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PROJECTED IMPACTS OF CHAPTER 9 FSSLA 2005 (SB 141) ON TEACHER RECRUITMENT AND RETENTION

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You asked about the projected impacts of SB 141, enacted as Ch 9 FSSLA 2005. Specifically, you wanted to know how the upcoming switch of the Teachers' Retirement System (TRS) from a defined benefit (DB) plan to a defined contribution (DC) plan is likely to affect the ability of Alaska schools to recruit and retain teachers.

SUMMARY

Ch 9 FSSLA 2005

As you know, Ch 9 FSSLA 05 provides for fundamental changes in the state's retirement systems for public employees hired on or after July 1, 2006. The primary component of the bill is a switch from a "defined benefit" pension system to a "defined contribution" retirement savings plan.[1] Debate over SB 141 and the comparative value of DB and DC plans continues to be intense and, at times, bitter, as the issue of public retirement affects many Alaskans. Although below we discuss in detail the differences between the two systems, it is not our intention to further the larger debate over the state's retirement system with this report. Instead, we focus on the narrower issue of how the change in the Teachers' Retirement System (TRS) is likely to impact the recruitment and retention of teachers to Alaska schools.

It is important to note that recruitment and retention issues were not the primary motivation behind THE NEW LAW. Rather, according to the bill's sponsors, by placing all state employees hired on or after July 1, 2006, in a defined contribution system, the law is intended to be the first

[1] When comparing the two plans we generally focus on retirement income. It is important to note that SB 141 makes changes to virtually all aspects of the public retirement system in Alaska for future public employees, including how healthcare plans are funded when those employees retire. Supporters of the reforms point out that, unlike many DC systems, the plan in SB 141 provides for retirees' healthcare coverage. Comparing aspects of various DC plans is, however, outside the scope of this report. Assuming that both the DB plan currently in place and the DC system to be implemented under the new law provide adequate healthcare coverage, there should be no impact on recruitment and retention stemming from healthcare benefits or, for that matter, any other features the plans have in common.

step in addressing a projected shortfall of nearly $6 billion in future retirement system funding. The move does not directly reduce the amount of that "unfunded liability," but prevents future employees from increasing the systems' shortfall. Supporters of the reforms, have, nonetheless, indicated that the switch in retirement systems will be a boon to recruitment and retention of public employees. In fact, CH 9 FSSLA 05 begins by adding a new section to AS 14.25, which, in part, provides the following statement of purpose:

> Sec. 14.25.001. Purpose. The purpose of this chapter is to encourage qualified teachers to enter and remain in service with participating employers by establishing plans for the payment of retirement, disability, and death benefits to or on behalf of the members.

Recruitment and Retention

Although not the primary driving force behind the reform of the state's public retirement systems, recruitment and retention of teachers appear to be integral aspects of the issue. Clearly, both supporters and detractors of the law believe the ability of the state to attract and maintain a skilled workforce—including high-quality teachers—will be substantially impacted.

Our research indicates that, on balance, the impacts of the new retirement system on the recruitment and retention of teachers will likely be negative. We further determined that the issues of "recruitment" and "retention" are distinct and may be differently impacted by the switch to a DC plan. In this report we therefore examine the two issues as largely individual topics and summarize our key findings for each as follows:

Recruitment

- The combined results of the research we reviewed suggest that retirement plans are, overall, relatively weak recruitment tools. Survey results have indicated that retirement plans are rarely the determining factor in workers' job choices
- Retirement plans appear to have the highest recruitment utility among older workers, who are more likely to be considering retirement issues than are younger workers. Surveys have shown that older workers prefer defined benefit plans. We found little support for claims by supporters of DC plans that younger workers strongly prefer the portability and other features of those plans.
- Workers covered only by defined benefit plans are substantially more likely to describe their retirement plan as "highly important" in their job choices than those covered only by defined contribution plans or workers covered by multiple plan types.
- Evidence suggests that public sector employees may be more willing than private sector workers to exchange higher wages for stronger benefits packages.
- Other states—for instance, Colorado and California—have recently rejected adopting defined contribution systems as their sole primary retirement plans. Research from these states concluded that such moves would not boost, but could harm, recruitment efforts.

Retention

- Overall, retirement plans have been shown to be relatively strong tools for retaining employees. Their retention power is strongest among employees aged 45 and older.

- Evidence suggests that retirement plans and other benefits may be particularly important in retaining public sector employees because those workers' wages are low relative to those of private sector employees performing the same jobs. Benefits may be especially important to teachers whose wages are widely regarded as being inadequate in light of increasing education and certification requirements.
- There appears to be a correlation between employee tenure—that is, length of time at one's current job—and retirement plan design. Tenure is about 80 percent higher in the public sector as compared to the private sector. Approximately 90 percent of public sector employees participating in retirement plans are covered by DB plans compared to about 21 percent of private sector workers.
- Under the current DB system, the average experience of current members of the Alaska Teachers' Retirement System (TRS) is 10.7 years. Approximately 72 percent of current TRS members have at least five years of experience
- Research has shown that employees covered only by a defined benefit plan are substantially more likely than those covered only by a defined contribution plan to indicate that their retirement plans are "highly important" in choosing to remain at their current job.
- Among workers under age 35 who find their retirement plan to be "highly important," those in DB plans are more likely than those covered by DC plans to indicate that it is "highly likely" that they will remain with their current employer until retirement.

We contacted a number of statewide education organizations that are on the "front-lines" of teacher recruitment and retention in Alaska. These groups are nearly universally opposed to switching to a DC plan. Organizations formally opposing SB 141 include the following:

- Alaska Council of School Administrators;
- Alaska Association of Elementary School Principals;
- Alaska Association of Secondary School Principals;
- Alaska Teacher Placement Program; and
- National Education Association-Alaska.

Research from the Institute of Social and Economic Research (ISER) at the University of Alaska indicates that recruitment and retention of quality teachers may be reaching a crisis point in the state, particularly in rural areas. A number of individual school administrators indicated that this situation would be made much worse under the proposed DC plan. Nonetheless, the Alaska Division of Retirement and Benefits (DRB), Governor Murkowski, and the sponsors and supporters of SB 141 maintain that the change to a DC plan will have an overall positive impact on recruitment and retention of public employees.

CHARACTERISTICS OF DEFINED BENEFIT AND DEFINED CONTRIBUTION RETIREMENT PLANS

Both defined benefit and defined contribution plans seek to provide benefits to their respective retired members. The plans differ widely, however, in the means through which that common goal is approached. Perhaps the most significant of those differences lie in their schemes for funding retirement income and who bears the risks of the underlying investments providing that income.

In DB plans, retirement income is based on a formula that generally takes into account, at a minimum, a worker's age, salary, and years of service. The employer guarantees the resulting pension amount and, therefore, bears the risk of investment. By contrast, retirement income from DC plans is based on the amount of total employee and employer contributions to an individual's account and the investment returns on those contributions. No retirement income is guaranteed and, therefore, the employee bears the risk of the investments. Table 1 compares the major features of typical DB and DC retirement plans.

Table 1: Comparison of Major Features of Typical Defined Benefit and Defined Contribution Plans

Topic	Defined Benefit Plans	Defined Contribution Plans
Benefit Design	Benefits are determined by a formula and benefit levels are guaranteed.	Benefits are determined by the contributions and investment earnings in a person's account.
Contributions	Members' contributions are set; sponsors are responsible for contributing as much as necessary to provide the promised benefits.	Members' and sponsors' contributions are set.
Employee Salary Changes	Salary increases affect both past and future benefits, because the benefit is determined by final average salary.	Salary changes affect future contributions.
Cost of Living Adjustments (COLAs)	Two-thirds of public plans provide automatic COLAs. In other public plans, there is no guaranteed protection from inflation.	Public plan provisions usually do not but can provide for annuities that offer an adjustment for inflation.
Benefit Adequacy	Depends on plan provisions.	Depends on investment return.
Investment Risk	Regardless of investment performance, the employer pays specified lifetime benefit. The employer bears the risk.	The employer's responsibility is to make the scheduled contributions. The employee bears the investment risk.
Investment Results	Investment performance affects funding, but does not directly affect benefits. Strong investment performance can lead to enhanced benefits.	Investment performance will help determine the employee's retirement benefit.
Longevity	Benefit levels are guaranteed for a retiree's lifetime. Retirees are often given the option of providing survivor benefits.	Benefits consist of the account balance, which can be annuitized for lifetime income.
Portability	Limited	Full
Individual Control	Members have no individual control of benefit levels, but affect them collectively through political action.	Members have individual choices among investments and may have choices among contribution amounts.
Simplicity	Members often are confused about the relationship of salaries and retirement benefits.	Structure is easily understandable.

Source: National Conference of State Legislatures, "Defined Benefit and Defined Contribution Retirement Plans," available online at *http://www.ncsl.org/programs/fiscal/defineretire.htm.*

Whether one of these plans is superior to the other is a largely subjective determination that depends upon the needs and preferences of the employers and individuals who respectively offer and participate in the plans. Obviously, a plan designed primarily to serve the financial requirements of the employer sponsoring the plan may conflict with the needs and preferences of individual employees. Further, unique circumstances of participants can greatly impact plan preferences. For instance, a mid-career worker who intends to stay with his or her current employer until retirement and has little interest in managing an investment portfolio may prefer the guaranteed pension offered by DB plans. By contrast, an employee who intends to stay only a few years with an employer, and has confidence in his or her investment knowledge, may prefer the portability and increased portfolio control offered by a DC plan. Table 2 shows some of the employee characteristics that determine who generally benefits most from each respective plan.

Table 2: Employees Who Benefit Most, by Retirement Plan Type

Plan Type	Importance of Retirement Plan in Job Choice	
	Little or None	High
Respondents Under Age 35		
Defined Benefit	64.2%	14.6%
Defined Contribution	63.0%	14.5%
Respondents Aged 45 and Above		
Defined Benefit	50.7%	25.5%
Defined Contribution	58.5%	20.0%

Source: The Watson Wyatt *Retirement Attitude Survey* as reported in "How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insider,* April 2005. This survey included responses from approximately 8,000 workers. More information is available online at *http://www.watsonwyatt.com/us/pubs/insider/default.asp.*

COMPARISON OF RETIREMENT INCOME VARIABLES OF THE CURRENT AND FUTURE TRS

Table 3 compares the components that determine retirement income of the current TRS and those of the new plan. Please note that this table shows only those variables that directly impact retirement income. We include a comparison of all the major components of the plans as Attachment B.

