Impact Of School Reform On Dropout Rates And Test Scores In An Urban High School

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ABSTRACT

The primary focus of the study was to explore the effect of School Within a School reform on two components in the Adequate Yearly Progress Report by which Texas schools are measured - dropout rates and scores on the Texas Assessment of Knowledge and Skills test. The demographics of the particular study sample included 11th grade students considered economically disadvantaged, English language learners, and regular, as well as special education students, attending an urban Texas high school. Data were acquired from the Texas Education Agency and hypotheses were tested with a non-parametric test of statistical significance, chi-square. Results indicated that the reform made a positive impact on dropout rates and on math and English Language Arts scores.

Keywords: Accountability; Dropout Rates; Testing; Assessment; Reform; Education

INTRODUCTION

To an unprecedented degree, this is the era of big business in educational entrepreneurship. "*The skeletal remains of broken reform programs are scattered behind us.*" (Toch et al., 2007, p. 3) Each one once held the hope of reforming public schools and each one has shown little ability to alter routines or results (Toch et al., 2007). "*The tides of reform have rolled out and in and out again, with little attention paid to actually implementing new proposals or ensuring that schools and school systems are serious about them*" (Hess, 2007, pp. 21-22). Every reform financed and every political decision based on these reforms will directly impact the achievement of the children in public education (McNeil, 2000).

THE SCHOOL WITHIN A SCHOOL MODEL

McAndrews and Anderson (2002) suggested that small-scale schooling possesses an academic, social, and financial benefit. Most discussions of small schools focus on the selection of a model and how to implement downsizing. One model that has experienced a large amount of popularity is Schools Within a School - a reform that divides a large school into smaller, individual communities. Although the smaller schools share facilities, each school has its own administrative team and teachers. Each school within a school is a separate and autonomous unit formally authorized by the board of education and/or superintendent (Raywid, 1995).

It plans and runs its own program, has its own staff and students, and receives its own separate budget. Although it must negotiate the use of common space (gym, auditorium, playground) with a host school and defer to the building principal on matters of safety and building operation, the school-within-a-school reports to a district official instead of being responsible to the building principal. Both its teachers and students chose the School within a School. (Raywid, 1995, p. 21)

The models differ according to the autonomy of the small school from the larger institution and the ability the smaller of the two has to manage its own budget. Additionally, they differ in the programs they offer and organizational structure and practice (Raywid, 1995). However, according to Sicoli (as cited in McAndrews & Anderson, 2002), a key organizational characteristic of all these schools is the importance of the community

remaining small. Many schools implementing this design have a large number of students living in poverty as well as a large number of working students. Regardless, these teens are more likely than those in comparable schools to graduate, pursue college, become a productive member of society, and return to their school after graduation to contribute to the success of the younger generation (Fine, 2005).

The primary focus of the study was to explore the effect of the Schools Within a School reform on dropout rates and Texas Assessment of Knowledge and Skills (TAKS) test scores. Specifically, the study examined the effects first on all 11th grade students and then examined the effects for subgroups and ethnicity. The demographics of the study sample included students who were considered economically disadvantaged, English language learners, and special education students who attended one urban school in an inner city district in south central Texas.

RESEARCH QUESTIONS

The study was directed by the following research questions, examined first for the total population, and then again for the subgroups and ethnicity:

1. How did 11th grade students, including those in the six sub-population categories, in an urban Texas high school perform on the Texas Assessment of Knowledge and Skills (TAKS) English Language Arts test from 2003 to 2008?
2. How did 11th grade students, including those in the six sub-population categories, in an urban Texas high school perform on the TAKS mathematics test from 2003 to 2008?
3. What was the dropout rate for one urban high school in south central Texas between 2002 and 2007?

METHOD

Data in this study were provided by the Texas Education Agency (TEA). Specifically, data were compiled through The Academic Excellence Indicator System (AEIS) as well as the Public Education Information Management System (PEIMS) (TEA, 2006, n.d.). As the data collected were numerical in nature, the methodology of the current study was quantitative.

