the students (n=58) who would have historically been placed in a mixed-regular course demonstrated mastery in at least one semester. This is a decrease over the 2012-13 cohort of 52% (n=75).

Mixed-Level Honors: In 2013-14, 89% of the students (n=244) who would have historically been placed in a mixed-honors course demonstrated mastery in at least one semester. This is an increase over the 2012-13 cohort of 85% (n=162).

Honors: 92% of students (n=79) who would have historically been placed in an honors level course demonstrated mastery in at least one semester in 2013-14; compared to 94% in 2012-13 (n=136).

Figure 10: History – Percent of Students Attaining Honors Credit by Historic Placement Group



Grade 9 – 1 Humanities and Biology

Biology

Regular: In 2013-14, 35% of the students (n=59) who would have historically been placed in a regular level course demonstrated mastery in at least one semester of their biology course.

Mixed-Level Regular: In 2013-14, 69% of the students (n=22) who would have historically been placed in a mixed-regular course demonstrated mastery in at least one semester.

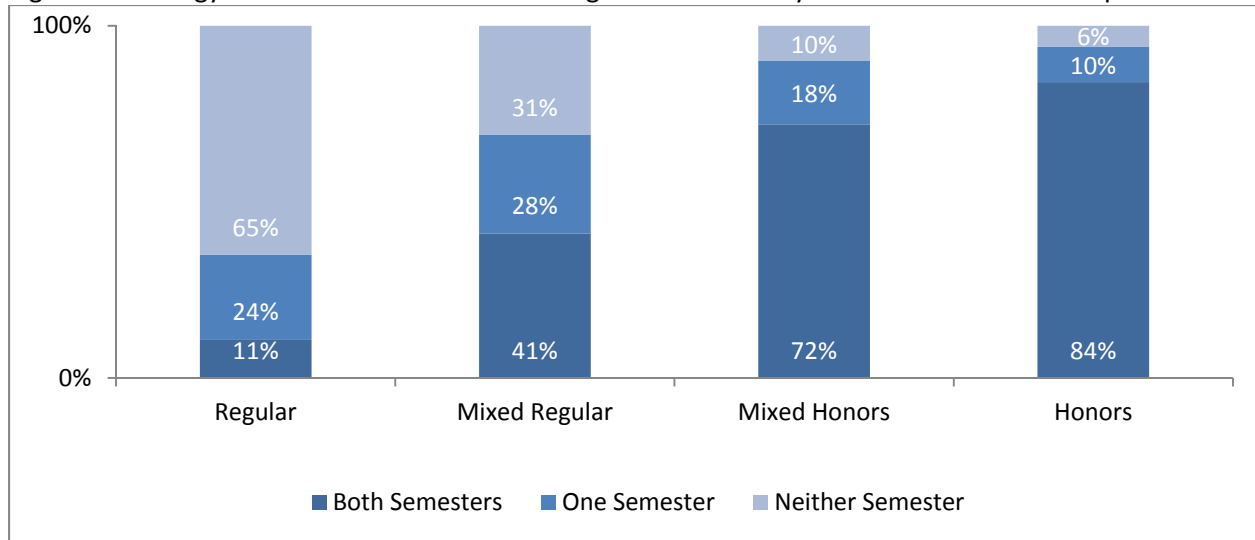
Mixed-Level Honors:

In 2013-14, 90% of the students (n=149) who would have historically been placed in a mixed-honors course demonstrated mastery in at least one semester.

Honors:

94% of students (n=144) who would have historically been placed in an honors level course demonstrated mastery in at least one semester in 2013-14.

Figure 11: Biology – Percent of Students Attaining Honors Credit by Historic Placement Group



Outcomes

A primary goal of the initiative is for more students to have access to and be successful in honors and AP courses as they progress through grades 11 and 12. Since the 1 humanities 2012-13 cohort has not yet completed grade 11, there are no outcomes to report. In lieu of that, 2014-15 semester 1 course level enrollment is summarized below.

