The Impact of Teacher Workforce Retirement/Attrition on Personnel Replacement Cost

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Abstract

The purpose of this paper is to examine the contribution of teacher retirement to the cost of teacher turnover in Georgia, especially given an aging teacher workforce. Utilizing turnover-cost models from other disciplines, it was estimated that it cost Georgia between $120 and $130 million dollars per year to replace teachers that retired in 2002-2003 and 2003-2004 school years. It was found that replacing retired teachers in Georgia accounted for 26-29% of the total turnover cost. Furthermore, over 50% of the cost in FY03 (59.2%) and FY04 (56.5%) was accounted for by teachers who left the classroom for other reasons than retirement. Thus, it appears that more retention efforts should be focused on teachers in the “Other reasons” category who are leaving the classroom prematurely.

Many states have argued publicly that the No Child Left Behind Act (NCLB) mandate is less than fully funded by the Federal government, yet states are expected to recruit, train and retain a qualified teacher in every classroom by FY06 (Minnesota Office of Legislative Auditor, 2004). One of the problems faced by many states is an inadequate supply of "highly-qualified" teachers as defined by NCLB. Numerous creative methods have been introduced either to attract fully certified or to prepare new teachers, though Ingersoll (2004) argues that the problem is less that of supply than retention. In Georgia, for example, programs such as Georgia Teacher Alternative Preparation Program (GATAPP), Troops to Teachers (TTT), Reach to Teach (RTT), and TeachGeorgia were designed to increase teacher supply. Despite these efforts and programs, the supply of teachers remains inadequate. The reasons for the apparent continuing need for teachers are manifold. Some obvious ones are: teacher attrition through promotion, retirement, disillusionment, and personal/family reasons; growth in P-12 student enrollment; unattractiveness of the teaching profession as a career to college students coupled with the ever expanding choices of alternative careers for women and minority groups; dismal high school graduation rate in Georgia, especially among minority males; and the differential need in subject matter and geographical location.

This paper focuses on one of the above reasons for perennial teacher demand in Georgia: teacher retirement. In Georgia, as in many states, many teachers are approaching retirement age. Specifically, 38.3% of Georgia teachers in the Fall of 2004 (FY05-1) were 50 years of age or older (Professional Standards Commission (PSC), 2005). As many as 32.5% had 20 or more years of experience and 24.3% were 50

years or older and had 20 or more years of experience. Every year, Georgia has had difficulty replacing 8-10% of its teaching workforce lost through all forms of attrition. Thus, the problem looming in the horizon from the impending retirement of 20% or more of its teaching workforce within the next 5-10 years is a significant additional pressure on teacher demand. Retirement, however, can be anticipated and projected given the age and experience of the workforce. The purpose of this paper, therefore, is to estimate how much teacher turnover engendered by retirement costs the state of Georgia.

By 2001, all Southern Region Education Board (SREB) states, with the exception of Alabama, Mississippi and Delaware (Gaines, 2001), had begun to tap into the retirement pool to supplement their teacher supply. Some states have had to change existing policies or create new ones to allow retired teachers and educators to return to the classroom without jeopardizing their retirement benefits (Gaines, 2002, 2004). Georgia is one of the last SREB states to allow retirees to return to teaching without losing their retirement benefits. Each state has some conditions under which these retirees can be rehired. In most states, the retiree is required to stop-out for from 30 days to a year before returning and while employed, and is not allowed to contribute to or accumulate further credits toward retirement. Some states, for example, South Carolina and Kentucky (Gaines, 2001, 2002), impose a salary cap for the new position. Most states allowing retirees to return to the classroom also restrict them to low-performing and hard-to-staff geographical locations and subject areas. New York (Gold, 1987) allows school systems to hire only teachers recommended by their former principals on the basis of excellent performance while in the classroom and their ability

to mentor new teachers. These teachers are trained and assigned to mentor beginning teachers. Thus, retired teachers generally do not simply return to teaching in their old school or classroom. Some that return to the classroom are not allowed to teach in the same school. These efforts are designed to ensure that the returning teacher approaches the new assignment with fresh vigor and enthusiasm. Nevertheless, rehiring retired teachers still raises questions regarding the quality of instruction, level of commitment, effectiveness and reasons for retirement. If the teacher had retired because he/she felt too old, "burned-out" or disillusioned, it could be argued that such a teacher would be less committed and effective if allowed to return to the classroom. Others argue that a feeling of not having anything to lose and having taken a break would actually energize returning retirees, liberating them from fear of failure and motivating them to perform better. These arguments will be evaluated as data on rehiring of retired teachers become available.

