

**ClassScape Assessment System:
Preliminary Analysis of Effectiveness**

**Center for Urban Affairs and Community Services:
North Carolina State University
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Since the implementation of the ABCs of Public Education in North Carolina in the 1990s and the No Child Left Behind Legislation of 2001, state and federal officials across the country have increased their demands for accountability and excellence in student performance in public schools. Districts and schools are under increasing pressure to identify resources that will assist them in monitoring student's ongoing academic progress and to provide opportunities for students to demonstrate what they know and are able to do as a component of their day-to-day learning experience. In North Carolina, the ClassScape Assessment System (ClassScape) was developed to fulfill this need. It was designed to be an assessment tool to help North Carolina teachers evaluate students' academic progress on an ongoing basis, provide real-time feedback of the students' performance, and to allow teachers to self-assess the effectiveness of their instructional delivery in real time.

ClassScape is an online classroom-based assessment system that provides the mechanism for users to design customized assessments to meet their every need in the classroom. The system consists of a computerized assessment-building tool, a tool that allows students to take assessments of learning online, and delivers students' results almost instantly. By using the ClassScape system, teachers are able to evaluate the degree to which they have focused their instruction, aligned their instruction to designated standards, assessed the alignment of their own instructional strategies, and are able to monitor student progress on an ongoing basis. Also, teachers who use ClassScape are able to identify the strengths and weaknesses of their class as a whole and that of individual students on specific indicators critical to the mastery of the Standard Course of study at that level.

This report provides preliminary information from an ongoing comparative analysis of data from North Carolina schools that used the ClassScape System during the 2007-08 school year compared to schools that did not use the system. This preliminary analysis was conducted as an initial evaluation of the effectiveness of the ClassScape system for the current phase of development and implementation. The basic underlying assumption being tested is that ClassScape allows teachers to monitor student performance throughout the year thus enabling them to improve the quality and focus of instruction and to better prepare students to demonstrate their performance on high-stakes, state-mandated tests such as the North Carolina End-of-Grade Tests (EOGs) and the North Carolina End-of-Course tests (EOCs).

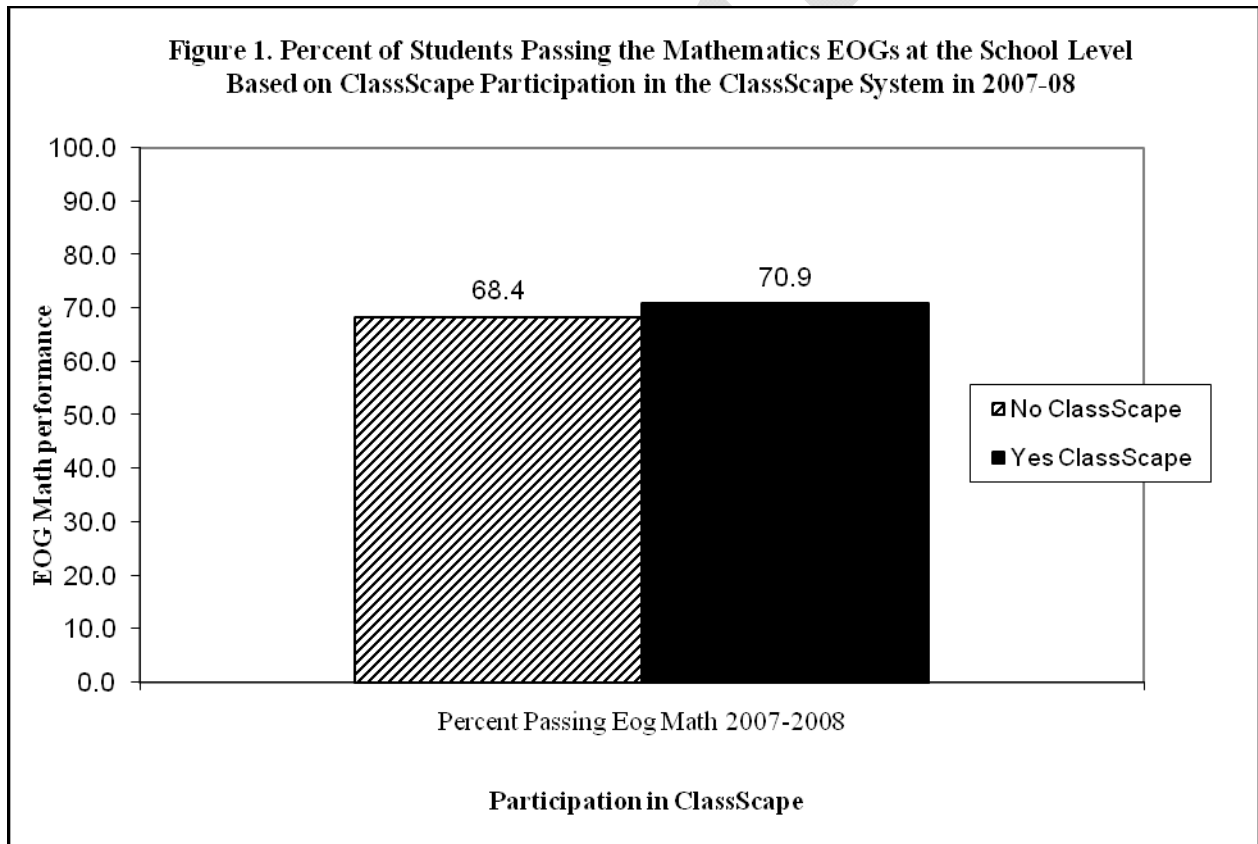
Preliminary Analysis of ClassScape's effectiveness for the 2007-08 School Year