The percent of grade 11 students enrolled in one or more honors course who would have historically been placed in a regular or mixed-level regular group has increased over the comparison cohort, with the greatest increase seen by the mixed-level regular group. The

mixed-level honors and honors level cohorts have remained the same or slightly higher, with 97-99% enrolling in at least one honors level course in grade 11.

Across all of the historical placement groups there was an increase in the percent of students enrolling in at least one AP course in grade 11. The mixed-level regular group saw the greatest increase from 30% of the comparison cohort enrolled in at least one AP course to 53% of the 2012-13 cohort.

Figure 12: Percent of Students Enrolled in One or More Honors or AP Course by Historic Placement Group (English, History, Math, Science and World Languages)

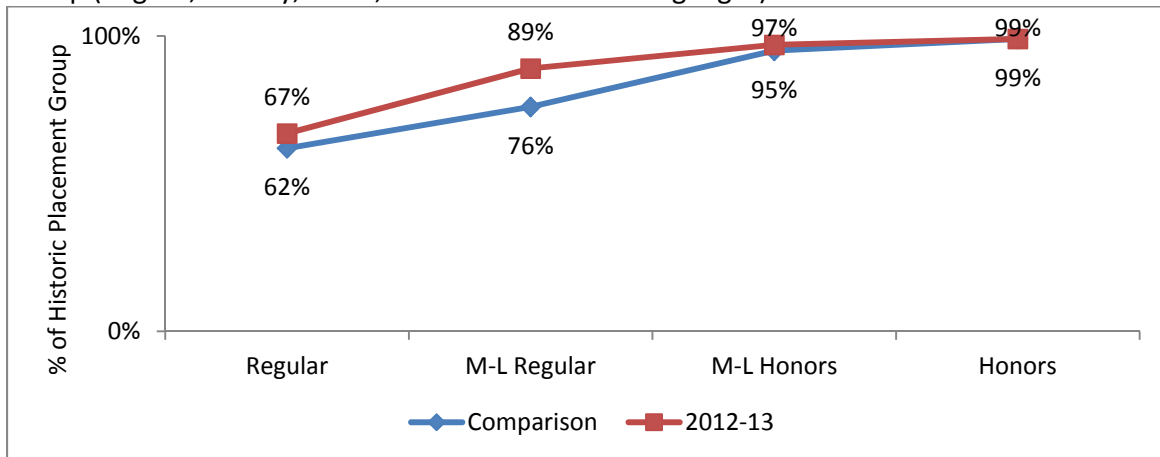
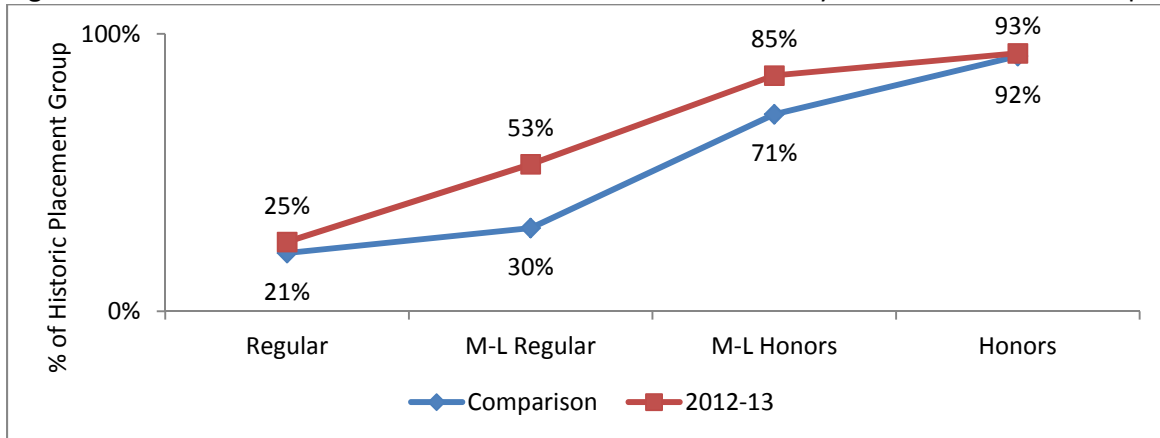


Figure 13: Percent of Students Enrolled in One or More AP Course by Historic Placement Group



Summary

Curriculum, Instruction & Assessment

The restructured 1 humanities and biology courses provide students with a guaranteed curriculum that focuses on skill development and is aligned with national standards.