Table 3: Selected Features of the Current and Upcoming Tiers of the Teachers Retirement System

Feature	Tier II Entered on or after July 1, 1990	Tier III Entered on or after July 1, 2006
Employee Contribution	Pre-tax employee contribution: 8.65% beginning 1/1/91	8% all employees. Employee may make additional contributions.
Employer Contribution	Determined by annual actuarial evaluation.	7% - DC account, 1.75% Health Plan - determined by annual actuarial evaluation after FY07. Health Reimbursement Account - flat dollar amount per employee based on 3% of the employer's average annual employee compensation.
Vesting	Members vest with 8 years of service.	100% vested in employee contributions from inception. Vested in employer contributions based on the following schedule: 25% after 2 years of service, 50% after 3 years, 75% after 4 years and 100% after five years.
Qualifications for Retirement	Normal retirement age is 60, with early retirement at age 55; teachers can retire at any age after 20 years of membership service.	None for investment account. Taxes and penalties may apply if withdrawn before age 59 1/2. See requirements for Retirement Medical Coverage.
Benefit Calculation Formula	Benefit formula is 2% for the first 20 years, 2.5% thereafter. Benefit calculation is determined on the average of the high three contract salaries.	DC account balance plus investment earnings.
Alaska Cost-of-living Increases (COLA)	An Alaska Cost-of-Living Allowance is payable to benefit recipients 65 or older or disability benefit recipients regardless of age who remain domiciled in Alaska after retirement. The allowance is 10% of the base benefit.	None provided.
Post Retirement Pension Adjustments (PRPA) (Inflation protection)	Automatic PRPA adjustments to disabled members, retirees 60 and over, and those who have received benefits for 8 years.	None provided.

Notes: This table shows only the variables of the two plans that directly impact retirement income. For a comparison of all the components of the plans, please see Attachment B or the Division of Retirement and Benefits' website at *http://www.state.ak.us/local/akpages/ADMIN/drb/home.htm* .
Source: Traci Carpenter, Project Manager, Alaska Division of Retirement and Benefits. Ms. Carpenter can be reached at (907) 465-4817.

PUBLIC AND PRIVATE SECTOR TRENDS IN RETIREMENT PLAN DESIGN

Over the past 25 years, there has been a divergence between the retirement plan designs of the public and private sectors. According to the National Conference of State Legislatures (NCSL), private sector plans were primarily defined benefit plans prior to 1980; almost 40 percent of private sector employees were covered by DB plans in 1977. By 2003, however, that figure had slipped to about 20 percent despite the fact that the total proportion of private sector employees covered by all retirement plans had increased.[2] The shift in the private sector toward defined contribution retirement is often cited as evidence that those plans are superior to DB systems and that the public sector should similarly covert to DC plans. In order to determine the validity of such claims, particularly with regard to recruitment and retention issues for public employers in Alaska, it is important to look more closely at specific elements of the trend toward DC plans in the private sector.

According to the National Association of State Retirement Administrators (NASRA)—whose members include the Alaska Division of Retirement and Benefits—the move toward DC plans in the private sector has not been uniform. Data cited by NASRA shows that the decline in private sector DB plans has occurred almost exclusively among employers with fewer than 250 employees whereas most large firms continue to offer DB plans.[3] Specifically, 346 of the companies that comprise the Standard and Poor's 500 index offer DB plans as their primary retirement benefit. By contrast, only 17 percent of the "Fortune 100" companies offer a DC plan as their primary retirement vehicle.[4] The fact that the overall shift of the private sector to DC plans has not been followed by large companies has been confirmed by the human resources consulting firm Hewitt Associates, which in 2004 indicated that 68 percent of large employers continue to offer DB plans.[5]

Further, when considering private sector trends in retirement plan design, it is import to also examine the reasons behind the shift. Explanations of the private sector's move toward DC plans most often include the following factors:

- **Federal regulation—**the Employee Retirement Income Security Act (ERISA) of 1974 regulates private sector DB plans has made administration of those plans more complicated and expensive than that of DC plans. The Act's requirements for retirement plan funding levels, payments to the Pension Benefit Guarantee Corporation, and limits on maximum deductible contributions have limited business' flexibility.[6]

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[2] National Conference of State Legislatures, "Defined Benefit and Defined Contribution Retirement Plans;" available online at *http://www.ncsl.org/programs/fiscal/defineretire.htm#notefive*.

[3] National Association of State Retirement Administrators, "Myths and Misinterpretations of Defined Benefit and Defined Contribution Plans," updated December 2003. We include a copy of this document as Attachment C. Further information on NASRA can be found on its website at *http://www.nasra.org*

[4] National Association of State Retirement Administrators, p. 3.

[5] Hewitt Associates, "Regulatory Uncertainty Eroding Employer Support for Pension Plans, Hewitt Study Shows," January 6, 2004, *http://was4.hewitt.com/hewitt/resource/newsroom/pressrel/2004/01-06-04.htm*.

[6] Hewitt Associates.

- **Business environment—**low interest rates and investment returns and pressures to limit future financial risk are leading companies away from defined benefit plans.

- **Workforce mobility**—companies believe that that DC plans match workforce mobility and workers' preferences better than DB plans.

Although these issues clearly hold relevance for much of the private sector, for a number of reasons they do not appear to be similarly germane to public sector recruitment and retention issues.

First, state and local governments' pension systems are exempted from the regulatory requirements of ERISA. The Act is, therefore, largely irrelevant to the design of public employees' retirement plans. Second, although the status of the investing environment is significant in terms of plan design overall, the issue appears to be primarily a concern of the employer with no obvious connection to recruitment and retention matters. Finally, workforce mobility and employee preferences are certainly related to recruitment and retention; however, as we discuss below, whether "mobility" and retirement plan "portability" are desirable in the context of attracting *and* maintaining public sector employees is questionable.

ACCESS AND PARTICIPATION RATES OF RETIREMENT PLANS

There are significant differences between the public and private sectors in access to and participation in retirement plans. Overall, almost twice as many public sector employees (98 percent) participate in retirement plans as compared to those in the private sector (50 percent). As our discussion of the trends in plan types would suggest, 90 percent of public sector employees participating in a retirement plan are covered by a defined benefit system compared to just 22 percent of private sector employees.[7] Interestingly, nearly all—97 percent—of the private sector employees with access to defined benefit systems choose to participate. By contrast, the participation rate for private sector workers with access to defined contribution plans is 78 percent. Because plan participation for public sector workers is generally mandatory, it is difficult to make an "apples-to-apples" comparison of participation rates between the two groups. It appears, however, that when given the opportunity private sector worker are more likely to participate in DB plans than in DC plans.[8]

PRIOR RESEARCH ON THE IMPACT OF RETIREMENT PLANS ON RECRUITMENT AND RETENTION

There is not a large body of research comparing the impact of different retirement systems on recruitment and retention. Much of the research on retirement plans focuses on the impacts those plans have on the finances of employers and employees or, to a lesser extent, on the differences in benefits offered by various plan types. While such studies are clearly important, they provide little insight into how various retirement plans affect the behavior of employees. In

[7] Public sector information is from NCSL.

[8] Bureau of Labor Statistics, "National Compensation Survey: Employee Benefits in Private Industry in the United States," March 2005; available online at *http://www.bls.gov/ncs/home.htm*.

the absence of multiple high-quality studies from which to draw conclusions, we focused on three categories of information sources as follows:

- Large-scale surveys of employees' attitudes regarding their retirement plans, which include information on how those plans affect their job choices and employment longevity;
- Recent experiences of other states with implementing defined contribution plans; and
- Views of organizations on the "front-lines" of teacher recruitment and retention in Alaska and elsewhere.

CONFLICTS BETWEEN "RECRUITMENT" AND "RETENTION"

In our preliminary research and discussions with those involved in hiring teachers in Alaska, it became immediately clear that "recruitment" and "retention" are unique issues. In the context of this report, we found that while certain aspects of retirement systems may have positive impacts on recruitment, they may negatively impact retention ultimately, and vice versa. For instance, supporters of DC systems consistently point out that the increased portability of individual accounts in those systems appeals to younger workers. Indeed, the press release announcing Governor Murkowski's signing of SB 141, quoted Melanie Millhorn, director of the DRB, as stating that the defined contribution plan "will be an effective recruiting tool for future public employees . . . if a young family is dreaming of new life adventures and careers in Alaska, the defined contribution offers more flexibility than the defined benefit program."[9] Ms. Millhorn's comment exemplifies the paradoxical nature of the DC plans: their primary appeal lies in allowing workers to easily *leave their current jobs* without losing the funds accumulated in their retirement accounts. Those plans, therefore, may be most effective in recruiting employees who intend to leave after a relatively short period of time.

In the context of Alaska's teachers, this difference in "portability" is particularly significant because under both the current DB system and the DC system in SB 141, teachers are covered by the same retirement plan at any school in Alaska. Both systems, therefore, provide equal portability among Alaska schools. Under the current DB system, however, teachers leaving Alaska schools are unable to retain the employer contribution portion of their accounts unless they are vested with at least eight years of service. Even then, teachers forfeit the service they have accumulated, and any future pension based on that service, under the TRS system if they "cash-out" their vested retirement funds. By contrast, the DC system will allow teachers to take without penalty 25 percent, 50 percent, 75 percent, and 100 percent of employee *and* employer contributions after two, three, four, and five years, respectively. Put simply, it does not appear that the DC system will provide substantial incentive for teachers to remain in Alaska schools beyond five years. The question, then, is as follows: will the DC system provide increases in recruitment large enough to offset the loss of the retention incentives—vesting requirements and increases in pension due to longevity—of the current DB system? Our research indicates that the answer to that question is, most likely, no.