The following preliminary analysis was designed to address the effectiveness of the ClassScape system. One way to preliminarily evaluate the effectiveness of ClassScape system was to conduct comparisons on the percent of students passing the different EOG subject tests (Mathematics, Reading, and Science) and the five core EOC subject tests (Algebra I, Biology, English I, Civics and Economics, and US History) between schools who participated in ClassScape during the 2007-08 school year and schools who did not. The percent of student passing (passing rates) for a subject was calculated by summing the number of students who were at level III or IV on EOG/EOC test across all grades and then dividing by the number of students who were at levels I, II, III, or IV across all grades. Then this was averaged across schools that either participated in ClassScape or those that did not participate. This analysis was

conducted for each subject. To be included in the different subject analyses as a participant in ClassScape, the school had to administer the ClassScape assessments in the subject in question and must have had students who participated in the summative (end-of-grade or end-of-course) EOG/EOC for that subject. Otherwise, schools were excluded from the analysis of that subject. At this time subgroup data is not available; therefore, no subgroup analyses could be conducted.

It should be noted that for all the subjects, except for mathematics, statistical significance in any of the analyses is not expected. These subjects were not fully operational at the beginning of the 2007-08 school year; therefore, conclusions drawn from the analysis of assessment and performance data may not be robust and will not be reported here. Furthermore, one limitation regarding this preliminary analysis is that it does not look at change at the student level but at the aggregate school level. Therefore it is possible that this analysis attenuates greater possible effects of ClassScape since students who are not given assessments are aggregated with students who are.

For the mathematics analysis, schools were included as a ClassScape participant only if they administered more than 10 assessments and met the aforementioned criterion. This cutoff was used as an indicator of actual usage of the system. The administration of ten or fewer assessments at a school served as an indication that the school was merely testing the system since mathematics is typically used during training sessions.

