

Duval County Shows FCAT Math Improvement



Program Profile

Implementation: Duval County Public Schools
Evaluation Period: 2007–2008
Target Population Highlighted in Report: Grades 6–10
Curriculum: CompassLearning Odyssey® Math and Honors Algebra

Executive Summary

Duval County Public Schools' 2008 Florida Comprehensive Assessment Test (FCAT) results in mathematics demonstrate improvement from 2007 across all Odyssey Math user grades 6 to 10. From 2007 to 2008, the percentage of Odyssey Math users in grades 6 to 10 scoring at or above grade level¹ on the FCAT in mathematics increased, ranging from 6% to 27%.

Findings indicate that both time in Odyssey and average activity score in Odyssey have an impact. The percentage increase was greater for subgroups with more hours of Odyssey Math or Algebra use (18 or more hours) and greatest for those who also obtained an average Odyssey Math or Algebra learning activity score of 75% or greater. Duval County Public Schools' mean FCAT Math Developmental Scale Score (DSS) results for all Odyssey user grades 6 to 10 increased from 2007 to 2008. The percentage of Odyssey users scoring at or above grade level increased in 2008 for those Odyssey users who scored below grade level in 2007. In 2007, 0% of these students in Odyssey user grades 6 to 10 scored at or above grade level. The increases in 2008 were 13% for the 6th and 10th grades, 15% for the 9th grade, 29% for the 7th grade, and up to 30% for the 8th grade. In all demographic subgroups, Odyssey user grades 6 to 10 achieved mean FCAT Math DSS gains from 2007 to 2008.

District Demographics

Duval County Public Schools is the nation's 20th largest public school district, with a total middle and high school enrollment of more than 62,000 students, a middle school enrollment of 28,246, and a high school enrollment of 34,180. The middle school student-to-teacher ratio is 18.34:1, and the high school student-to-teacher ratio is 21.69:1. The district-wide staff includes 14,425 employees, including 8,744 teachers, 683 administrative staff, and 3,188 student support staff.

Ethnic Breakdown of Duval County Public Schools

Caucasian	43.6%	Asian	3.6%
African American	42.7%	Multiracial	3.8%
Hispanic	6.2%		

Program Summary/Goals

The curriculum focus in the district is “to provide instruction based on a rigorous curriculum with high expectations for student work and mastery of standards.” The implementation of CompassLearning Odyssey aligns with this focus, particularly as one of the district's main goals was preparation for high-stakes testing such as the FCAT. The district purchased Odyssey as part of a comprehensive approach to address middle and high school credit recovery, grade recovery, remediation, over-age intervention instruction, and advanced-placement curriculum needs. CompassLearning Odyssey is installed in all of Duval County Public Schools' 28 middle schools and in 17 high schools across the district as part of an overall emphasis on improving student achievement results.

Implementation

Overview

The district and CompassLearning worked together to create an implementation approach designed to meet the unique needs of all the schools involved. The project began with an initial implementation meeting where Duval County Public Schools' Chief Technology Officer and technical and professional development staff met with the CompassLearning professional development and technical teams. During this meeting, the implementation scope of Odyssey was introduced, with a focus on technical and professional development rollout, as well as discussion of how to generate awareness and excitement about the program. The Instructional Technology Coordinator was also in attendance, a role designated to facilitate the implementation and act as a key resource — both internally to the district and to CompassLearning professional development and technical teams — to help ensure that district needs were met.

A large district, Duval County Public Schools recognized the need to tailor implementation planning to each school's student population. As a part of the process, leadership training was offered for 2–3 weeks and enabled rotating attendance for the district leadership down to school principals, assistant principals, and instructional coaches designated as site leaders for their schools. The purpose of the leadership training was to introduce and provide an overview of the program and to discuss how to implement it. Discussions included Odyssey content, students' personalized learning paths, the Odyssey reporting system and its value in monitoring progress and informing instruction, and Odyssey alignment with district curriculum and course matrices. The CompassLearning professional development team shared implementation ideas and discussed the nine best practices of high-performing schools. Site-specific implementation plan meetings were also scheduled at this time.