[9] Governor Murkowski's press release, and audio comments from the sponsors of SB 141 and Ms. Millhorn, can be found online at *http://www.gov.state.ak.us/archive.php?id=1848&type=1.*

THE IMPACT OF RETIREMENT PLANS ON RECRUITMENT

As we mentioned, supporters of SB 141 claim that prospective employees, particularly younger individuals, will be drawn by the increased portability and flexibility of the defined contribution plan.[10] This belief is widely held regarding DC plans in general and such statements are common in the news media and elsewhere. Research into the attitudes of employees, however, provides little support for such claims. In fact, two large-scale surveys have shown that retirement plans have, in general, somewhat limited influence on prospective employees' decisions to take particular jobs. That influence is very weak for workers under age 35 regardless of what type of retirement plan is offered. Indifference to retirement plans among many workers has led NASRA to conclude, "the reality is that most workers are unfamiliar with the difference between defined contribution and defined benefit plans."[11]

In 2002, the Employee Benefit Research Institute (EBRI) reported findings from its most recent *Value of Benefits Survey*, which measured the importance employees placed on benefits offered by employers. According to the EBRI, 77 percent of workers reported that the benefits offered by a prospective employer are very important in their decision to accept or reject a job. However, only 25 percent of workers reported that they have accepted, quit, or changed jobs because of the benefits that were or were not offered. This finding appears to indicate that although benefits are an important facet in recruiting employees, they do not appear to often be *the* determining factor in job choices. Because overall benefit packages represent only a portion of the factors influencing job choices, the impact of retirement benefits alone on recruitment appears to be relatively small. According to EBRI, 60 percent of workers view health benefits to be the single most important benefit offered by their employer. By contrast, just 29 percent of respondents found retirement savings and pension plans to be most important.[12]

The *Retirement Attitudes Survey* conducted by the firm Watson Wyatt further confirms the relative weakness of retirement plans as a recruiting tool. Although the survey found that most workers value both defined benefit and defined contribution retirement plans, researchers concluded that, overall, retirement plans may not be overly effective at attracting workers. This weakness was particularly evident among younger workers who reported that neither DB nor DC plans were of "high importance" in their decisions to take a job. The researchers called this result "surprising" not because young people don't place emphasis on retirement plans, but because the plan types were equally ineffective. That is, workers under age 35 did not attribute increased recruitment value to the DC plan as researchers had expected. By comparison, workers aged 45 and older are more likely to indicate that retirement plans were highly important in their decision to take a job. Among this group, DB plans were found to be a stronger recruiting tool than DC plans. Table 3 shows the relative importance of retirement plans on the job choices of younger and older

[10] Supporters of defined contribution systems elsewhere have cited employees' desire for increased control over investments within individual retirement accounts as another strength of DC plans as compared to DB systems. It does not appear, however, that the sponsors or supporters of SB 141 heavily focused on this aspect in arguing for the DC plan in Alaska.

[11] National Association of State Retirement Administrators, p. 18.

[12] Rachel Christensen, "Value of Benefits Constant in Changing World: Findings from the 2001 EBRI / MGA Value of Benefits Survey," *EBRI Notes,* Vol. 23, No. 3 (March 2002). We include a copy of this article as Attachment D. Further information on EBRI can be found on its website at *http://www.ebri.org*.

workers.[13] The data in Tables 4 through 9 represent results from a survey of approximately 8,000 workers.

Table 4: Importance of Retirement Plans in Attracting Certain Workers

Plan Type	Importance of Retirement Plan in Job Choice	
	Little or None	High
Respondents Under Age 35		
Defined Benefit	64.2%	14.6%
Defined Contribution	63.0%	14.5%
Respondents Aged 45 and Above		
Defined Benefit	50.7%	25.5%
Defined Contribution	58.5%	20.0%

Source: The Watson Wyatt *Retirement Attitude Survey* as reported in "How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insider,* April 2005. This survey included responses from approximately 8,000 workers. More information is available online at *http://www.watsonwyatt.com/us/pubs/insider/default.asp.*

It is important to note that Table 4 contains the responses of younger and older workers that are, in a number of instances, covered by *both* DC and DB plans simultaneously. By contrast, Table 5 shows the responses of workers aged 20 and older who are covered by *only* a DC *or* a DB plan as compared to those of all respondents.

Table 5: Impact of Retirement Plans on Workers' Job Choices, by Plan Structure

Plan Type	Importance of Retirement Plan in Job Choice	
	Little or None	High
All Respondents		
Defined Benefit	54.1%	22.6%
Defined Contribution	59.2%	18.2%
Covered by Both Plan Types		
Defined Benefit	54.7%	21.4%
Defined Contribution	56.7%	20.3%
Covered by One Plan Type Only		
Defined Benefit	49.7%	**30.8%**
Defined Contribution	62.7%	**15.2%**

Source: The Watson Wyatt *Retirement Attitude Survey* as reported in "How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insider,* April 2005. This survey included responses from approximately 8,000 workers. More information is available online at *http://www.watsonwyatt.com/us/pubs/insider/default.asp.*

[13] We include, as Attachment E, a copy of "How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insid*er, April 2005. Roughly 8,000 employees completed the Watson Wyatt Retirement Attitude Survey in 2003. Every employee in the sample was matched to his or her actual plan design information using the Watson Wyatt COMPARISON™ database. All respondents were covered by a defined benefit plan, a defined contribution plan, or both. Two-thirds of the employees have both a defined benefit plan and a defined contribution plan; 27 percent have only a defined contribution plan; the remaining workers have only a defined benefit plan. The final sample included employees

(footnote continued)

As you can see, when workers covered by only a DC or DB plan are isolated, participants in DB plans are about twice as likely as those in DC plans to report that their retirement plan was highly important in the decision to take their current job.

RETIREMENT PLANS AND PUBLIC SECTOR RECRUITMENT

Thus far, we have discussed research that combined data from the public and private sectors, or that discussed private sector workers alone. It is important to acknowledge, however, that workers in the two sectors may generally hold differing attitudes and preferences regarding retirement plans. Research has shown that certain demographic and personality characteristics impact workers' views about retirement planning.[14] Although difficult to quantify precisely, it is clear that such factors also impact job choices. It stands to reason that some of the specific preferences and characteristics that commonly lead members of given professions to their jobs also impact their general collective views on retirement plans and other benefits. Put simply, it may be that people who are inclined to become public employees have very different attitudes and priorities with regard to compensation—i.e., pay and benefits, including retirement plans—than those who pursue careers in the private sector. Evidence of these differences is apparent when considering the salaries of public and private sector employees who perform essentially identical jobs. The 2005 *Public Employees Compensation Survey* by the American Federation of Teachers found that the salaries of public sector employees are, on average, approximately 30 percent less than those of their private sector counterparts.[15] In light of the differences between the two groups, it is important to isolate the experiences and preferences of public sector organizations and employees from those of the private sector.

In the absence of extensive empirical data on other states' recruiting experiences following the implementation of defined contribution plans, it is instructive to examine research from other states whose governments have considered adopting DC systems. Two such states—Colorado and California—hold particular relevance to our research because they have each considered the issue recently. In addition, both of these western states—particularly California—directly compete with Alaska for teachers.

In 2001, Colorado contracted the firm Buck Consultants, Inc. to examine the potential redesign of the state's retirement system, including a possible switch from the state's defined benefit plan to a defined contribution system. The consultants determined that changing the benefit design would not significantly improve recruitment. Instead, they indicated that enhancing communication about the positive attributes of Colorado's existing retirement system could improve recruitment.[16]

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from 982 firms. More information on Watson Wyatt and the survey can be found online at *http://www.watsonwyatt.com/us/pubs/insider/default.asp.*

[14] See, for example, Donna M. MacFarland, Carolyn D. Marconi, and Stephen P. Utkus, "Money Attitudes and Retirement Plan Design: One Size Does Not Fit All," *Pension Research Council,* The Wharton School, University of Pennsylvania*,* 2003; available online at *http://www.reish.com/publications/pdf/money.pdf*.

[15] Further information on the American Federation of Teachers and its salary surveys can be found online at *http://www.aft.org/salary/index.htm.*

[16] "Study of Retirement Plans for the State of Colorado Office of the State Auditor Pursuant to Senate Bill 01-149," Buck Consultants, Inc., November 2001; available online at *http://www.nctr.org/pdf/coloradodcdbstudy.pdf.*

Colorado ultimately kept its DB system and, in 2004, added an optional primary DC system, which will go into effect January 1, 2006.

It remains to be seen if providing a choice between retirement systems boosts recruitment in Colorado; however, the experiences of other states that have done so does not indicate a strong desire for DC plans by public employees. According to the National Association of State Retirement Administrators, large numbers of public employees in Michigan, Florida, Ohio, and South Carolina have been given the opportunity to participate in DC systems as a primary retirement plan. In each of these states, more than 90 percent of those eligible to switch have chosen to stay in the DB plan.[17]

As part of his FY06 budget package, California Governor Arnold Schwarzenegger proposed reforming the California Public Employees' Retirement System (CalPERS) by switching the system to a defined contribution plan. The CalPERS is among the largest retirement systems in the country with 1.45 million active and retired members and about $196 billion in assets. As such, its consideration of a conversion to a DC plan was seen as a bellwether for the direction of public retirement systems that would impact other states contemplating similar reforms.

The reaction to Governor Schwarzenegger's proposal was swift: within days the CalPERS Board of Directors issued press releases stating its opposition to the reforms. Police officers, firefighters, and teachers began organizing public protests and producing print and television advertisements condemning the proposal. In January 2005, the CalPERS issued a *Research Brief* entitled "Pension Debate: The Myths and Realities of Defined Benefit and Defined Contribution Plans."[18] The brief included a section on the impact retirement plans have on recruiting public employees that indicated, in part, "[d]efined contribution plans will hamper state recruitment and retention" and will make the state less able to attract capable workers. Further, CalPERS argued, "…it is not the pay that attracts people to work for the State, but rather the retirement benefits." In April, facing strong opposition from public employees and their supporters, the governor abandoned the proposed reforms.

Although the experiences of other states do not provide direct empirical evidence as to the impact on recruitment of switching from a DB to a DC plan, they have shown the retirement plan preferences of active public employees. In each instance we have reviewed, public employees' unions and advocacy organizations—in particular those of teachers and public safety employees—have led the opposition to proposed switches in statewide retirement systems from DB to DC plans. This evidence, combined with the survey data cited above, appears to contradict arguments that the switch proposed under SB 141 will improve recruitment of teachers to Alaska schools.

THE IMPACT OF RETIREMENT PLANS ON RETENTION

Defined benefit plans have been described as "golden handcuffs" for the employees in those systems. The moniker refers to the power of such plans to retain workers by requiring minimum vesting periods and providing increased benefits for longevity. As we mentioned, by contrast, defined contribution plans most often do not require extensive vesting periods and, since there is

[17] National Association of State Retirement Administrators, p. 20.

[18] We include a copy of the January 2005 CalPERS *Research Brief* as Attachment F.

no guaranteed benefit amount, cannot offer increases for longevity. Our research shows that DB systems appear to be more effective at retaining employees. Indeed, this effect may be particularly strong among public sector employees.

According to the *Retirement Attitude Survey*, both DB and DC plans are better at retaining workers than recruiting them. As Table 6 shows, among all survey respondents, DB plans are attributed with a higher retention value. Moreover, retention power is strongest among employees covered by only a DB and weakest for those in only a DC plan.

Table 6: Retention Value of Retirement Plans, by Plan Type

Plan Type	Importance of Retirement Plan in Remaining at Current Job	
	Little or None	High
All Respondents		
Defined Benefit	30.8%	46.4%
Defined Contribution	35.7%	39.5%
Covered by Both Plan Types		
Defined Benefit	31.1%	45.4%
Defined Contribution	30.2%	45.4%
Covered by One Plan Type Only		
Defined Benefit	28.8%	**53.1%**
Defined Contribution	43.5%	**31.3%**

Source: The Watson Wyatt *Retirement Attitude Survey* as reported in "How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insider,* April 2005. This survey included responses from approximately 8,000 workers. More information is available online at *http://www.watsonwyatt.com/us/pubs/insider/default.asp.*

As Table 7 shows, overall there exists a wide difference between workers younger than 35 and those aged 45 and older in the power of their retirement plans to encourage retention. As you can see, about 53 percent of older workers in DB plans say their retirement plan is "highly important" compared to around 44 percent of those in DC systems. For younger workers, fewer than one-third found either plan type to be similarly important.