Unlike the previous courses, the current courses are aligned to Common Core and ACT College Readiness standards, Advanced Placement Framework, and Next Generation Science Standards. The courses included more writing, literature analysis, research, and skills. They have common exams, earned honors assessments, and a common grading scale. All of these changes have made the 1 humanities and biology courses more rigorous than any of the previous courses, including honors level courses.

Effort and Locus of Control

A majority of grade 9 students put forth effort in their English, history, and biology courses.

Students with a high locus of control believe they have command over their learning. Less than one-half of grade 9 students have a high locus of control in their English and history courses and under one-quarter have a high locus of control in their biology course. White students are more likely than African American/Black or Hispanic/Latino students to put forth effort and to have a high locus of control in their English, history, and biology class.

It is too early in the evaluation to make any generalizations about what these findings mean. Future evaluation reports will include grade 11 locus of control results. At that time a more complete analysis and interpretation will be possible.

Grade 9 Access and Success

All students now have access to a challenging, guaranteed curriculum. This includes students who, in the past, would have been placed in a

regular or mixed-level regular course. Students who earned honors credit met the course's high expectations and demonstrated a command of the skills taught.

There was an increase in the percent of students who would have historically been placed in a mixed-level regular course and not previously granted access to a guaranteed curriculum demonstrate mastery in the restructured English and history courses. There was also an increase in the percent of students who would have historically been placed in a mixed-level honors or honors course demonstrate mastery in the restructured English and history courses.

Students enrolled in these more rigorous courses are demonstrating they have a command of the skills taught in the courses.

Outcomes

A primary goal of the initiative is for more students to have access to and be successful in honors and AP courses as they progress through grades 11 and 12. Across all of the historical placement groups the percent of students enrolling in at least one honors or AP course in grade 11 increased. There was also an increase in students enrolling in at least one AP course in grade 11. Students who would have been historically placed in a mixed-level regular course saw the greatest increase in the percent enrolling in one or more honors or AP course. This group of students also saw the greatest increase in the percent enrolling in at least one AP course.

Evaluation Report #3

It is too early in the evaluation to report on any long-term outcomes that will be used to measure the success of the initiative. This report is formative and its purpose is to help adapt and improve the initiative.

Summary

The next report should be available in June, 2016. Current plans are to include the following analyses:

1 Humanities

- 2012-13 cohort
 - Grade 11 Course Levels and Grades
 - Grade 11 AP Exam Scores
 - Grade 12 Course Enrollment
 - ACT Scores
 - ACT Survey – College Aspirations
 - Grade 11 Locus of Control
- 2013-14 cohort
 - Grade 11 Course Enrollment
- 2014-15 cohort
 - Grade 9-Course Levels and Grades
 - Grade 9 Effort and Locus of Control

Biology

- 2014-15 cohort
 - Grade 9 Course Level and Grades
 - Grade 9 Effort and Locus of Control

Appendix – 1 Humanities and Biology Cohorts – Number of Students

Cohort	Total	Regular	Mixed-regular	Mixed-honors	Honors	None	AA/ B	H/L	W	Other
1 Humanities										
Grade 9										
Comparison	614	74	116	251	136	37	156	85	318	55
2012-13	643	114	145	190	145	49	168	99	305	71
2013-14	648	111	123	274	86	54	172	104	319	53
Grade 11										
Comparison	556	62	106	231	131	26	134	75	297	50
2012-13	586	104	133	173	136	40	143	88	288	67
Biology										
Grade 9										
Comparison	583	146	53	129	214	41	128	85	308	62
2013-14	573	169	32	165	153	54	135	80	307	51