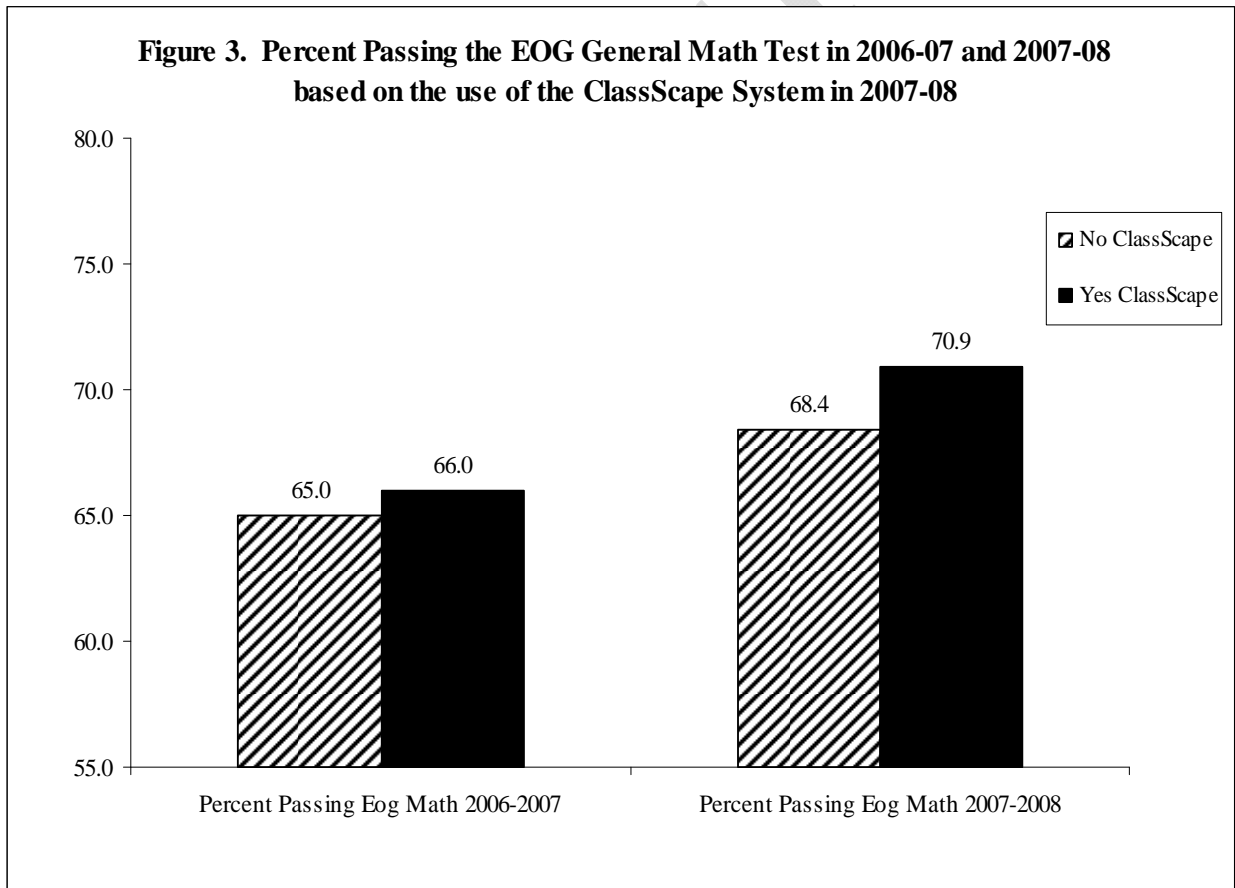


A statistical test (t-test) was conducted to compare the differences in the average percent of students who passed the EOG mathematics test in schools that participated in ClassScape compared with schools that did not participate. There was a significant difference in the

percentage of students passing the EOG math ($t(420) = -2.71, p < 0.01$) in favor of the schools that participated in ClassScape and administered the math assessments for the 2007-08 school year ($M = 70.8, SD = 13.6, N = 255$) as compared to the schools that did not participate ($M = 68.2, SD = 18.6, N = 1,609$), see Figure 1. This indicates that on average more students in schools that give assessment using ClassScape pass the end-of-grade summative mathematic tests the students in schools that do not use ClassScape.

Further Analysis of Participation in Mathematics

A set of more detailed analyses was conducted to delve deeper into performance on the EOG mathematics test and participation in the ClassScape system. Mathematics was the only subject for which ClassScape was fully operational in the 2007-08 year, therefore a more in depth analysis could be performed. An analysis of covariance was utilized to evaluate the difference between percent passing on the EOG Mathematics subject test in 2007-08 for schools who gave assessments in mathematics using the ClassScape system and those who did not. The passing rates for 2006-07 and ClassScape participation were the covariates in the analysis. The passing rate for 2006-07 was used as a covariate to address the possibility that prior performance on an EOG subject test would account for the difference in passing rate on the current year's EOG between schools that did or did not use ClassScape and not the actual use of ClassScape.