POPULATION AND SAMPLE

Students who attended Texas public schools and enrolled in regular education during the academic years 1997 to 2007 served as the population for this study. The sample was students enrolled in an urban 5A high school located in south central Texas. The number of students enrolled was 2,049. The gender of the sample was 46.6% female and 53.4% male. The ethnic composition was 84.1% Hispanic, 8.2% African American, and 7.3% White. Approximately 78% of the students were economically disadvantaged and At-Risk. Special education students made up 15.1% of the population, and 6.7% were Limited English Proficient (SAISD, n.d.). The urban high school began implementing the Schools Within a School reform in 2003. Implementation of this reform ended at the conclusion of the 2006-2007 academic year.

INSTRUMENTATION

The sole source of instrumentation was the PEIMS and AEIS data. It is noteworthy to make the distinction between the PEIMS system of data and that of AEIS. School districts submit data to PEIMS four times a year. This includes student demographics, academic performance, personnel demographics, fiscal information, and organizational information. PEIMS only has data for the state legislature and TEA to oversee public schools. It does not hold any data related to instruction above what the federal government requires (TEA, 2006). AEIS data focus on student-based performance data. AEIS reports contain information regarding academic performance indicators for individual campuses and districts. Indicators include TAKS performance, attendance rates, dropout rates, completion rates, and SAT/ACT test results (TEA, 2007).

To examine the impact of the school reform, two variables were examined - dropout rates and the number of students who passed TAKS. The dependent variables were the number of passing scores on the TAKS tests, as

well as the dropout rate variable. Within the data, there were a number of demographic variables that could have impacted student achievement - ethnicity, socioeconomic status, and gender. Since 100% of the students in the school district are considered to qualify for the free lunch program, the category of socio-economic status was not examined as an intervening variable. Participants were examined by ethnic groups - Hispanic, African American, and White. Also, participants were examined by the sub-populations - special education, economically disadvantaged, and LEP.

DATA ANALYSIS

Each analysis was conducted by building a cross-tabulation table for the variables under investigation. Once the cross-tabulation was constructed, an inferential statistical procedure - a chi-square analysis - was run (Gall et al., 2006). To build the descriptive cross-tabulation, two sources of data were accessed. In all cases, the number of students meeting the standard on the TAKS test at the state level was compared to the number of students meeting the standard on the TAKS test at the high school. Standard statistical limits were set for this non-parametric analysis. An alpha level of 0.05 was set. Any cells with less than five expected members were indentified. Any procedures with zero observed members caused the chi-square not be executed.

RESULTS

Null hypothesis #1 - investigating the interaction between exit level 11th graders in ELA in an urban high school in south central Texas - was analyzed through the use of the chi-square statistical procedure. In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level 11th graders, statistical dependence did exist, χ^2 (5, n=1175354) = 23.075, p< .00. In other words, the Schools Within a School reform had an impact on the ELA scores for the student population groups in an urban high school in south central Texas (Table 1).

Table 1: Exit Level 11th Graders In ELA

11th Grade Students Passing							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	151	328	328	282	297	319	1705
Texas	126278	189145	202529	207209	218187	230301	1173649
Total	126429	189473	202857	207491	218484	230620	1175354

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level African American 11th graders in ELA statistical independence was apparent, χ^2 (5, n= 147891) = 9.204, p=.101. Therefore, the Schools Within a School reform had no impact on the ELA scores for the African American student population group (Table 2).

Table 2: Exit Level African American 11th Graders In ELA

11th Grade African American Students Passing							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	15	32	25	22	19	24	137
Texas	13397	22935	25208	26895	28397	30922	147754
Total	13412	22967	25233	26917	28416	30946	147891

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level Hispanic 11th graders in ELA, a level of significant statistical dependence did exist, χ^2 (5, n= 401926) = 25.058, p = 0.00. The Schools Within a School reform had an impact on the ELA scores for the Hispanic student population (Table 3).