¹ FCAT Levels 3–5

The district was focused on customizing the Odyssey implementation within each site, enabling principals to define the scope and focus that would best fit their schools. The flexibility permitted school principals to define an implementation plan aligned with their individual student population goals and needs, as well as set up a professional development training schedule that fit their schedules. CompassLearning professional development met with each school to collaborate to define the implementation plan at each site. Principals, assistant principals, instructional coaches, team leaders, and teachers attended.

After the implementation plan was solidified at each school, the program was up and running. FCAT performance-level data was used to identify students who could benefit from using Odyssey, and intervention was designed to help these students improve. The primary focus was students with an FCAT Level of 1 or 2. Teachers used Odyssey for whole-class instruction, and students worked individually on Odyssey in a computer lab setting. Students worked on personalized learning paths assigned through objective-based tests aligned to Florida Explorer or Northwest Evaluation Association (NWEA) Measure of Academic Progress (MAP) tests. Odyssey was available through the classroom or lab and was offered during school, with additional access provided before school, on Saturdays, and in an after-school program. Students could also access Odyssey from home via the internet.

Progress Monitoring

Involvement in progress monitoring engaged Duval County Public Schools’ staff across the district, from the Chief Technology Officer to the Cluster Chiefs, principals, and teachers. The Chief Technology Officer utilized monthly reporting to discuss usage and progress with the Cluster Chiefs, who then communicated with the principals about student work in Odyssey. Principals could then consult with teachers to help facilitate the implementation. These efforts were designed to enhance the implementation by driving accountability for usage and informing Duval County Public Schools’ educators about implementation progress.

Each student and teacher could monitor time-on-task and activity and test scores, as well as mastery and nonmastery of Sunshine State Standards. To evaluate student progress, teachers ran weekly reports, such as the Student Progress report and the Objective-Based Test Results report. These reports enabled teachers to see how students were doing within their personalized learning paths and on assessments. Teachers used this data to target instruction and provide feedback about advancement toward individual student goals. Parent communication tools were also available through individualized progress reports that provided lesson and activity results for each child. Those reports could be viewed online or printed.

About midway through the year, CompassLearning professional development met with school personnel for a midyear review. This enabled teachers and administrators to share their progress and make any changes to their training and/or implementation. These changes would be revisited during the end-of-year review. In review sessions, many schools opted to build on their implementation by expanding their focus, changing their plans based on results from the previous year, and registering teachers for additional summer training.

Training and Professional Development

Duval County Public Schools had two full-time CompassLearning Professional Development consultants that provided training and coaching, mentoring, and modeling customized for each school. District-wide training was also offered at a central location, giving teachers and staff from different schools an opportunity to train together. Additional support and access to Professional Development resources were provided by request, including telephone and e-mail support.

Training schedules were flexible, with training offered during teachers’ planning periods, early-release days, after school, and before school, and were designed to meet individual school needs. In addition to the overall school and district training, Professional Development included Summer Institutes with specific training on personalized learning and focused sessions that trained educators on product implementation and student reporting capabilities.

Throughout the implementation, CompassLearning professional development personnel visited schools to model CompassLearning Odyssey tailored to specific schools’ needs. Training identified how to use Odyssey as an educational resource that was fully integrated into teachers’ daily lesson plans. Coaching was targeted to help teachers find the materials necessary to support individual student needs rather than having to search for resources.

To evaluate student results for Odyssey users, an analyst reviewed FCAT Math and Odyssey Math and Algebra data for the 2007 to 2008 time period. Analysis was conducted at the district level, by grade, and across Odyssey user groups and for those with a 2007 FCAT Math Level of 1 or 2.

Results

The increase in percentage of students scoring at or above grade level on the 2008 FCAT in math is greatest for the Odyssey user subgroup with more hours of Odyssey Math or Algebra use and an average Odyssey Math or Algebra learning activity score of 75% or greater as indicated by comparison of Odyssey user subgroups for grades 6 to 10.² See **Figure A**.

The percentage scoring at or above grade level for Odyssey users with 18 or more hours of Odyssey Math or Algebra use increased by 27%, from 24% to 51%, for those with an average Odyssey Math or Algebra learning activity score of 75% or greater (N=225), and by 21%, from 14% to 35%, for those with an activity score lower than 75% (N=462).