Though it was hypothesized that the 2006-07 passing rates for a school would account for a large proportion of variance of the 2007-08 passing rate if ClassScape participation was found to

significant account for the remaining variance, this would serve as an indication that ClassScape participation had an effect above and beyond that of last year's passing rates for a school. Schools were said to have participated in ClassScape if they administered more than 10 ClassScape assessments during the school year; and, if the schools also had students who participated in the summative EOG mathematics test in 2006-07 and 2007-08. The analysis of covariance found that last year's passing rates on the EOG mathematics test as well as participation in ClassScape significantly accounts for the passing rate in 2007-08 ($F=11.53$, $p<0.01$). Therefore, participation in ClassScape increased a school's passing rate on the summative EOGs greater than what was expected based on 2006-07 passing rates (see Figure 3).

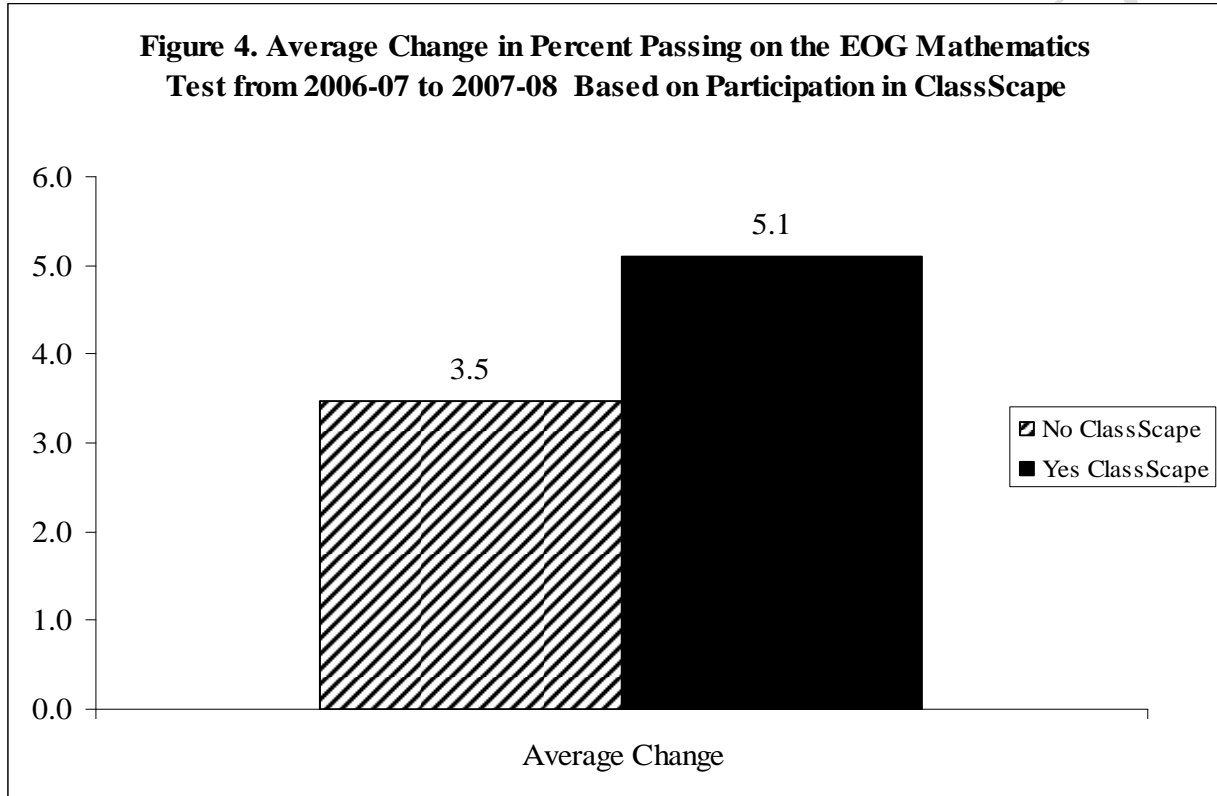


Figure 4 shows the average amount of change in percent passing from 2006-07 to 2007-08 on the EOG mathematics subject test between schools that did and did not administer ClassScape assessments in mathematics. The differences in the amount of change from 2006-07 to 2007-07 was significant, as indicated in the aforementioned ANCOVA but was also found to be significant based on a t-test of the average amount of change ($t(1,818) = -3.12$, $p<0.01$). The amount of change in passing rates on the EOG mathematics test was calculated by subtracting the school's passing rates in 2006-07 from the passing rate in 2007-08. Schools were excluded from the analysis if they did not give more than 10 assessments using ClassScape and if they did not have students participating in the EOG mathematics tests in 2006-07 and 2007-08.