Table 7: The Importance of DB and DC Plans on Retention of Certain Workers

Plan Type	Importance of Retirement Plan in Remaining at Current Job	
	Little or None	High
Respondents Under Age 35		
Defined Benefit	45.3%	29.1%
Defined Contribution	43.6%	28.1%
Respondents Aged 45 and Above		
Defined Benefit	26.9%	52.8%
Defined Contribution	33.7%	44.1%

Source: The Watson Wyatt *Retirement Attitude Survey* as reported in "How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insider,* April 2005. This survey included responses from approximately 8,000 workers. More information is available online at *http://www.watsonwyatt.com/us/pubs/insider/default.asp.*

Table 8 illustrates that among workers under age 35 who described their retirement plans as "highly important," those in DB plans were more likely than those in DC plans to indicate it was "highly likely" they would remain with their current employer until retirement. This result is somewhat surprising in light of the common belief that younger workers strongly prefer DC plans.

Table 8: Retention Power of Retirement Systems Among Younger Workers

Employees' Perceptions of Retirement Plan	Likelihood of Employees Under Age 35 Staying With Current Employer Until Retirement	
	Low	High
Defined Benefit Plans		
High Importance	19.8%	**51.0%**
Low Importance	55.7%	19.0%
Defined Contribution Plans		
High Importance	30.5%	**40.0%**
Low Importance	56.7%	20.0%

Source: The Watson Wyatt *Retirement Attitude Survey* as reported in "How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insider,* April 2005. This survey included responses from approximately 8,000 workers. More information is available online at *http://www.watsonwyatt.com/us/pubs/insider/default.asp.*

Table 9 combines the information in Tables 4 and 5 to provide a comparison of the relative value of retirement plans in attracting *and* retaining employees as reported in the Watson Wyatt *Retirement Attitude Survey*.

Table 9: Impact of Retirement Plans on Attracting and Retaining Employees, by Plan Type

Plan Type	Impact on Recruitment		Impact on Retention	
	Little or None	High	Little or None	High
All Respondents				
Defined Benefit	54.1%	22.6%	30.8%	46.4%
Defined Contribution	59.2%	18.2%	35.7%	39.5%
Covered by Both Plan Types				
Defined Benefit	54.7%	21.4%	31.1%	45.4%
Defined Contribution	56.7%	20.3%	30.2%	45.4%
Covered by One Plan Type Only				
Defined Benefit	49.7%	**30.8%**	28.8%	**53.1%**
Defined Contribution	62.7%	**15.2%**	43.5%	**31.3%**

Source: The Watson Wyatt *Retirement Attitude Survey* as reported in "How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insider,* April 2005. This survey included responses from approximately 8,000 workers. More information is available online at *http://www.watsonwyatt.com/us/pubs/insider/default.asp.*

WORKER TENURE

A recent study by the Employee Benefit Research Institute (EBRI) measured the number of years employees have worked at their current jobs. The researchers found that the median tenure of private sector workers was about four years. Public sector workers, by contrast, had a median tenure of approximately seven years—75 percent longer than those in the private sector.

Clearly, retirement issues are just one factor among many that constitute an employee's decision to remain in a job. Nonetheless, as research from CalPERS and others indicates, retirement packages may be more important to public sector employees because of their low wages relative to those in the private sector. It stands to reason that the prevalence of DB plans in the public sector has had some influence on the increased tenure seen in public employees relative to the private sector where DC plans are most common.[19] Teachers in Alaska, whose wages are regarded by researchers at ISER and elsewhere to have fallen behind those of teachers in most other states, may be strongly influenced to remain in their current positions in order to take maximum advantage of their defined benefits plan.

According to data from the Teachers' Retirement System, there are currently approximately 9,900 active members in the system. Of these, 7,121—or 72 percent—have at least five years of experience, and the overall average experience for active TRS members is 10.7 years.[20] It is important to note that each year a portion of the teachers in Alaska move between schools and districts within the state. As such, TRS experience data are not directly comparable to the tenure figures from EBRI reported above.[21] That is, EBRI figures refer to employees staying with a single employer, whereas TRS data refers to teachers active in a single retirement system covering multiple employers—i.e. all the schools in the state. Nonetheless, the collective data does indicate that, on average, teachers remain employed in Alaska schools for longer periods of time than other public or private sector employees remain with a single employer. Again, although retirement plans are rarely the sole factor behind employees remaining in a specific occupation, it stands to reason that the current TRS plan contributes to the relative longevity of its active members.

STATUS OF TEACHER RECRUITMENT AND RETENTION IN ALASKA

It is widely acknowledged that Alaska schools, particularly those in rural communities, are facing increasing difficulty attracting and keeping quality teachers. Although by no means the sole reason, those difficulties begin with the fact that Alaska schools must import from other states roughly 70 percent of all new elementary and high school teachers hired annually. This means that Alaska must compete with other states for teachers—particularly western states with rapidly

[19] Although we located no empirical research regarding the role retirement plan designs play in the differences in worker tenure between the public and private sectors, we believe it is reasonable to, at the least, infer a strong correlation between the ubiquity of DB plans and long tenure in the public sector.

[20] Tony Brakes, Retirement and Benefits Specialist I, Division of Retirement and Benefits, provided TRS data. Mr. Brakes can be reached at (907) 465-5696.

[21] For more information on teacher mobility within Alaska, see G. Williamson McDiarmid, et al. (ISER), pp. 9-11.

increasing school enrollment (e.g., Arizona, California, and Nevada).[22] From this perspective, it is clear that a variety of factors impact Alaska's competitive standing in the hiring market. Some of these are intangibles such as the personal inclinations of prospective teachers, which may include geographic, climatic, or cultural preferences, that are largely unaffected by policy decisions. Others, most obviously salary and benefits, are heavily impacted by policy decisions and directly influence the state's ability to compete for quality teachers.

According to ISER, over the past twenty years the state's average teacher salary, when adjusted for cost of living differences, has slipped from being highest in the nation to around 40th among the states today. The researchers at ISER predict that schools in urban areas of the state that have traditionally been relatively easy to staff will begin to suffer unless Alaska's competitive position is improves. Further, researchers say, the loss of the competitive edge once enjoyed by Alaska schools has eroded to the point that currently hard to staff schools in rural areas will have to rely on unqualified or under-qualified staff to teach students who already under-perform on standardized tests.[23]

Nationwide, schools in rural areas face particular problems with securing a stable teaching force. This is particularly true in Alaska where high costs of living, shortages of quality housing, cultural differences, and geographic isolation are among the issues that deter prospective teachers. The turnover rates found in many of Alaska's rural school districts indicate that even when sufficient numbers of qualified teachers can be hired, within a few years many move to urban districts, other states, or out of the teaching force entirely. According to ISER, 24 of the state's rural school districts have annual teacher turnover rates above 20 percent. Of these, 11 districts have turnover rates at or above 30 percent. This compares to turnover in the urban districts of Anchorage, Fairbanks, Juneau, and Mat-Su, which, at between 6 percent and 14 percent, are closely in line with national averages.[24]

VIEWS OF ALASKAN EDUCATIONAL ORGANIZATIONS REGARDING CH 9 FSSLA 2005

In order to get the views of those on the "front-lines" of teacher recruitment and retention, we sought input on the likely impact of SB 141 from a number of statewide educational organizations. The following individuals and organizations responded to our request:

- Bill Bjork, president, National Education Association-Alaska (NEA-AK);
- Mary A. Francis, Ph.D., executive director, Alaska Council of School Administrators (ACSA);
- Melissa Hill, executive director, Alaska Teacher Placement Program (ATP), University of Alaska; and
- Carl Rose, executive director, Association of Alaska School Boards (AASA).

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[22] G. Williamson McDiarmid, Eric Larson, and Alexandra Hill, "Retaining Quality Teachers for Alaska," Institute of Social and Economic Research, University of Alaska Anchorage, 2002. We include a copy of this study as Attachment A.

[23] McDiarmid, et al., p. 57.

[24] McDiarmid, et al., p. 12.

Three of these organizations—NEA-AK, ACSA, and ATP—have taken official positions opposing the implementation of the defined contribution plan in SB 141. According to Carl Rose, the AASA has not yet formalized its position on the matter, and he has not yet seen data to support claims that the DC plan will negatively impact recruitment. He did, however, indicate that he believes younger workers generally do not consider retirement issues when job-hunting, but fears that there may be "some truth" to the concern that recruitment and retention of middle-aged teachers will be negatively impacted.

Indicating the opposition of the NEA-AK to the SB 141 retirement reforms, Bill Bjork stated as follows:

> . . . the impact of SB 141 will be so severe that the proposed defined contribution system will have to be changed or Alaska simply will not attract the high quality employees we want and need to maintain quality Alaska K-12 schools.

Further, Mr. Bjork believes the changes in TRS will put Alaska's retirement system in the "bottom 10" among the states, which, when combined with falling salaries and increased certification requirements, will "substantially reduce the state's competitive standing in the market place for new teachers." The NEA-AK sees the impact of the future DC plan on retention to be negative as well, as Mr. Bork emphasized in the following statement:

> Alaska is on a path to become the training ground for Pacific Northwest states. SB 141 places an incentive into law for public employees including teachers, architects, engineers and public safety officers to leave Alaska within their first five years of employment for states where salaries and retirement benefits are competitive.[25]

According to Dr. Mary Francis, the ACSA sees the impacts of SB 141 in a similarly negative light. At its 2005 annual meeting, the Council adopted a resolution stating that the group's members collectively "believe in and support the defined benefits Alaska Teacher Retirement (TRS) and Public Employee Retirement Systems (PERS) as an important element in attracting and retaining capable employees . . ." The Alaska Association of Elementary School Principals (AAESP) and the Alaska Association of Secondary School Principals (AASSP) jointly adopted a resolution identical to that of the ACSA.[26]

The University of Alaska's Teacher Placement Program organizes job fairs for teachers and provides services to school districts to assist in their recruiting efforts. Melissa Hill, ATP executive director, told us that attendance at Alaska job fairs has decreased dramatically in recent years due, in large part, to salary and cost of living issues. She believes moving to a DC retirement plan will effectively remove one of the "very important" remaining recruiting tools at the disposal of Alaska schools.[27]

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[25] Personal communication from Bill Bjork, a copy of which we include as Attachment G. Mr. Bjork can be reached at (907) 274-0536.

