US-China Education Review B 6 (2011) 862-867
Earlier title: US-China Education Review, ISSN 1548-6613

Instructional Expenditures and Dropout Rates of Special Populations in Texas High Schools

Gloria Koepke
Texas, US

Lori Kupczynski, Glenda Holland
Texas A & M University-Kingsville, Texas, US

This study examined the relationship between instructional expenditures and the annual dropout rates of special populations. Per-pupil instructional expenditures by school district and targeted special populations included students identified as ELL (English language learner), economically disadvantaged, at-risk and special education students. All public high schools in Texas reporting data for the school years studied were included. Three successive school years (2005-2006, 2006-2007 and 2007-2008) were cross compared for a relationship between funding and dropping out of school. For each school district in Texas, bivariate regression correlations analyses were conducted between their special population dropout rates and their per-pupil instructional percentage rates. The process was repeated using data from three consecutive school years. The study further examined the link between education funding and student outcomes. Expenditures are explicitly linked with dropout rates to provide recommendations for the dropout dilemma and future research.

Keywords: instructional expenditures, dropout, special populations, at-risk, special education, high school

Introduction

Dropout rates for students from special populations are a growing concern globally. While dropout rates of students with disabilities have declined significantly, students with some cognitive disabilities account for 13% of the dropouts, and the rate for students with emotional disabilities is as high as 53% (Zhang & Benz, 2006). Completion rates of students with disabilities have improved, with three-fourths of them graduating. Still, dropout rates for students with disabilities are two to six times greater among students with disabilities coming from low-income families than those coming from middle- and upper- income families (Murray & Naranjo, 2008).

Prominent educational reforms originated due to concern over low graduation rates. The Goals 2000 of the Education American Act and a 12-action plan from the NEA (National Education Association) were two of those reforms (Educate America Act, 1993). Goals 2000 recommended that schools retrieve their high school dropouts and bring them back into the educational system (Section 306 (i)). NEA's 12-action plan called for additional resources for lowering pupil and teacher ratios, providing more individual attention and counseling, developing early identification of services, parent and community involvement programs and making high school graduation a federal priority. Congress will invest $10 million over ten years to states that would make high school graduation obligatory. These recommendations would require that more dollars be spent on

Gloria Koepke, Ed.D., Educational Consultant.
Lori Kupczynski, Ed.D., Department of Educational Leadership and Counseling, Texas A & M University-Kingsville.
Glenda Holland, Ed.D., Department of Educational Leadership and Counseling, Texas A & M University-Kingsville.

education. However, many believe that increasing spending does not improve education (Jehlen, 2007). Like Jehlen (2007), others not only believe that the educational system does not need more money, but that it already spends too much. Richards reported that $9 billion is spent nationally each year. This is a yearly average of $ 9,688 per student or $ 125,944 over the student's kinder through 12th grade years. It was estimated that these figures were a 17% increase per pupil than what was spent ten years ago. Richards (2005) reiterated the feelings of many taxpayers that the spending of the educational system is excessive. Green and Trivitt (2008) detailed that over the last 30 years, the per-pupil spending in US public education had doubled, yet student achievement remains unchanged. They claimed that insignificant increases in graduation rates are being made and condemn that more spending does not lead to higher graduation rate.

The importance of finding ways to keep students from dropping out of high school or discontinuing their studies is an important objective for everyone (Leuchovius, 2006). And the debate continues on whether or not more money is needed for education. At present, research has been unable to declare that increased instructional funding increases student performance or even that funding in reform contexts leads to progressive change in the educational setting (Greene & Trivitt, 2008). Abundant research on high school dropouts found numerous correlations to dropping out, linked to individual, social or family- and school- based causes. The research on the correlations between school-based causes and dropout rates is the suggestion that instructional programming or reform can reduce dropout rates.

Some literature described numerous programs designed to reduce dropout rates, but few of these programs have been empirically tested, and when an empirical case study was conducted on a program, its outcome with regard to reducing dropout rates was questioned (Finnan & Chasin, 2007). The basis of these studies found that funding to high schools in general is problematic, and at present, there has been no confirmed correlation between how much a state or district spends on instructional programming for dropouts and any change in the dropout levels of that district or state. Even so, at the present time, no study to date had been attempted to link instructional funding directly to dropout rates of special populations.

Method

This study used the dominant methodology of quantitative research, descriptive statistics and correlation design to determine whether relationships exist between instructional spending in Texas high schools and changes in the dropout levels of students from special populations. The population of interest for this study consisted of all public high schools in the state of Texas. Data from 1,224 Texas high schools were collected and those districts or charter schools that had reported data for those three successive school years were used to study the dropout rates of students of special populations. The sample studied consisted of students identified as the economically disadvantaged, ELL (English language learner), special education and at-risk.