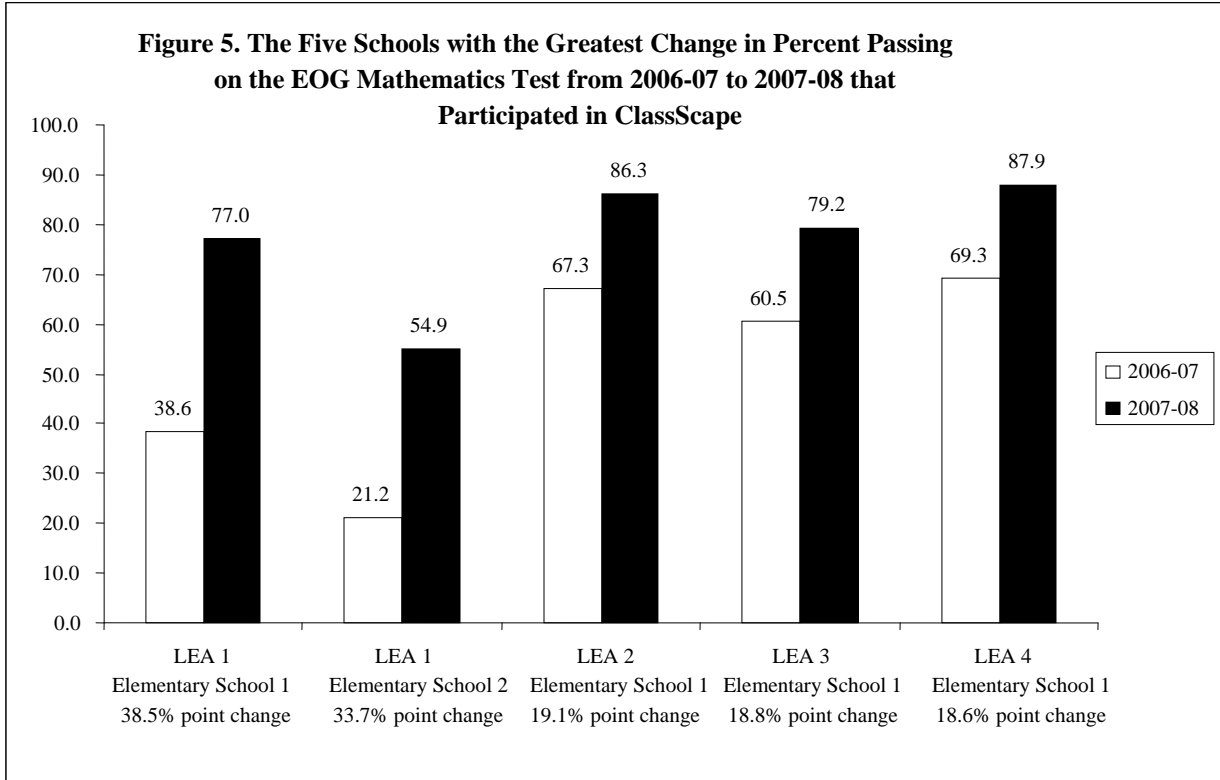


Figure 5 shows the five schools that gave ClassScape assessments in mathematics, which showed the greatest amount of change in the passing rates from 2006-07 to 2007-08 on the EOG mathematics subject test. The names of the local education areas and schools have been changed.

Conclusion

Based on the analyses presented in this report brief, the data show that the ClassScape System has been effective in helping teachers within schools that administered the mathematics subject assessments to evaluate their students’ performance on an ongoing basis throughout the year thus increasing performance on the summative EOG mathematics assessments more so than schools whose teachers did not use the system. Because of limited data, comparisons cannot be made at this time for the other subjects available through ClassScape and regarding change in performance at the student level within participating schools comparing students who are given assessments using ClassScape to students who are not.