[26] Specifically, the resolutions were adopted as ACSA Resolution #8 (2005) and AAESP / AASSP Joint Resolution 05-03. We include, as Attachment H, a copy of the text of the joint resolution, as well as comments Dr. Francis collected from a number of individual ACSA members regarding the impacts of SB 141. Dr. Francis can be reached at (907) 586-9702.

[27] Personal communication from Melissa Hill. Ms. Hill can be reached at (907) 450-8400.

INPUT FROM THE DIVISION OF RETIREMENT AND BENEFITS

We asked the Division of Retirement and Benefits to comment on the projected impacts of SB 141 on teacher recruitment. Traci Carpenter, project manager, Division of Retirement and Benefits, provided input on behalf of the DRB. Ms. Carpenter begins the points in her memorandum as follows:

> In all the research that has been done over the past several years **we have found no empirical evidence to support the contention that retirement benefits are crucial in a person's decision to become or remain a teacher, whether in Alaska or elsewhere in the country** [emphasis added]**.**

Because this statement appears to conflict with the quote attributed to DRB Director Millhorn in the Governor's press release regarding the signing of SB 141—that the DC plan will be "an effective recruiting tool for future public employees"—we asked for clarification of the position of the DRB on the matter. Ms Carpenter replied, in part, as follows:

> . . . we haven't seen verifiable supporting information that retirement plans are crucial in employees' job choices. Specifically, the information that we found on Alaska teachers does not support the idea that retirement benefits play a primary role in their decisions to move.

Despite their apparent lack of "empirical evidence" on the subject, Ms Carpenter reiterated that because of the structure and benefits provided in SB 141, the administrators of the DRB "believe that Alaska's DC retirement plan will be an effective tool for recruitment and retention of both teachers and other public employees." [28]

As this report indicates, we agree, in part, with the stance of the DRB: our research shows that retirement plans, in general, are not often *crucial* in the job choices of a majority of employees. We further agree that there has been little, if any, empirical research *specific* to the affect of retirement plans on the job choices of *Alaska teachers*. Nonetheless, we find that reasonable inferences can be made from existing research, such as we have cited in this report, about the *likely affects* of different retirement plans on the job choices of teachers and other public employees. Further, our research has found that retirement plans may substantially impact the choices of many employees to remain at their jobs. As we have indicated, the evidence we reviewed suggests that teachers and certain other public employees appear overwhelmingly to favor defined benefit retirement plans.

I hope you find this information to be useful. Please do not hesitate to contact us if you have questions or need additional information.

[28] Personal communication from Traci Carpenter. Ms. Carpenter can be reached at (907) 465-4817. We include, as Attachment I, a copy of the memorandum from the DRB.

LIST OF ATTACHMENTS

Attachment A

G. Williamson McDiarmid, Eric Larson, and Alexandra Hill, "Retaining Quality Teachers for Alaska," Institute of Social and Economic Research, University of Alaska Anchorage; 2002

Attachment B

Alaska Division of Retirement and Benefits, Teachers' Retirement System (TRS) Plan Comparison Chart, *http://www.state.ak.us/drb/trs/tiertrs.pdf*

Attachment C

National Association of State Retirement Administrators, "Myths and Misinterpretations of Defined Benefit and Defined Contribution Plans," updated December 2003, *http://www.nasra.org*

Attachment D

Rachel Christensen, "Value of Benefits Constant in Changing World: Findings from the 2001 EBRI / MGA Value of Benefits Survey," *EBRI Notes,* Vol. 23, No. 3 (March 2002), *http://www.ebri.org*

Attachment E

"How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insid*er, April 2005, *http://www.watsonwyatt.com/us/pubs/insider/default.asp*

Attachment F

California Public Employees' Retirement System, "Pension Debate: The Myths and Realities of Defined Benefit and Defined Contribution Plans," *CalPERS Research Brief,* January 2005, *http://www.calpers.ca.gov/*

Attachment G

Personal Communication from Bill Bjork, executive director, National Education Association-Alaska, October 26, 2005

Attachment H

ACSA Resolution #8 (2005) and AAESP / AASSP Joint Resolution 05-03

Anonymous comments from members of the Alaska Council of School Administrators (ACSA), supplied by Mary A. Francis, PhD., executive director, ACSA, October 31, 2005

Attachment I

Traci Carpenter, Project Manager, Alaska Division of Retirement and Benefits, Memorandum: "Impact of Defined Contribution Plan on Teacher Recruitment and Retention," November 7, 2005

Attachment A

G. Williamson McDiarmid, Eric Larson, and Alexandra Hill, “Retaining Quality Teachers for Alaska,” Institute of Social and Economic Research, University of Alaska Anchorage; 2002

RETAINING QUALITY TEACHERS FOR ALASKA

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December 2002

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Jerry Covey, a former commissioner of education, provided data on numbers of education graduates from Alaska's colleges and universities. Melissa Hill, former director of the Alaska Teacher Placement Office at the University of Alaska Fairbanks, and Karen Lipson, a research analyst with the Alaska Department of Education and Early Development, provided a wide range of information on Alaska's teachers and students—including teacher turnover, new hires, and other teacher and student characteristics. Claudia Dybdahl, director of UAA's Teacher Education Program, provided information on graduates certified to teach special education.

We also thank those who provided valuable comments on earlier drafts: Gary Baldwin, Lower Kuskokwim School District; Lee Gorsuch, UAA; Rich Kronberg, NEA-Alaska; and Paul Ongtooguk, ISER.

CONTENTS: RETAINING QUALITY TEACHERS FOR ALASKA

CHARTS, TABLES, MAP

Retaining Quality Teachers for Alaska

I. THE NATIONAL AND REGIONAL PICTURE

Historically, Alaska has depended heavily on teachers educated outside the state. Over time, Alaska has imported roughly 70 percent of its teachers. As a consequence, national trends—in certification of new teachers, teacher shortages, retirements, and salaries—are of immediate relevance to teacher supply and demand in Alaska.

Before we delve into data on Alaska educators, therefore, we will look at the wider national picture. Specifically, projections of student enrollment, teacher retirement, turnover, and new entrants to the teaching field seem critical to the issue.

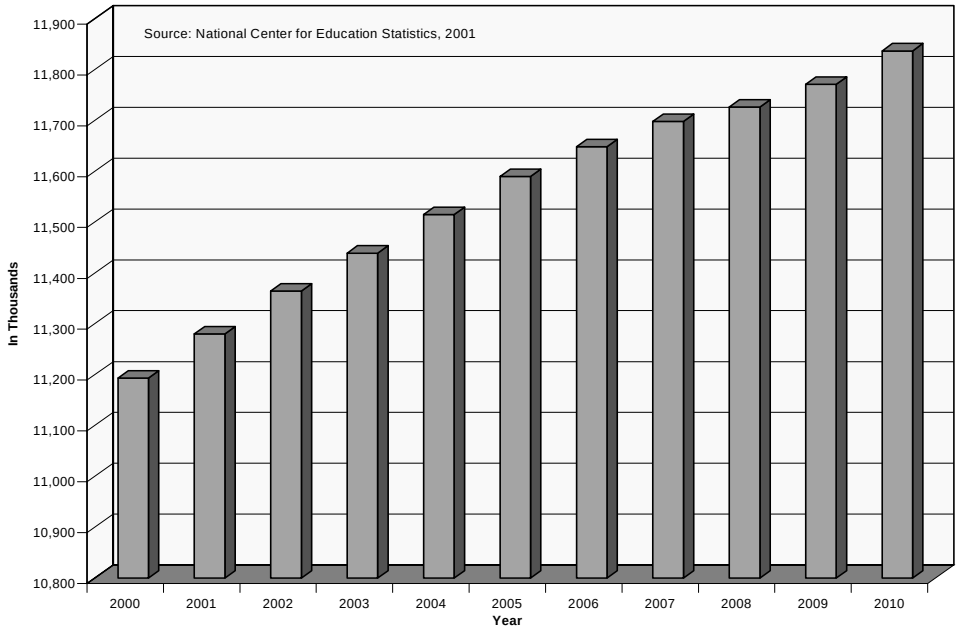
Nationwide Enrollment

Nationwide, student enrollment is beginning to level off, after increasing for a number of years. Projected enrollments for the year 2010 are almost identical to those for 2000. Secondary enrollment grew slightly between 1999 and 2000, while elementary enrollment decreased slightly from the previous year (NCES, 2002).

The bigger issue is which states are experiencing growth. Six states are witnessing a surge in enrollment: California, Nevada, Arizona, North Carolina, Massachusetts, and Rhode Island. The three Western states experiencing enrollment growth compete with Alaska for teachers. Student enrollment in the Western region, projected to grow about 6 percent between 2000 and 2010 (Chart 1), will outstrip the national growth rate in the period 2000-2010.

Although this growth is not dramatic—roughly half a percent annually—it nonetheless suggests a slow, steady increase in demand for teachers. And when growing enrollment is coupled with policy initiatives such as class-size reduction in California, the demand for teachers increases dramatically—as we have seen in Los Angeles.

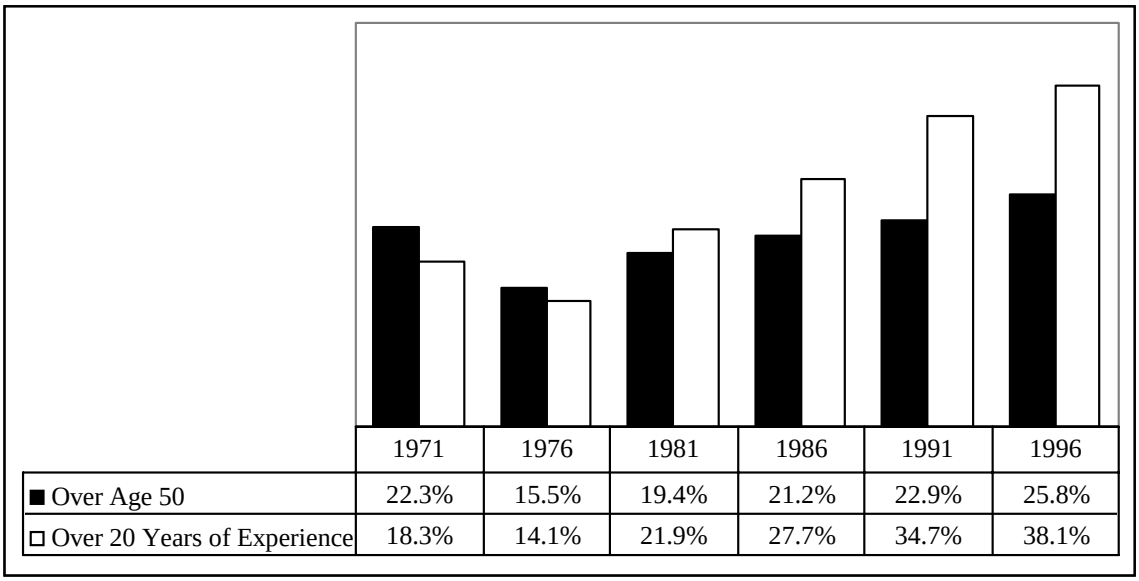
Chart 1. U.S. Western Region, K-12 Enrollment Projections, 2000-2010



National Teacher Retirement and Turnover

What has received the most public attention nationwide is the rise in the number of teachers reaching retirement age. From 1986 to 1996, the median age of teachers increased from 41 to 44 (NCES, 1998). As Chart 2 indicates, the proportion of teachers over 50 has been increasing since 1976. However, after increasing 5 percent a decade from 1976 to 1996, the share of teachers over 50 is projected to level off, like student enrollments.