Results

Across the three school years, the special education student group had the highest average distribution of student groups. The special education student group for the school years of 2005-2006, 2006-2007 and 2007-2008 had an average distribution of 55.05, 55.23 and 54.55, respectively. The group with the second highest observed average distribution was the economically disadvantaged student group with average distributions of 44.13, 44.35 and 43.92 for school years of 2005-2006, 2006-2007 and 2007-2008, respectively. The at-risk student group was the third among student groups in terms of the highest average proportions of

students observed, with average distributions of 13.40, 12.57 and 11.64 for the second year of 2005-2006, 2006-2007 and 2007-2008, respectively. The limited English proficient student group had the lowest average distribution across the three school years, with average distributions of 7.68, 7.83 and 7.94 for the school years of 2005-2006, 2006-2007 and 2007-2008, respectively.

Instructional Funding

Instructional funding of special population increased each school year with $ 4,994, $ 5,107 and $ 5,368 for the school years of 2005-2006, 2006-2007 and 2007-2008, respectively. The average dropout rates of the economically disadvantaged student group were the lowest among groups in special populations across three school years. The highest observed average dropout rate of the economically disadvantaged students occurred during the school years of 2006-2007 (M = 1.79) and the lowest observed average dropout rate occurred in the school years of 2007-2008 (M = 1.55).

Dropout Rates

The ELL student group had the highest dropout rate among special populations groups across the three school years. The highest observed average dropout rate of the ELL students occurred during the school year of 2005-2006 (M = 3.03). The lowest observed average dropout rate of the ELL student group occurred in school year of 2006-2007 (M = 2.74).

The special education student group had the second lowest dropout rate among special populations groups across three school years. The highest observed average dropout rate of special education students occurred during the school years of 2005-2006. The lowest observed average dropout rate occurred in the school year of 2007-2008 (M = 1.66).

The average dropout rates of the at-risk student group were the second highest among other groups in special populations across three school years. The highest observed average dropout rate of at-risk students occurred during the school year of 2006-2007 (M = 2.27). The lowest observed average dropout rate occurred in the school year of 2007-2008 (M = 2.09).

Positive relationships of dropout rates among the different districts of special populations exist. Accordingly, dropout rates of special education have a positive relationship with the dropout rates of limited English proficient (r = 0.511, p < 0.001), economically disadvantaged (r = 0.0841, p < 0.001) and at-risk dropout rates (r = 0.850, p < 0.001). Similarly, all other pairs of different student groups of special populations have positive correlation values that are significant at the significance level of 0.05. The dropout rates among the different student groups of special populations were proportional for the school year of 2005-2006. Thus, as the dropout rate of one student group increases, the dropout rates of the other student groups also increase and as the dropout rate of a group decreases, the dropout rates for the other student groups also decrease. The strongest positive relationship occurred between the dropout rates of student groups at-risk and economically disadvantaged (r = 0.943, p < 0.001).

The values of correlations between groups in special populations for school year of 2006-2007 are positive and significant at the significance level of 0.05. Thus, there are significant positive relationships among the proportions of economically disadvantaged, ELL, special education and at-risk dropout rates from Texas high schools for the school year of 2006-2007. Based on the values of correlations, the relationship between the dropout rates of student groups at-risk and economically disadvantaged (r = 0.937, p < 0.001) had the highest correlation of student groups.

The school year of 2007-2008 correlations between student groups in special populations were all positive, indicating that a high dropout rate of one group corresponds to high dropout rates for the other student groups at significance level of 0.05. Accordingly, the low dropout rate of one student group corresponds to low dropout rates for the other groups. The highest positive relationship occurred between the dropout rates of student groups and economically disadvantaged ($r = 0.951$, $p < 0.001$).

Correlations of Instructional Funding to Dropout Rates

The information in Table 1 shows that all correlation values were at the significance level of 0.05. The values of the correlations were negative; indicating the relationship between the instructional operating expenditures and dropout rates of special population was inversely proportional.

Table 1

Correlation Between Instructional Funding and Groups in Special Populations

Instructional funding	School year		Special education	ELL	Economically disadvantaged	At-risk
Funding	2005-2006	Cor.	-0.078**	-0.073**	-0.092**	-0.085**
		Sig	0.010	0.029	0.002	0.005
Funding	2006-2007	Cor.	-0.205**	-0.119**	-0.192**	-0.195**
		Sig	0.000	0.000	0.000	0.000
Funding	2007-2008	Cor.	-0.204**	-0.076**	-0.216**	-0.244
		Sig	0.000	0.000	0.000	0.000

Note. **Correlation is significant at the significance level of 0.05.

Instructional operating expenditures and dropout rates for the economically disadvantaged student population in Texas high schools had a significant negative relationship across school years of 2005-2006 ($r = -0.092$, $p = 0.002$), 2006-2007 ($r = -0.192$, $p < 0.001$) and 2007-2008 ($r = -0.216$, $p < 0.001$). An increase in instructional operating expenditures corresponds to a decrease in the dropout rates for economically disadvantaged students.

Similarly, instructional operating expenditures and dropout rates for the ELL student population in Texas high schools had a significant negative relationship across school years of 2005-2006 ($r = -0.073$, $p = 0.029$), 2006-2007 ($r = -0.119$, $p < 0.001$) and 2007-2008 ($r = -0.076$, $p < 0.001$). An increase in instructional operating expenditure corresponds to a decrease in the dropout rate for ELL students.