Table 3: Exit Level Hispanic 11th Graders In ELA

11th Grade Hispanic Students Passing							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	114	263	265	232	242	269	1385
Texas	35957	60580	68174	70565	78156	87109	400541
Total	36071	60843	68439	70797	78398	87378	401926

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level White 11th graders in ELA, a significant level of statistical independence was apparent, $\chi^2(5, n= 576040) = 1.746$, p=.883. In other words, Schools Within a School had no impact on the ELA scores for the White student population (Table 4).

Table 4: Exit Level White 11th Graders In ELA

11th Grade White Students Passing							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	20	31	35	29	33	27	175
Texas	71600	97416	99817	100450	102868	103714	575865
Total	71620	97477	99852	100479	102901	103741	576040

No special education students passed TAKS ELA at the campus level for the first and fourth years. Due to this missing data, a chi-square could not be calculated for special education students.

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level economically disadvantaged 11th graders in ELA, a significant statistical dependence did exist, χ^2 (5, n= 393195) = 43.909, p=.00. The Schools Within a School reform had an impact on the ELA scores of the economically disadvantaged student population group (Table 5).

Table 5: Exit Level Economically Disadvantaged 11th Graders In ELA

11th Grade Economically Disadvantaged Students Passing							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	131	265	260	230	251	235	1372
Texas	32708	56913	67445	71281	77415	86061	391823
Total	32839	57178	67705	71511	77666	86296	393195

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level LEP 11th graders in ELA, statistical dependence existed, χ^2 (5, n= 20201) = 13.411, p =.020. Therefore, Schools Within a School had an impact on the ELA scores for the LEP student population group (Table 6).

Table 6: Exit Level LEP 11th Graders In ELA

11th Grade LEP Students Passing							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	8	6	9	5	6	12	46
Texas	1165	4011	3940	3550	3055	4434	20155
Total	1173	4017	3949	3555	3061	4446	20201

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level 11th graders in Math, a significant statistical dependence was apparent, χ^2 (5, n= 1075854) = 24.737, p = .00. The Schools Within a School reform had an impact on the Math scores for the exit level 11th grade student population group (Table 7).

Table 7: Exit Level 11th Graders In Math

11th Grade Students Passing Math							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	169	307	251	207	235	242	1411
Texas	135063	183671	184736	179117	192228	199628	1074443
Total	135232	183978	184987	179324	192463	199870	1075854

Data analysis of the impact of Schools Within a School on the TAKS scores for exit level African American 11th graders showed statistical dependence was apparent, χ^2 (5, n= 116741) = 19.045, p =.002. Schools Within a School had an impact on the Math scores for the African American student population (Table 8).

Table 8: Exit Level African American 11th Graders In Math

11th Grade African American Students Passing Math							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	13	30	16	13	8	13	93
Texas	13020	20347	19848	19112	21561	22760	116648
Total	13033	20377	19864	19125	21569	22773	116741

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level Hispanic 11th graders in Math, statistical dependence was apparent, χ^2 (5, n = 351410) = 25.562, p=000. The Schools Within a School reform had an impact on the Math scores for the Hispanic student population group (Table 9).

Table 9: Exit Level Hispanic 11th Graders In Math

11th Grade Hispanic Students Passing Math							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	127	245	200	168	197	202	1139
Texas	37504	57906	59102	58462	65375	71922	350271
Total	37631	58151	59302	58630	65572	72124	351410

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level White 11th graders in Math, a level of significant statistical independence was apparent, χ^2 (d, n= 549007) = 2.226, p=.817. The Schools Within a School reform had no impact on the Math scores for the White student population group (Table 10).