Chart 2. Nationwide Teacher Experience and Age Trends



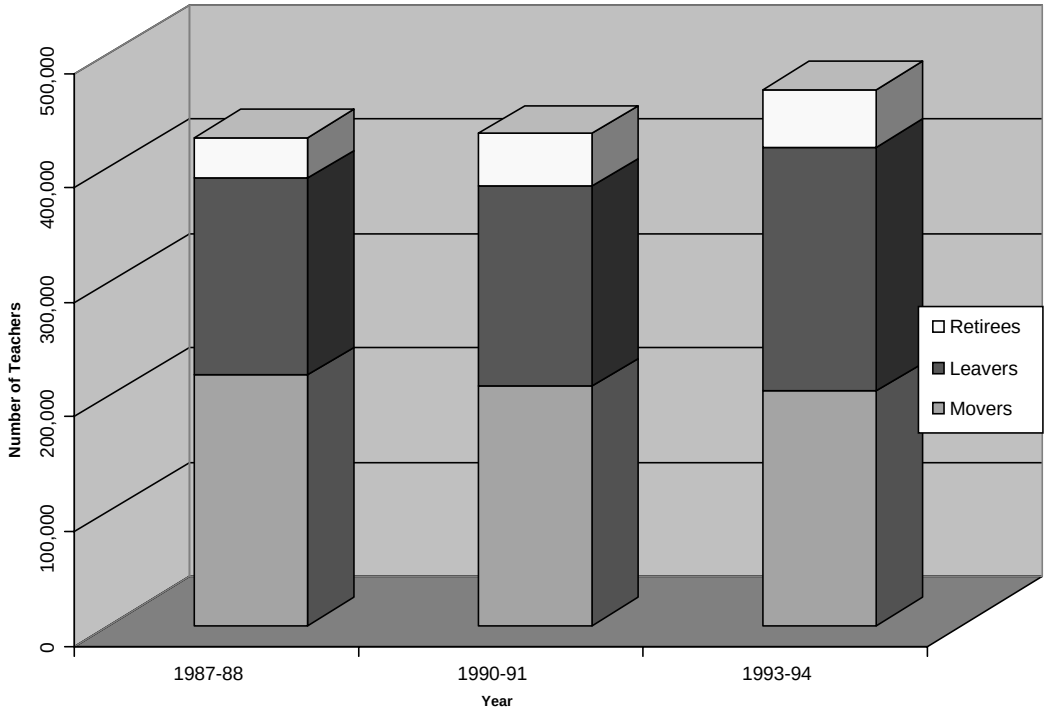
	1971	1976	1981	1986	1991	1996
■ Over Age 50	22.3%	15.5%	19.4%	21.2%	22.9%	25.8%
□ Over 20 Years of Experience	18.3%	14.1%	21.9%	27.7%	34.7%	38.1%

Source: American Federation of Teachers, Survey and Analysis of Teacher Salary Trends 1998, p. 37

Some analysts have concluded that retirements are strongly influencing the demand for teachers. One analysis, based on 1999 surveys of teacher preparation institutions nationally, identified early retirement—intended to save districts money—as the primary factor determining demand, followed by routine retirement (American Association for Employment in Education, 2001).

Yet, retirements account for only small—although growing—proportions both of teachers who leave their positions and those who leave the profession. Of the more than 400,000 teachers who left their jobs in 1993-94—to teach elsewhere, to quit teaching, or to retire—only about 50,242 retired (Ingersoll, 2001). Those retirements accounted for only about 12 percent of teacher turnover that school year. As Chart 3 indicates, these data are consistent over time, rising slightly in the 1990s.

Chart 3. Total Turnover in the U.S.: Movers, Leavers, and Retirees, 1987-88 to 1993-94

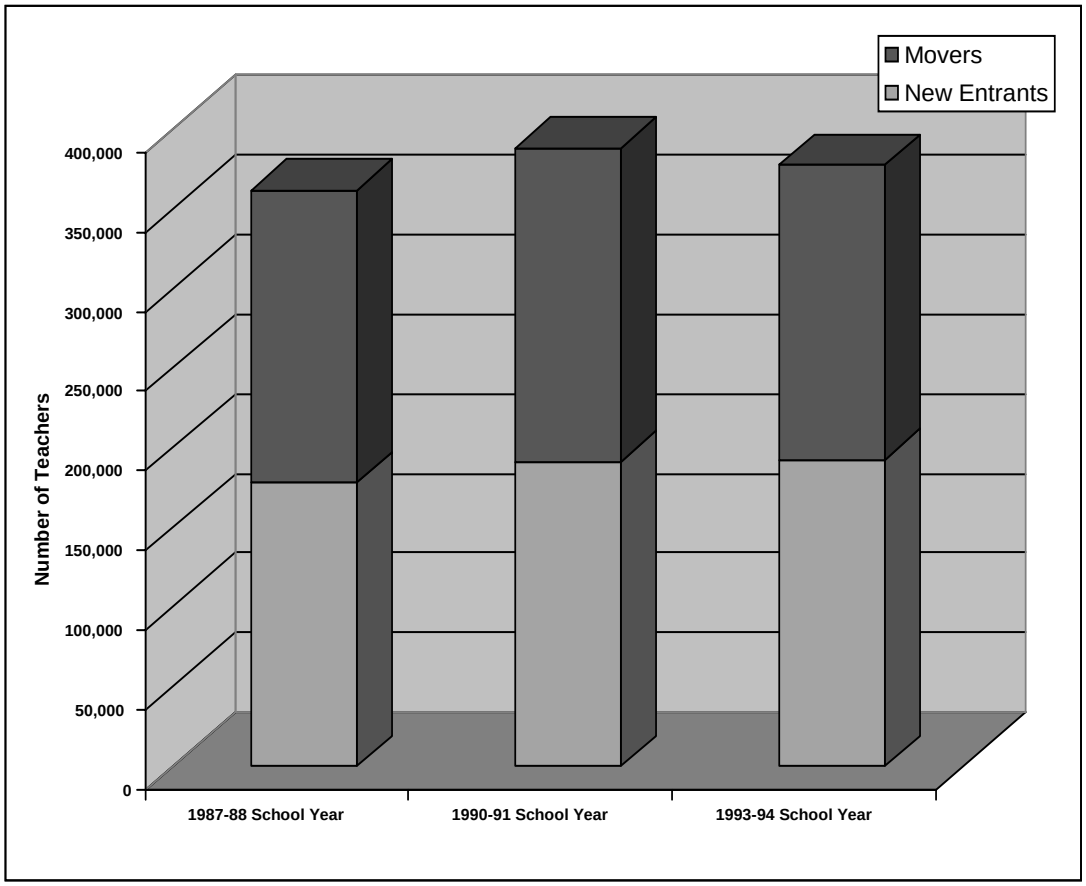


Source: National Center for Educational Statistics, School Staffing Survey*, 1994, cited in Ingersoll, 2001*

As Ingersoll (2001) has argued, it is those who leave the profession ("leavers"), even if temporarily, and those who move from one teaching position to another position elsewhere ("movers"), that constitute the bulk of what is called teacher turnover.

As Chart 4 shows, movers also make up almost half of the new hires each year. In 1993-94—the most recent year for which we have NCES statistics—49 percent of new hires were actually movers, while only 51 percent were new entrants to the profession. This illustrates what Ingersoll calls the "revolving door" of teaching.

Chart 4. Total Hires in U.S. Schools: New Entrants And Movers, 1987-88 to 1993-94



Source: National Center for Education Statistics, School Staffing Survey, 1994, *cited in Ingersoll, 2001*

Is the U.S. Facing an Inadequate Supply of Teachers?

Another common assumption is that the U.S. supply of teachers is inadequate and that teacher preparation programs need to produce more teachers. Although that may be true for certain specialties—for instance, math, science, and special education—it may not be generally true. Enrollment in teacher education programs increased 49 percent in the 15 years between 1983 and 1998 (Feistritzer, 1999). Over the past decade, 67 new teacher education programs have come on line. Recent federal policy initiatives such as the Transition to Teaching program—designed to foster alternate ways for teachers to become licensed and shorten the preparation time—will further increase the labor pool.

Depending on which estimate you choose, the nation has a surplus supply of several million teachers who are certified but not teaching. Census data from 1993 indicated that six million people held at least a bachelor's degree in education in the U.S. (Feistritzer, 1998), while fewer than four million were teaching that year (NCES, 2001). We know relatively little about these potential teachers—for instance, we do not know what incentives would draw some of them into teaching.

Thus, while the demand for teachers has increased nationwide, so has the supply—and it continues to increase.

If Inadequate Supply Isn't the Problem, What Is?

The data we just discussed suggest that a significant number of people do not teach after earning their certificates—perhaps as many as 40 percent of the graduates of teacher education programs nationwide. And the attrition rate for teachers in the first five years of teaching is also high—between 30 and 50 percent, depending on location (Darling-Hammond, 2000; NCES, 1997). Consequently, a graduating class of 100 teachers might yield, five years later, between 30 and 42 teachers in the classroom.

In addition to high attrition rates, the supply of teachers is uneven. For some specialties—such as elementary, English, and social studies—surpluses exist in some areas of the country (NCREL, 2000; Oregon University System, 1999). Yet for other specialties—such as special education, math, and science—shortages are rampant in many districts.

Consequently, to speak of a generic teacher "shortage" is misleading. Rather, we are experiencing *shortages* that are localized and specific to specialties. As we noted above, much of teacher turnover—roughly 50 percent—is actually teachers moving from one district to another (Chart 3). Among all teachers in the U.S., 14 to 15 percent actually leave the profession annually.

Which Schools and Districts are Experiencing Shortages and in Which Fields?

Shortages are localized to a small number of schools. Unfortunately but predictably, high-need schools in rural and urban districts are much more likely than suburban schools to experience shortages (Darling-Hammond, 2000). Students in these high-need schools are also less likely to be taught by teachers with majors or minors in the subjects they are teaching (Education Trust, 2002). Among high-poverty districts, 65 percent hire non-certified or long-term subs (Darling-Hammond, 2000). A student in a high-need math classroom has less than a 50-50 chance of being taught by a teacher with a major or minor in mathematics (Oakes, 1990).