Teacher turnover adds to the cost of running schools systems and high turnover may negatively affect student performance in hard-to-staff schools (Ingersoll, 2004, 2005; Alliance for Excellent Education, 2005). Teacher retirement contributes to composite turnover figures in the schools. Turnover cost calculations often include the value, in dollar amounts, which had been added to the leaver through induction, in-service training, as well as the cost of hiring a new person to replace the leaver. It should also include the difference in value added by the teacher that left and the value added by the new teacher. Whether this difference in value is positive or negative depends on the experience, and effectiveness of the out-going and in-coming teachers. However, as Gaines (2000, 2004) noted, it is difficult to compare costs among teaching

personnel because apart from the salaries the state provides, school systems spend very different amounts on incentives, bonuses, and benefits to attract, hire, mentor and/or keep teachers in their systems. Turnover cost figures reviewed or presented in this paper are estimates and should be interpreted with caution.

Business models have been utilized in educational environment for estimating the cost of employee turnover, that is, losing and replacing an employee (Texas Center for Educational Research, 2000; Alliance for Excellent Education, 2005). The most basic and generalized form of the models is presented by Hauenstein (1999) of Advantage Assessment, Inc. This model utilizes the number of leavers, annual salaries of the leavers, and hiring costs, comprised of the number of applicants interviewed for each opening and the cost of advertising and interviewing them. The model also incorporates the total number of employees in the organization. Other models by Sorensen (1995) and Jones (1999) include training costs and lost productivity costs as additional variables. Training cost would include the cost of mentoring and induction, professional development, and so forth, while lost productivity is said to include the difference in performance of a veteran teacher compared to a novice. Given the difficulty in measuring this variable, it is not usually incorporated. People Sense adds vacancy cost variable to their model. Vacancy cost includes the cost of hiring substitute employees while the position is vacant. Some other models include separation cost for organizations that conduct exit interviews as some school systems do (Cascio, 1987). Fitz-enz, (1997) who estimates that cost of turnover is as much as twice the annual salary and benefits of the leaver, includes in his model termination/separation costs, hiring, vacancy, learning curve and training costs. Researchers in this area have

estimated that turnover costs range from 25% to 200% of a leaver's annual salary. The Texas teacher turnover project (2000) indicated that the turnover cost varies with teacher experience and geographical location of the school system. This author contended that the subject taught by the teacher will also add more variation to the teacher turnover cost. The rationale is that positions in hard-to-staff subjects will remain vacant for longer periods, increasing vacancy costs, and candidates in such areas might be attracted with larger signing bonuses, increasing the hiring costs.

For the purposes of this paper the U.S. Department of Labor turnover cost estimate of 30% of leaver's salary will be used.

Method

Sample

The 9,434 and 9,608 teachers who taught in school year 2002-2003 (FY03) and 2003-2004 (FY04), respectively, and did not return to the classroom the following year, comprised the sample for this study. This is referred to as teacher attrition for FY03 and FY04, respectively. Data on these former teachers were obtained from the Certified Personnel Information (CPI) database. The CPI database is a repository for data on the Georgia educator workforce. It contains data on the demography, assignment and distribution of educators in the Georgia public school system. This database is updated annually.

Procedure

Each year's sub-sample was divided into three groups based on reasons for leaving the classroom. The first group was comprised of individuals who were still in Georgia public school system the following year but in non-teaching positions. The

remaining leavers were matched against the Georgia Teacher Retirement System (TRS) database to determine the individuals who had retired. Individuals who were identified to have retired were classified as Retired group. The rest were classified as leaving for "Other reasons." Table 1 shows the number of former teachers in each group.

