

Differences in Campus Ratings by School Level in Texas Public Schools: A Multiyear, Statewide Analysis

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ABSTRACT

In this research investigation, the degree to which differences were present in campus accountability ratings (i.e., Met Standard, Met Alternative Standard, and Improvement Required) by school level (i.e., elementary, middle, and high school) was addressed. Using archival data from the Texas Academic Performance Reports for the 2015-2016 and 2016-2017 school years, inferential statistical analyses yielded the presence of statistically significant differences at all three school levels. Middle schools had statistically significantly higher percentages of Improvement Required schools than both elementary schools and high schools. Elementary schools had statistically significantly higher percentages of Met Standard schools than both middle schools and high schools. These results were commensurate in both school years. Implications of these findings and suggestions for future research are provided.

Keywords: campus ratings, accountability, school levels, elementary, middle school, high school, Texas

INTRODUCTION

Under the present accountability system in Texas, school districts and school campuses are assigned one of three academic ratings: Met Standard, Met Alternative Standard, or Improvement Required (Texas Education Agency, 2017). These ratings are based on student achievement, student progress measures, postsecondary readiness, and efforts to close the achievement gap on state assessments. To improve the ability of each school campus to reach the highest accountability rating, school district leaders must allocate appropriate resources and supports. In providing such support, the degree to which school campus needs might differ by campus level (i.e., elementary, middle, or high school) is not known. As such, research investigations into student achievement by campus level are warranted.

In a longitudinal investigation of science achievement in Grades 4 through 8, Bursal (2013) documented that course scores in Grades 7 and 8 were statistically significantly lower than course scores in lower level grades. Bursal (2013) established as the students' grade level increased, science academic achievement decreased. Altermatt (2017) contended that academic declines in schools could be attributed to perceived support from peers. He provided evidence that as students progressed from Grade 4 to Grade 8, perceived peer support declined. As students advanced from elementary, to

middle school, and to high school, they experienced declines in a variety of factors that may have an effect on achievement. For example, middle school students experienced changes in teacher-student interactions such as greater teacher control and less friendly and caring interactions with teachers (Eccles et al., 1993). Other factors were decreased academic engagement, competence beliefs, and performance (Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006).

In addition, researchers such as Hwanggyu and Sireci (2017) and Brown (2011) have concluded students not only face the above achievement challenges, students also experience a lack of progress in advanced achievement as they progress from elementary to high school. Hwanggyu and Sireci (2017) conducted a study in which scores on the international assessment Trends in International Mathematics and Science Study and the United States National Assessment of Educational Progress were linked to evaluate trends in achievement. While evaluating the trends, it was determined that overall achievement levels had increased since 2003; however, the United States increased at a lower rate than other countries in the percentage of students that scored at the At or Above Advanced levels on the assessments. Brown (2011), in a review of multiple studies, concluded that students in the United States had higher dropout rates, mediocre achievement, and

inadequate college and career readiness compared to other countries. In her review of the studies, test scores across the grade levels had increased, but at a lesser rate at the high school level. In addition, declines in advanced achievement were more prevalent at high school than at Grades 4 and 8.

Declines in academic performance and advanced achievement can be attributed to factors such as peer support and low competence belief. Altermatt (2017) discussed perceived peer support as a reason that may be contributing to a decline in student achievement from elementary to high school. Jacobs, Lanza, Osgood, Eccles, and Wigfield (2002) contended that a low competence belief could also contribute to lower levels of success. Jacobs et al. (2002), in a 10-year analysis, followed three cohorts of students through elementary, middle, and high school. They documented that competence beliefs in mathematics, language arts, and sports decreased as students approached high school. They also examined how students perceived activities in each subject by the task value (i.e., how interesting and how useful they believed it was). Students demonstrated declining values from elementary to high school. Jacobs et al. (2002) determined that changes in competence beliefs accounted for much of the age-related decline in task values. Finally, Muenks, Wigfield, and Eccles (2018) documented that young children are optimistic about their competencies in different areas. As students grow older, this optimism turns to a realism and sometimes pessimism for many children. Muenks et al. (2018) contended that these expectancy beliefs could serve as a predictor of future performance. The higher the self-competency, the higher the performance.