The problem is exemplified by data on shortages by specialty. Most of the areas of shortage are well known—math, science, special education, English as a second language, bilingual education. However, some schools actually experience shortages in specialties for which a surplus of licensed teachers exists. In 1993-94, for instance, 16 percent of schools reported difficulty staffing math positions and 15 percent had trouble filling special education positions—but 9 percent also reported difficulty finding qualified English teachers, despite evidence that teacher preparation programs are producing a surplus of English teachers. This indicates that hard-to-staff schools—which too often are also the schools where students have the greatest educational needs—may have difficulty attracting teachers even in specialties with a surplus of qualified teachers.

This supply problem suggests a parallel to the world food situation. Although sufficient food is produced worldwide to feed everyone, the food often fails to reach the people in greatest need. Thus the issue is less one of *production* and more one of *distribution*. Teachers—especially accomplished teachers who teach in specialties that are experiencing shortages—can usually decide for themselves where they will teach. Many teachers avoid high-turnover districts precisely because they tend to be in impoverished neighborhoods and to enroll students who lack many of the resources that lead to success in school.

This is not to deny that critical supply problems do exist in some specialties. For instance, the Washington Education Association sent current and former special education teachers a survey asking what they would be doing in five years (Washington Education Association, 2002). About two-thirds of those who received surveys responded. Among the respondents, only 36 percent reported they planned to continue working in the field. Another 22 percent were unsure, 13 percent planned to retire, 9 percent planned to leave education altogether, and 20 percent planned to remain in education but not in special education. Even if all those who didn't respond to the survey plan to stay in special education—which seems unlikely, given the answers of those who did respond—at least one in three special education teachers plan on leaving the field within five years. This survey indicates the depth of the problem in special education. Washington is one of the states with which Alaska competes for teachers.

National and Regional Context: Conclusion

The national and regional picture suggests that the primary problem is getting teachers to the schools where they are needed. Most schools in the country and in the Western region are not facing shortages. But schools where students have traditionally been underserved—rural and urban schools in communities with high poverty—are suffering severe shortages. These schools have little choice but to turn to unlicensed and under-prepared people who, facing the greatest instructional challenges, are often overwhelmed and consequently abandon the classroom in short order. As we will see later, one factor associated with students' failure to learn is high teacher-turnover.

Increasing the supply of teachers, especially in high-need areas such as math, science, and special education, may help. Newly minted teachers may find their way to the schools that most need them. History, however, suggests otherwise.

Consequently, we need incentives that will attract well-qualified teachers to the schools where they are most needed.

The Relationship Between Teacher Turnover and Student Achievement

A primary reason to be concerned about high rates of turnover among teachers is the relationship that has been established between teacher turnover and student achievement. David Grissmer and his colleagues at RAND analyzed math and reading scores from over 2,500 fourth and eighth graders in 44 states on the 1990-1996 National Assessment of Educational Progress (Grissmer et al., 2000). The researchers were particularly interested in the relationship between certain school and teacher characteristics and student achievement. They used both U.S. census data and parent self-reported data from the National Educational Longitudinal Study to ensure that they were comparing students from similar socio-economic backgrounds. Among the variables that correlated with higher-than-average student scores over time was low teacher turnover.

The findings of Grissmer and his colleagues are particularly important because they (1) used a national sample of students and their families; (2) examined NAEP results over time, rather than just a "snapshot" of scores; and (3) controlled for the effects socio-economic factors have on student achievement. Still, these results only allow us to say that low teacher turnover is *associated* with higher student achievement, not that low turnover *causes* higher student achievement. Nonetheless, the results are suggestive and make the point that turnover is not merely disruptive and a headache for administrators but that it may also affect student achievement. This finding is particularly relevant to

Alaska at this time, because students will soon be required to pass a High School Graduation Qualifying Examination before they can receive diplomas and because both the federal and state governments have established school accountability systems.

The recent federal No Child Left Behind (NCLB) legislation underlines the importance of addressing the turnover issue. NCLB requires accountability "to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments." If a state fails to improve achievement among disadvantaged students, the U.S. Department of Education could reduce the amount the state may use for administration of ESEA programs. Persistent low performance on the state assessment among students at a given Alaska school is not merely a problem for the community and district in which the school is located—it is a challenge for Alaska as a whole. Addressing chronically high turnover rates—arguably a major factor in persistent low performance—is thus a key to overall state success in meeting the NCLB performance objectives.

II. THE ALASKAN CONTEXT

Population and Enrollment Growth

Alaska's population is expected to grow at a rate of about 1.5 percent annually over the next 25 years (Goldsmith, 2001). This aggregate figure hides unevenness in growth among different groups and in different regions. In 2000, for instance, 39 percent of Alaska Natives were under the age of 18, compared with 30 percent of all Alaskans; Alaska Natives made up 20 percent of school-age children, but just 16 percent of the total population (U.S. Census, 2000). Some areas of the state also grew faster than others in recent years—particularly the Mat-Su Borough, but also the Kenai Peninsula, the North Slope, and the Yukon-Kuskokwim Delta. These data suggest that the demand for teachers is likely to increase more in specific areas and in school districts with large numbers of Alaska Native students.

Alaska's Competitiveness

As noted above, Alaska has relied on teachers from outside the state since the establishment of formal schools in the nineteenth century. In recent years, roughly 70 percent of the teachers in Alaska's schools have been educated outside the state.

The demand for teachers in Alaska increased dramatically during the mid-1970s, when construction of the trans-Alaska oil pipeline attracted new residents, and in the late 1970s and early 1980s, as the state government built and staffed village high schools. At that time, North Slope oil production was generating very high revenues for the state government, and the state was able to offer the highest teacher salaries in the country. As a consequence, most Alaska school districts received far more applications than they had positions and could pick and choose whom they wanted.

However, as the 1980s unfolded, oil revenues began to decline and so did Alaska teachers' salaries, when adjusted for Alaska's higher cost-of-living (COL). The American Federation of Teachers reports that during the 1990s, average COL-adjusted salaries in Alaska plummeted from 8th to 40th among the states (Table 1).

Table 1. Average Salary, Cost-of-Living Adjusted Salary, and Relative National Ranking for Alaska Teachers, 1989-90 to 1999-2000

Year	Average Salary	COL Adj. Salary	National Ranking
1989-90	$43,097	$35,152	8
1992-93	$46,799	$35,214	18
1995-96	$47,349	$36,422	24
1997-98	$48,275	$38,620	23
1999-00	$46,481	$37,185	40

Source: American Federation of Teachers, 2001

To adjust average teachers' salaries to reflect cost-of-living differentials across states, the federation uses the cost-of-living index published by the American Chamber of Commerce Researchers Association (ACCRA; see www.coli.org/). ACCRA uses the COL-adjustment for Anchorage to reflect the cost-of-living differential for the entire state. ACCRA's adjustment for Anchorage is about 23 to 25 percent above the U.S. average, according to Goldsmith (2002). Goldsmith, based on his own research into cost-

of-living differences between Alaska and other states, argues that ACCRA overestimates the cost-of-living difference between Anchorage and the U.S. average but may underestimate the difference for rural areas, where costs can be significantly higher.

Potential sources of error include methods of data collection; the contents of the ACCRA "market basket" used to measure living costs; and the exclusion of sales taxes from the cost of items. Also, the Permanent Fund dividend the state pays Alaska residents effectively reduces the cost-of-living differential—by increasing buying power of Alaskans—but the ACCRA index doesn't account for that.

Goldsmith estimates that the Alaska differential is about 20 percent above the U.S. average (Goldsmith, 2002). This represents the average cost of living across the state, based on weights for particular places using the number of state and local employees in each place. This state average tends to overestimate the differential for Anchorage and underestimate the differential for rural Alaska.

Overall, Goldsmith estimates that the ACCRA index is likely inaccurate for Anchorage and for the state as a whole—and may actually underestimate the cost-of-living differential for rural Alaska. As we will discuss below, of greatest concern in Alaska is the high turnover rate in hard-to-staff schools. These schools are almost exclusively in the remote rural areas of the state, where the cost-of-living differential is the highest. Thus, while the rankings in Table 1 may place Alaska lower than real living costs statewide would justify, they may—by underestimating rural costs—overstate the competitive position of remote rural Alaska districts.

Snapshot of Alaska Teacher Mobility

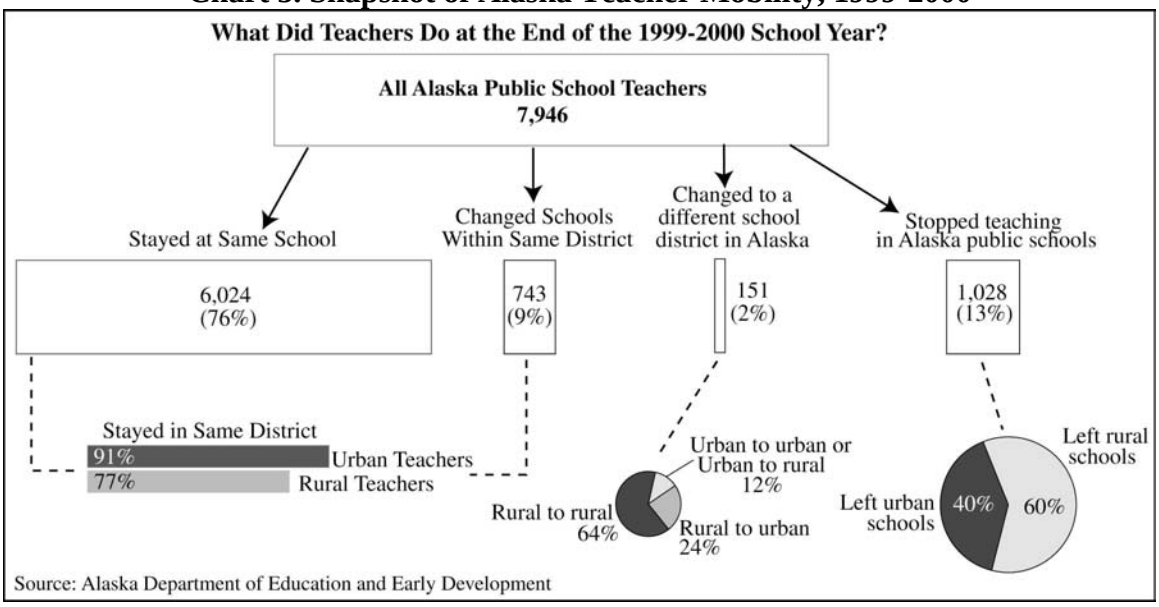
To put our descriptions of teacher turnover and demand in perspective, we first present a snapshot of mobility among Alaska's teachers at the end of the 1999-2000 year. Chart 5 shows that about three quarters of teachers stayed at the same schools to teach the following year. Another 9 percent changed schools but stayed in the same districts. Two percent moved to other Alaska school districts. The final 13 percent decided, for various reasons, to leave their jobs in Alaska's public schools. This turnover— defined as "movers" plus "leavers"—of 15 percent was similar to the national turnover rate of 13.7 percent in 1995 (NCES, 1997).