Table 1

Distribution of the Sample by Reasons for Leaving and Fiscal Year in Which They Left

Reasons for Leaving the Classroom	FY03	Percent of FY03	FY04	Percent of FY04
Reassignment to Non-Teaching Jobs	1,164	12.3	1,264	13.2
Retired	2,077	22.0	2,319	24.1
Left for Reasons Other than Retirement	6,193	65.6	6,025	62.7
Total Attrition	9,434	100	9,608	100

Turnover cost was determined first for employment in certificate-requiring positions (certified positions) and then for total employment. Total employment includes assignments in non-certificate-requiring positions (classified positions). Applying the U.S. Department of Labor turnover cost estimation method, turnover cost per individual is calculated by multiplying the leaver's salary in certified position and total salary by 0.30 as shown in the Appendix.

Result and Discussion

Table 2 shows mean turnover costs and other descriptive statistics for each sub-sample. As would be expected, the turnover cost based on total employment salary is slightly higher than salary from certified positions alone. Given that new teachers hired to replace those that left tend to be less experienced teachers and less likely to be

holding both certified and classified positions, only turnover cost for certified positions will be used for the rest of the discussion.

Not surprisingly, for both FY03 and FY04, the group that left the classroom due to retirement had the highest mean turnover cost for certified positions, $16,387 in FY03 and $16,489 in FY04 compared to those who were reassigned (FY03: $15,538; FY04:$1 5,405) and those who left for other reasons (FY03: $11,976; FY04:$12,145), respectively. See Table 2. Though retirees comprised 22-24% of attrition each year, it contributed 26-28% of the turnover cost each year. The cost in terms of student achievement would actually be even higher if it is assumed that highly experienced retirees would be more effective teachers than new and less experienced teachers who are most likely to replace the leavers. Data in Table 2 also shows that 59.2% of the total cost in FY03 and 56.5% in FY04, were accounted for by teachers who left for other reasons than retirement

Overall, teacher turnover cost Georgia more than $122 million per year, as shown in Table 2, to replace the 9,434 and 8,608 teachers who left the classroom for various reasons after FY03 and FY04, respectively. More than 50% of the cost was accounted for by teachers who left the classroom for other reasons than retirement while retirement accounted for about one quarter of the total cost. This suggests that perhaps more attention should be focused on the retention of those teachers who are not leaving the classroom because of promotion to administrative positions and for retirement.

Table 2

Turnover Cost Estimates Using Certified Employment Salary and Total Employment Salary for FY03 and FY04					
		2002-2003 (FY03)		2003-2004 (FY04)	
Reason for Leaving	**Statistics**	**Based on Cert Salary***	**Based on Total Salary**	**Based on Cert Salary**	**Based on Total Salary**
Reassigned	Mean**	15538.15	15550.50	15405.18	15424.55
	N	1164	1164	1264	1264
	FTE	1144.87	1144.87	1251.57	1251.57
	Median	15297.45	15304.33	15182.70	15187.71
	Minimum	5661.81	5661.81	1814.4	1814.40
	Maximum	29161.71	29161.71	27700.2	27700.20
	Range	23499.90	23499.90	25885.80	25885.80
	Sum	17,789,156.14	17,803,299.47	19,280,659.72	19,304,901.94
Retired	Mean**	16387.34	16392.74	16489.36	16498.06
	N	2077	2077	2319	2319
	FTE	1978.54	1978.54	2176.76	2176.76
	Median	15885.90	15885.90	15778.50	15778.50
	Minimum	1448.58	1448.58	2386.50	2920.30
	Maximum	24973.06	24973.06	26706.49	26706.49
	Range	23524.47	23524.47	24319.99	23786.19
	Sum	32,423,003.56	32,433,685.13	35,893,378.09	35,912,313.59
Other Reasons	Mean**	11975.69	11977.79	12144.87	12157.97
	N	6193	6193	6025	6025
	FTE	6074.04	6074.04	5891.76	5891.76
	Median	11264.4	11264.4	11513.4	11534.4
	Minimum	1423.18	1423.18	1191.6	1191.6
	Maximum	27181.62	27181.62	31593.6	33446.1
	Range	25758.44	25758.44	30402	32254.5
	Sum	72,740,842.84	72,753,571.03	71,554,685.81	71,631,856.37
Total Attrition	N	9434	9434	9608	9608
	FTE	9197.45	9197.45	9320.08	9320.08
	Sum	122,953,002.5	122,990,555.6	126,72,8723.6	126,84,9071.9
Retirement as % of Total Turnover Cost		**26.37**	**26.37**	**28.32**	**28.31**