Table 10: Exit Level White 11th Graders In Math

11th Grade White Students Passing Math							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	26	28	35	26	27	25	167
Texas	76388	95686	96012	92046	94735	93973	548840
Total	76414	95714	96047	92072	94762	93998	549007

No special education students passed TAKS Math at the campus level in the fourth year. Due to this missing data, a chi-square could not be calculated for special education students.

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level economically disadvantaged 11th graders in Math, statistical dependence was apparent, χ^2 (5, n= 336761) = 46.054, p = .00. The Schools Within a School reform had an impact on the Math scores for the economically disadvantaged student population group (Table 11).

Table 11: Exit Level Economically Disadvantaged 11th Graders In Math

11th Grade Economically Disadvantaged Students Passing Math							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	142	245	200	164	196	179	1126
Texas	34164	54293	57301	56946	63497	69380	335635
Total	34306	54538	57501	57110	63693	69613	336761

In analyzing the data for determining the impact of the Schools Within a School reform on the TAKS scores for exit level LEP 11th graders, statistical independence was apparent, χ^2 (5, n= 26139) = 6.498, p=.251. Therefore, the Schools Within a School reform did not have an impact on the Math scores for the LEP student population group (Table 12).

Table 12: Exit Level LEP 11th Graders In Math

11th Grade LEP Students Passing Math							
	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	10	10	8	5	10	6	49
Texas	2923	5627	4839	4125	3972	4604	26090
Total	2933	5637	4847	4130	3982	4610	26139

In analyzing the data for determining the impact of the Schools Within a School reform on the dropouts, statistical dependence existed, χ^2 (5, n = 126933) = 193.617, p = .00. The Schools Within a School reform had an impact on the dropout student population group (Table 13).

Table 13: Dropouts

	S03	**S04**	**S05**	**S06**	**S07**	**S08**	**Total**
School	5	35	24	45	176	171	456
Texas	16622	17151	16434	18290	24975	33005	126477
Total	16627	17186	16458	18335	25151	33176	126933

CONCLUSIONS

Importantly, dropout rates were positively impacted by the Schools Within a School reform. As a whole group, ALL students benefit from the Schools Within a School design with both Math and ELA TAKS scores. The sub-populations of Hispanic, Economically Disadvantaged, and LEP benefit from the Schools Within a School design in regard to ELA TAKS scores. Schools Within a School had a significant impact on the Math TAKS scores for the African American, Hispanic, and Economically Disadvantaged sub-populations. The impact that the school Schools Within a Schools reform had on the ELA TAKS scores for exit level 11th graders in the African American and White student sub-populations was not significant and there was not a statistical difference found on the Math scores for the LEP and White student groups.

IMPLICATIONS

School districts will continue to scramble looking for the magic program, software, and reform to boost their scores in order to meet federal and state guidelines. This study shows that the Schools Within a School reform met the needs of the largest majority of students. Investing the time to examine the impact of reforms on student success and academic progress would, no doubt, be beneficial to the overall success on student achievement. Educators must search to find the best way to connect and authentically engage students (Edutopia, 2010). If children deserve quality instruction, then campus stakeholders must concentrate on what happens in classrooms on a continual basis (Finch, 2010). It is apparent that the logistical organization of a school impacts classroom instruction and student outcomes.

This quantitative research study explored the effect of a small learning community's high school Schools Within a School reform on dropout rates and Texas Assessment of Knowledge and Skills (TAKS) test scores. As this study concluded, test scores for the large majority of students and dropout rates were positively impacted.

While many reforms have been implemented, there is not one single reform that has held the accountability secret for all students. There is not a one-size-fits-all model that can be effective and sustained to meet the all of the expectations NCLB placed on public schools (National High School Alliance, 2005). "*Schools don't improve through political and managerial incantation; they improve through the complex and demanding work of teaching and learning*" (City, Elmore, Fiarman, & Teitel, p. 25). Across America, public school students continue to maneuver through the battlefield of reforms that stakeholders place in front of them.

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