The percentage of Odyssey users with 1 to less than 18 hours of Odyssey Math or Algebra use who scored at or above grade level increased by 8%, from 48% to 56%, for those with an average Odyssey Math or Algebra learning activity score of 75% or greater (N=2541), and 6%, from 34% to 40%, for those with less than a 75% score (N=3560).

² Odyssey users may fall in one or more of the subgroup categories depending on their hours of use and average learning activity score in Odyssey Math or Odyssey Honors Algebra

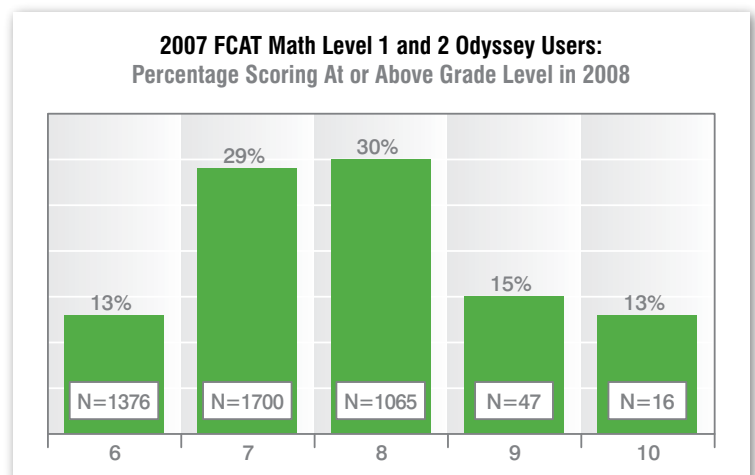


Figure C. 2007 FCAT Math Level 1 and 2 Odyssey Users: Percentage Scoring At or Above Grade Level in 2008

All Odyssey user grades 6 to 10 achieved mean FCAT Math DSS gains from 2007 to 2008, ranging from 27 points for the 6th grade up to 172 points for the 7th grade.³ See **Figure B**.

The percentage of Odyssey users scoring at or above grade level increased in 2008 for those Odyssey users who scored below grade level in 2007. In 2007, 0% of these students in Odyssey user grades 6 to 10 scored at or above grade level. The increases in 2008 were 13% for the 6th and 10th grades, 15% for the 9th grade, 29% for the 7th grade, and up to 30% for the 8th grade. See **Figure C**.

In all subgroups across grades 6 to 10, Odyssey user groups achieved mean FCAT Math DSS gains from 2007 to 2008.⁴ Seventh-grade Odyssey user subgroups achieved the highest mean FCAT Math DSS gains across subgroup categories, with a single exception, the Multiracial subgroup. Other notable subgroup gains include the English Language Learners subgroup, which showed mean FCAT Math DSS gains across grades of 107, 266, and 229 points for grades 6 to 8, respectively. See **Figure D**.

³ Odyssey users: Mean FCAT Math DSS gains are statistically significant ($p < 0.01$) for grades 6-9; grade 10 not tested as sample size is less than 30

⁴ Odyssey users: Mean DSS gains are statistically significant for:

Grade 6: African American, Hispanic, ELL & Free/Reduced lunch subgroups ($p < 0.01$); Caucasian ($p < 0.02$; Multiracial ($p < 0.05$)

Grade 7: all reported subgroups ($p < 0.01$)

Grade 8: all reported subgroups ($p < 0.01$)

Grade 9: African American and free/reduced lunch subgroups ($p < 0.01$) Caucasian subgroup < 30 – not tested