*Cert Salary = salary for a certificate requiring position (Certified Employment) and
Total Salary = Sum of Cert Salary + salary received for non-certificate requiring positions
** The number used to compute the Mean is the FTE

References

Alliance for Excellent Education (2005). *Teacher attrition: A Costly loss to the nation and to the states*. Issue Brief. Retrieved March 31, 2006 from http://www.all4ed.org/publications/TeacherAttrition.pdf.

Cascio, W. (1987). *Costing human resources: The Financial impact of behavior in organizations*. Boston: PWS-Kent Publishing Company.

Fietz-enz, J. (1997). It's costly to lose good employees. *Workforce*, 76, 50-51

Gaines, G. F. (2000). Focus on teacher salaries: What teacher salary averages don't show. Retrieved June 2, 2005, from http://www.sreb.org/main/Publications/PressRel/newsl.asp?Code=1049

Gaines, G. F. (2001). The 2001 Legislative Briefings. Retrieved June 2, 2005 from http://64.233.187.104/u/SREB?q=cache:sp8GKgx84_wJ:www.sreb.org.

Gaines, G. F. (2002). The 2002 Legislative Briefings. Retrieved June 2, 2005, from http://64.233.187.104/u/SREB?q=cache:COmQTu0eBE4J:www.sreb.org.

Gaines, G. F. (2004). Focus on teacher pay and incentives: Recent legislative actions and update on salary averages. Retrieved June 2, 2005, from http://www.sreb.org/scripts/Focus/Reports/04S06-Focus_Teacher_Pay.pdf

Gold, M. J. (1987). Retired teachers as consultants to new teachers: A new in-service teacher training model. Final report. Case 09-87. ERIC #: ED306928.

Hauenstein, P. (1999). Understanding turnover. Advantage Hiring Newsletter [Online]. Available:http://www.advantagehiring.com/newsletter/n99Q4_1.html

Ingersoll, R. M. (2004). Why do high-poverty schools have difficulty staffing their classrooms with qualified teachers? Prepared for *Renewing Our Schools,*

Securing Our Future: A National Task Force on Public Education. Center for American Progress& Institute for America's Future. Retrieved March 31, 2006 from http://www.americanprogress.org/atf/cf/%7BE9245FE4-9A2B-43C7-A521-5D6FF2E06E03%7D/Ingersoll-FINAL.pdf

Office of Legislative Auditor, State of Minnesota (2004, February 26). No Child Left Behind. Evaluation Report Summary #04-04a.

Sorenson, N. (1995). Measuring HR for success. *Training and development*, *49*, 49-51.

Teachers Retirement System of Georgia (2005). Working after retirement: Full time teaching after retirement. Retrieved June 2, 2005 from http://www.trsga.com/shared/tertiaryPage.asp?source=edu&section=59&category=63&TargetAudience=1

Texas Center for Educational Research. (2000). *The Cost of teacher turnover*, Paper prepared for the Texas State Board for Educator certification. Retrieved June 21, 2005 from http://www.sbec.state.tx.us/SBECOnline/txbess/turnoverrpt.pdf

Appendix

Turnover Cost based on “Certified Employment” Salary = Certified Salary X 0.3

Turnover Cost based on “Total Employment” Salary = (Certified Salary + Classified Salary) X 0.3