Engagement is another factor that has an influence on achievement. Student engagement can be defined as, “the quality of a student’s connection or involvement with the endeavor of schooling and hence with the people, activities, goals, values, and place that compose it” (Skinner, Kindermann, & Furrer, 2009, p. 494). Yang, Bear, and May (2018) discussed that students at different grade levels need different types of supports during the developmental transitions to keep them engaged. In their study, Yang et al. (2018) established that student engagement was stronger at the elementary and middle school years than during high school. In additional research on engagement, Kahraman (2014) determined that students reported higher belonging, more interest in the subject, and a

higher willingness to participate during Grade 4 than Grade 8. Evidence was obtained that elementary school students’ emotional engagement levels were higher than the emotional engagement levels of middle school students.

PURPOSE OF THE STUDY

Prior research exists concerning the academic achievements of students in elementary, middle, and high school and on the factors that influence achievement. Particularly, researchers (e.g., Bursal, 2013; Kahraman, 2014) have documented that academic declines occurred as students reached high school. A lack of literature exists in which researchers examined how these academic differences are related to state accountability. The first purpose of this study was to address the gap in the literature by examining the degree to which differences were present in the percentage of schools in each accountability category (i.e., Improvement Required, Met Standard, and Alternative Met Standard) by school level (i.e., elementary, middle, and secondary) in the 2015-2016 school year. The second purpose was to examine the extent to which differences existed in the percentage of schools in each accountability category by school level in the 2016-2017 school year. A third purpose was to determine the extent to which consistencies were present across these two school years.

RESEARCH QUESTIONS

The following research questions were addressed in this study:

- a. What is the difference in the percentage of schools that were in the Improvement Required, Met Standard, and Alternative Met Standard category by school level (i.e., elementary, middle, secondary) in the 2015-2016 school year?; and
- b. What is the difference in the percentage of schools that were in the Improvement Required, Met Standard, and Alternative Met Standard category by school level (i.e., elementary, middle, secondary) in the 2016-2017 school year?

METHOD

Research Design

For this study, a non-experimental, causal-comparative research design was conducted (Johnson & Christensen, 2017). In non-experimental research, no manipulation of an independent variable occurs, and the data used in this study were archival data. In this study, the primary independent variable, school level,

and the dependent variable, campus rating, were categorical variables. Moreover, they reflected events that had occurred in the past. As a result, neither the independent variable nor the dependent variable could be manipulated in this study.

Instrumentation and Procedures

Using information from the Texas Education Agency website, data were downloaded from archival datasets available on the Texas Academic Performance Report as an Excel spreadsheet. The data were then converted to Statistical Package for Social Sciences data. According to the Texas Education Agency (2017), campuses in Texas are assigned an accountability rating. For the purposes of this study, data were limited to three labels:

- a. Met Standard (indicates acceptable performance based on meeting targets on all indices for which data is available),
- b. Improvement Required (indicates unacceptable performance based on not meeting required targets), and
- c. Met Alternative Standard (indicates acceptable performance for charter districts and alternative education campuses).

Campuses on which data were analyzed were configured with school levels of elementary (i.e., Grades PK-5), middle (i.e., Grades 6-8), and high school (i.e., Grades 9-12). Campuses who did not meet one of these configurations

were eliminated from the data set.

RESULTS

To ascertain whether differences were present in campus ratings (i.e., Improvement Required, Met Standard, and Alternative Met Standard) by school level (i.e., elementary, middle, secondary), Pearson chi-square analyses were conducted. This statistical procedure was viewed as the optimal statistical procedure to use because frequency data were present for campus ratings and for school levels. As such, chi-squares are the statistical procedure of choice when both variables are categorical (Slate & Rojas-LeBouef, 2011). In addition, with the large sample size, the available sample size per cell was more than five. Therefore, the assumptions for utilizing a chi-square were met.