The instructional operating expenditures and dropout rates for the special education student population in Texas high schools had a significant negative relationship across school years: 2005-2006 ($r = -0.078$, $p = 0.010$), 2006-2007 ($r = -0.205$, $p < 0.001$) and 2007-2008 ($r = -0.204$, $p < 0.001$). An increase in instructional operating expenditures corresponds to a decrease in the dropout rate for special education students.

Instructional operating expenditures and dropout rates for the at-risk student population in Texas high schools had a significant negative relationship across school year of 2005-2006 ($r = -0.085$, $p = 0.005$), 2006-2007 ($r = -0.195$, $p < 0.001$) and 2007-2008 ($r = -0.244$, $p < 0.001$). This indicates that an increase in the instructional operating expenditures would correspond to a decrease in the dropout rate for special education students.

Discussion and Conclusions

Special education students comprised the majority of the special populations, followed by the

economically disadvantaged student group, the at-risk student group and the ELL student group. The highest average dropout rates of special populations were observed during school years with smaller instructional funding and the lowest dropout rates of special populations were observed during school years with higher instructional funding.

The instructional funding of special populations increased each school year. The economically disadvantaged student group had the lowest average dropout rates of groups in special populations across the three school years, but had the highest average dropout rate of students for the school year of 2006-2007 and had the lowest average dropout rate for the school year of 2007-2008.

The ELL student group average dropout rates were the highest among groups in special populations across the three school years. These students had the highest average dropout rate for the school year of 2005-2006 and the lowest average dropout rate for the school year of 2006-2007. The special education student group had the second lowest average dropout rates among groups in special populations across the three school years. They had the highest average dropout rate for the school year of 2005-2006 and the lowest average dropout rate for the school year of 2007-2008.

Finally, the at-risk student group had the second highest average dropout rates among groups in special populations across the three school years. The group had the highest average dropout rate during the school year of 2006-2007 and the lowest average dropout rate in the school year of 2007-2008. The highest dropout rates of special populations occurred mostly during the school years with smaller instructional funding and the lowest dropout rates of the special populations occurred mostly during the school years with higher instructional funding.

The results indicated positive correlations between dropout rates and the different student groups, thus, suggesting that changes in the dropout rates for the economically disadvantaged, ELL, special education and at-risk student groups would follow the same direction. Statistically, significant relationships were found among the proportions of economically disadvantaged, ELL, special education and at-risk dropout rates from Texas high schools across three school years.

Correlation tests indicated that instructional funding and dropout rates of special population are negatively related, indicating that an increase in instructional expenditures corresponds to a decrease in the dropout rates for all student groups. Statistically, negative relationships were found between instructional funding and the dropout rates of the economically disadvantaged, ELL, special education and at-risk students, indicating that an increase in instructional expenditures corresponds to a decrease in dropout rates for all student groups. All the correlations were negative, thus, the relationship between the instructional operating expenditures and dropout rates of special population was inversely related.

The highest average dropout rates of special populations were observed mainly during school years with smaller instructional funding and the lowest dropout rates of special populations were observed mainly during school years with higher instructional funding. The dropout rates between the different students groups were positively correlated, which mean changes in the dropout rates for the economically disadvantaged, ELL, special education and at-risk student groups follow the same direction.

Instructional funding and dropout rates of special populations have a negative relationship with each other, indicating that an increase in instructional expenditures corresponds to a decrease in dropout rates for all student groups. This study substantiated the role that funding plays on the dropout rate of students in special populations by confirming that the level of instructional commitment made by school districts has a significant

relationship in reducing high school dropout rates of students of special populations.

References

Finnan, C., & Chasin, G. (2007, April). Accelerating the learning of low-achieving students: The transformation of a dropout. *Phi Delta Kappan,* 625-631.

Goals 2000: Educate America Act—Hearing before the committee on labor and human resources H.R. 1804. (1993). One Hundred Third Congress (Serial 846).

Greene, J. P., & Trivitt, J. R. (2008). Can judges improve academic achievement? *Peabody Journal of Education, 83,* 224-237.

Jehlen, A. (2007). Can the standards movement be saved? *National Education Association*. Retrieved from http://www.nea.org/neatoday/0101/cover.html

Leuchovius, D. (2006). The role of parents in dropout prevention: Strategies that promote graduation and school achievement. *Parent brief.* NCSET (National Center on Secondary Education and Transition), University of Minnesota (ERIC Document Reproduction Service No. ED 495 870).

Murray, C., & Naranjo, J. (2008). Poor, black, learning disabled and graduating: An investigation of factors and processes associated. *Remedial and Special Education, 29,* 145-160.

Richard, A. (2005). Researcher tally costs of education failings. *Education Week,* 25(10). Retrieved from ProQuest Education Journals database.

Zhang, D., & Benz, M. R. (2006). Enhancing self-determination of culturally diverse students with disabilities: Current status and future directions. *Focus on Exceptional Children, 38,* 1-13.