Grade 10: African American subgroup < 30 – not tested

* Results not reported for subgroups of less than 10

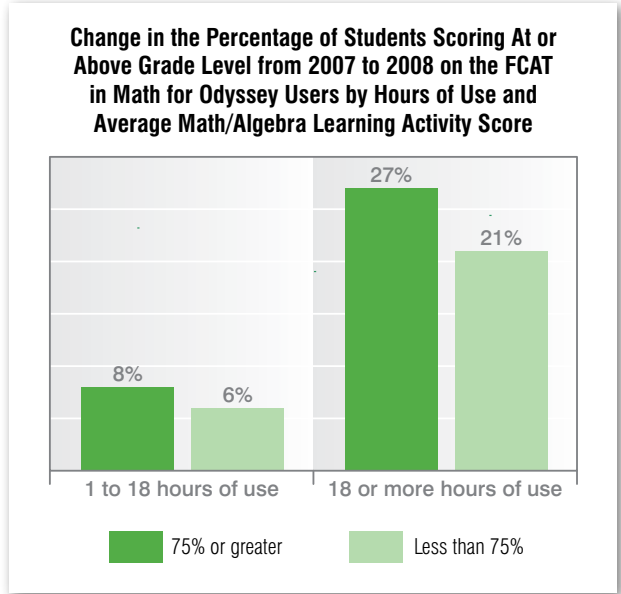


Figure A. 2007 to 2008: Change in Percentage of Odyssey User Grades 6–10 Scoring At or Above Grade Level on the FCAT in Math by Odyssey User Subgroup

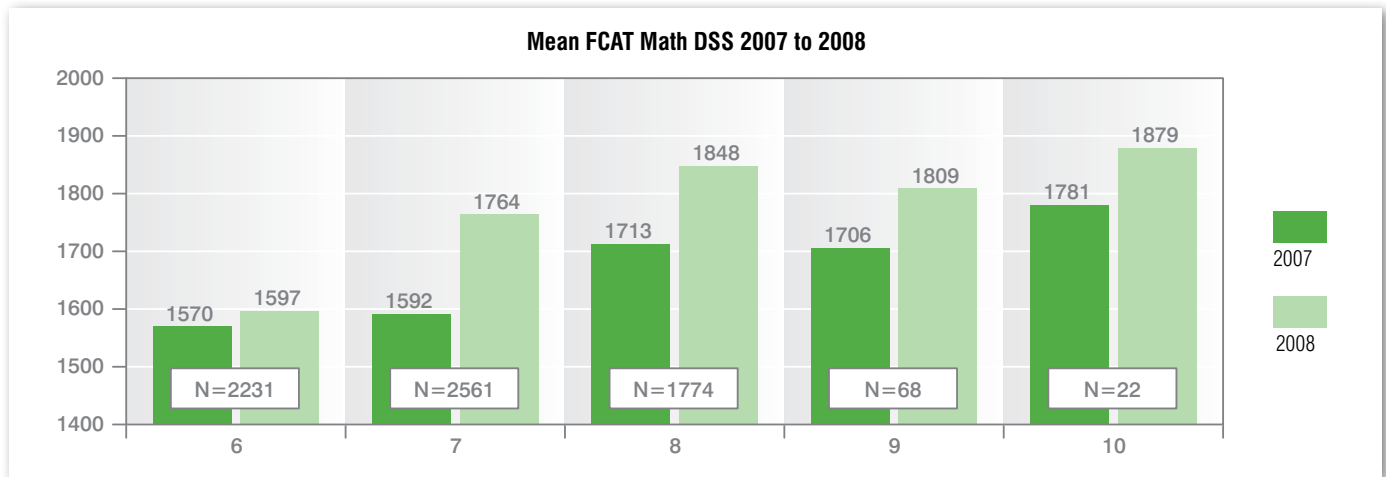


Figure B. 2007 and 2008 Mean Odyssey User FCAT Math DSS by Grade

Grade	African American	Asian American	Caucasian	Hispanic	Multiracial	ELL	Free/Reduced Lunch
6	+29	+29	+14	+58	+35	+107	+25
7	+188	+155	+146	+205	+150	+266	+186
8	+141	+110	+122	+152	+155	+229	+140
9	+159	—	+28	—	—	—	+121
10	+79	—	—	—	—	—	—

Figure D. 2007 to 2008 Mean FCAT Math DSS Change for Odyssey Users by Grade & Demographic*

Appendix

Figure E. Sample Size for Odyssey Users by Grade & Demographic

Grade	African American	Asian American	Caucasian	Hispanic	Multiracial	ELL	Free/Reduced Lunch
6	1242	45	735	130	76	41	1243
7	1354	77	887	155	84	63	1372
8	932	44	620	118	55	36	882
9	40	1	21	4	2	4	39
10	14	—	7	1	—	—	5

In their words...

“CompassLearning Odyssey has provided our first 24/7 digital tool for our secondary students, teachers, and parents to review, reteach, and remediate academic concepts, as needed. It is a very versatile tool for meeting diverse needs, helping us differentiate instruction.”

—Dr. Theresa R. Stahlman
Chief Technology Officer
Duval County Public Schools



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