For the first research question in which the focus was placed on campus ratings by school level in the 2015-2016 school year, the result was statistically significant, $\chi^2(4) = 380.61, p < .001$. The effect size for this finding, Cramer’s V, was small, .19 (Cohen, 1988). As revealed in Table 1, elementary schools had a campus rating of Met Standard about 4% more often than middle schools and about 8% more often than secondary schools. Furthermore, middle schools had the highest percentage of Improvement Required schools at 7.60%, and secondary schools had the highest percentage of Met Alternative Standard schools at 8.30%.

Table1. *Frequencies and Percentages of Campus Ratings by School Level in the 2015-2016 School Year*

	Met Standard	Met Alternative Standard	Improvement Required
School Level	<i>n</i> and %age of Total	<i>n</i> and %age of Total	<i>n</i> and %age of Total
Elementary	(<i>n</i> = 3,033) 96.00%	(<i>n</i> = 0) 0.00%	(<i>n</i> = 128) 4.00%
Middle	(<i>n</i> = 1,081) 92.20%	(<i>n</i> = 3) 0.30%	(<i>n</i> = 89) 7.60%
Secondary	(<i>n</i> = 1,044) 88.60%	(<i>n</i> = 98) 8.30%	(<i>n</i> = 36) 3.10%

For the second research question in which the focus was placed on campus ratings by school level in the 2016-2017 school year, the result was statistically significant, $\chi^2(4) = 353.02, p < .001$. Similar to the previous school year, the effect size for this finding, Cramer’s V, was small, .18 (Cohen,1988). As delineated in Table2, elementary

schools had a campus rating of Met Standard 1.50% more often than middle schools and about 7% more often than high schools. Moreover, middle schools had the highest percentage of Improvement Required schools at 4.30%, and secondary schools had the highest percentage of Met Alternative Standard schools at 8.00%.

Table2. *Frequencies and Percentages of Campus Ratings by School Level in the 2016-2017 School Year*

	Met Standard	Met Alternative Standard	Improvement Required
School Level	<i>n</i> and %age of Total	<i>n</i> and %age of Total	<i>n</i> and %age of Total
Elementary	(<i>n</i> = 3,067) 96.00%	(<i>n</i> = 0) 0.00%	(<i>n</i> = 128) 4.00%
Middle	(<i>n</i> = 1,123) 95.50%	(<i>n</i> = 2) 0.20%	(<i>n</i> = 51) 4.30%
Secondary	(<i>n</i> = 1,062) 89.80%	(<i>n</i> = 95) 8.00%	(<i>n</i> = 26) 2.20%

DISCUSSION

According to the literature, student engagement and student self-perception of confidence declined as students became older (Jacobs et al.,

2002; Kahraman, 2014). Based on this information, it was expected that a higher number of high schools would have obtained an Improvement Required campus rating. Brown

(2011) also established that high school students were lagging in achievement. However, high schools had a lower percentage of Improvement Required ratings than middle schools. As expected, elementary schools had a smaller percentage of Improvement Required schools than middle school or high school. These results were consistent for both school years. Scholars have suggested that many factors such as self-perception and other social-emotional competencies affect middle schoolers (Yang et al., 2018) and their academic achievement.

Readers should note that the effect sizes in this study were small. Further research should be conducted on the differences in student achievement by campus level. Researchers are encouraged to extend the study to include additional school years to identify patterns over time. If discrepancies between campus levels continue to be identified, then campus and district leaders will want to consider why the discrepancies exist. Additional academic and social-emotional supports may need to be implemented at the middle school level to prevent further decline.

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Citation: Amy C. Busby and John R. Slate. "Differences in Campus Ratings by School Level in Texas Public Schools: A Multiyear, Statewide Analysis". *Journal of Educational System, 2*(4), 2018, pp. 21-24.

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