Within that broad pattern among all teachers, there were substantial differences in movements of urban and rural teachers, as the bottom half of Chart 5 shows. While more than 90 percent of teachers in urban schools stayed in the same districts (either in the same school or a new school) to teach the following year, only 76 percent of rural teachers stayed in the same districts. Among the teachers who left the public schools, nearly 60 percent left rural schools, as compared with 40 percent leaving urban schools.

Of special interest in Alaska is the question of whether significant numbers of rural teachers move to urban districts. Anecdotal evidence suggests that some of the teachers who move to the state initially take jobs in remote districts until they can find openings in districts on the road system. Rural educators point out that if this is true, rural districts shoulder a disproportionate burden of inducting and training new teachers who then move on to urban schools. Because such induction and training may cost $8,000 or more per teacher, this would represent a subsidy rural schools pay urban schools (Texas Center for Educational Research, 2000).

Chart 5 shows that of the small number of teachers who moved from one Alaska district to another in 2000, most were in fact rural teachers. But they moved mostly to other rural districts. Of the roughly 150 teachers who moved from one Alaska school district to another after the 1999-00 school year, about two-thirds moved from rural districts to other rural districts. Another 20 percent—36 teachers—moved from rural to urban schools. A handful moved from urban to rural schools, and a few moved from one urban district to another. Thus, the number of teachers who move from rural to urban districts appears small—yet the acute teacher shortages that rural districts experience suggest that even these relatively small numbers are significant.

Chart 5. Snapshot of Alaska Teacher Mobility, 1999-2000



Source: ISER calculations from Alaska Department of Education and Early Development data

Alaska Teacher Turnover

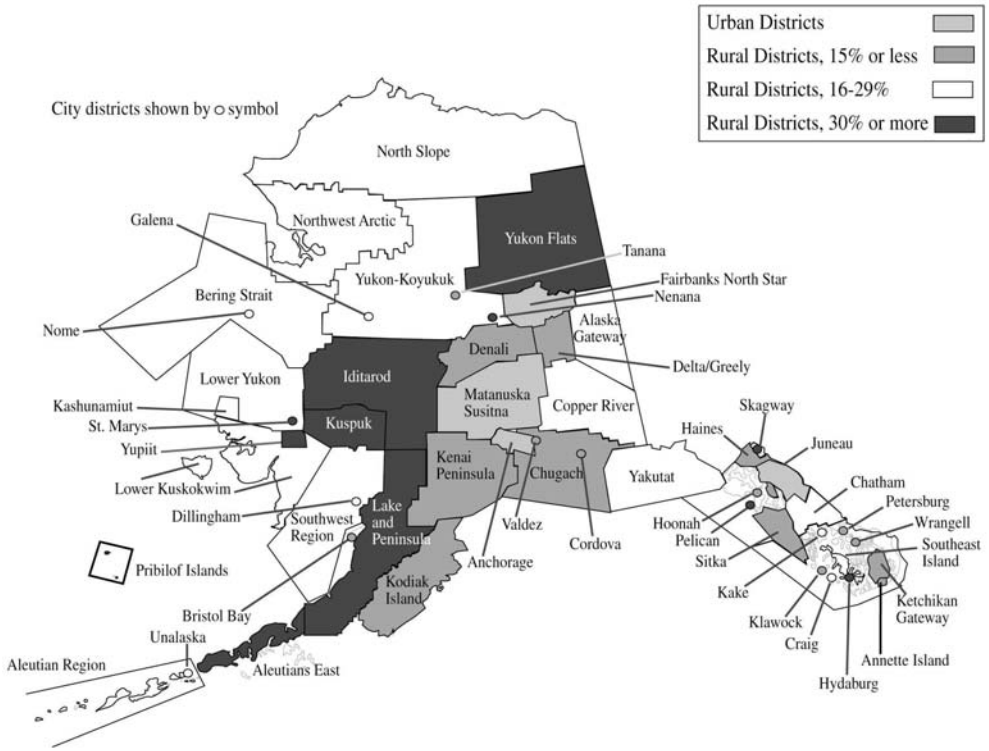
Now we describe teacher turnover among Alaska's 53 public school districts in recent years. As Map 1 shows, the average annual turnover rate from 1996 through 2000 differed sharply across school districts, from a low of 3 percent to a high of 50 percent. We calculated a five-year average, to compensate for year-to-year fluctuations. Some of the smaller, remote rural districts have experienced rates near 100 percent in some years. The state's urban districts—Anchorage, Fairbanks, Juneau, Mat-Su—have historic annual turnover rates between 6 and 14 percent—comparable to the national average. All the districts with annual turnover rates of 30 percent or more are rural districts far from the main road system. But at the same time, some remote districts —notably Klawock (3 percent), Hoonah (7 percent), and Bristol Bay Borough (9 percent)—have annual turnover rates comparable to those of their more accessible counterparts. These districts deserve closer study, so we can learn more about how they manage to retain their teachers.

District and Community Characteristics and Teacher Turnover Rates

Table 2 compares district, community, and teacher characteristics in urban districts—which have low turnover—and several categories of rural districts: those with turnover rates below 15 percent, between 16 and 29 percent, and above 30 percent.

Map 1. Alaska School Districts, By Average Annual Teacher Turnover Rate, 1996-2000

	Average Turnover Rate, 1996-2000
Urban Districts	
Fairbanks North Star Schools	6%
Matanuska-Susitna Schools	8%
Anchorage School District	10%
Juneau Borough Schools	14%
Rural Districts, 15% or less	
Delta/Greely Schools	3%
Klawock City Schools	3%
Hoonah City Schools	7%
Kenai Peninsula Schools	8%
Sitka Borough Schools	9%
Bristol Bay Borough Schools	9%
Valdez City Schools	9%
Kodiak Island Borough Schools	9%
Petersburg City Schools	9%
Ketchikan Gateway Schools	10%
Wrangell City Schools	11%
Haines Borough School District	12%
Chugach Schools	13%
Cordova City Schools	14%
Annette Island Schools	14%
Tanana City Schools	14%
Denali Borough Schools	15%
Rural Districts, 16-29%	
Kake City Schools	17%
Cooper River Schools	17%
Alaska Gateway Schools	18%
Lower Kuskokwim Schools	18%
Nome City Schools	19%
Craig City Schools	21%
Dillingham City Schools	22%
Southwest Region Schools	22%
Lower Yukon Schools	22%
Unalaska City School District	23%
Southeast Island Schools	23%
North Slope Borough Schools	25%
Northwest Arctic Schools	26%
Yukon/Koyukuk Schools	26%
Aleutian Region Schools	27%
Kashunamiut School District	28%
Galena City Schools	28%
Chatham Schools	29%
Yakutat School District	29%
Bering Straits Schools	29%
Rural Districts, 30% or more	
Nenana City Schools	30%
Kuspuk Schools	30%
Pribilof School District	30%
Skagway City Schools	31%
Yukon Flats Schools	31%
Iditarod Area Schools	33%
Lake and Peninsula Schools	36%
Pelican City Schools	37%
Aleutians East School District	37%
Yupiit School District	39%
Hydaburg City Schools	40%
Saint Marys School District	50%



Source: ISER calculations from Alaska Teacher Placement data

Table 2. District, Community, and Teacher Characteristics, by Teacher Turnover Group

Indicator		Year	Turnover Groups, Based on Annual Average Turnover, 1996-2000			
			Urban Districts	Rural Districts Turnover Below 15%	Rural Districts Turnover Between 16% and 29%	Rural Districts Turnover 30% or more
District Indicators	District Teacher Turnover Rate	Average 1996-2000	9%	10%	24%	37%
	Average Daily Membership	2001	20,669	1,299	1,014	282
	Average Number of Teachers	2001	350-2,800*	88	67	29
	Average Base Salary of Teachers	2001	$31,394	$32,447	$35,988	$34,313
	Expenditures per Student (ADM)	1999	$6,473	$9,571	$12,172	$15,994
Community Indicators (Average across communities)	Aver. Number of Communities in District	2001	8	5	8	6
	Average Population per Community	2000	92,667	5,390	3,033	1,164
	Percent Alaska Native Population	2000	11%	33%	57%	64%
	Median Household Income	2000	$51,454	$46,436	$41,087	$37,284
	Median Value, Owner-Occupied Housing	2000	$123,131	$126,558	$88,733	$92,522
	Unemployment Rate	2000	8%	13%	15%	18%
	Percent Families below Poverty Line	2000	8%	10%	16%	19%
Teacher Indicators (For entire district)	Percent Teachers with 1 Year Experience	2001	7%	7%	9%	13%
	Average Years of Experience	2001	10.1	11.8	8.8	7.5
	Percent Female	2001	73%	61%	62%	60%
	Percent Alaska Native	2001	3%	8%	14%	12%

** This is the range rather than the average among urban districts; the average is misleading, because Anchorage has nearly three times the teachers as the next largest district.*
ISER tabulations with data from Alaska Teacher Placement; Alaska Departments of Education and Early Development and Community and Regional Affairs; U.S. Census
Note: District indicators and teacher indicators are averages across districts in each group. Community indicators are averages across communities in each group.

Table 2 makes clear the patterns of difference between, on the one hand, urban districts and rural districts that have little difficulty in staffing their schools, and on the other, rural districts that are chronically difficult to staff.

High-turnover districts have significantly smaller populations and likewise far fewer teachers and students. The districts with the highest turnover had on average 29 teachers in 2001, compared with an average of 88 in rural districts with low turnover and between 350 and 2,800 in urban districts. Alaska Natives make up a substantial share of the small populations in high-turnover districts. In 2000, Alaska Natives made up between 57 and 64 percent of the community populations, compared with just 11 percent in urban districts and 33 percent in rural districts with lower turnover.

Base salaries of teachers in high-turnover districts are just modestly higher than salaries in urban districts, despite significantly higher living costs. The base salary is the bottom of the pay scale—what a district offers its newest, least experienced teachers — and it does not reflect *average* salaries. However, it is a reasonable indication of the salary differential among districts. In 2001, base salaries of teachers in high-turnover districts were in the range of 10 percent more than in districts with lower turnover. Salary levels may be critical in efforts to attract teachers to remote, high-turnover districts.

Districts with the highest turnover also have the highest per-pupil expenditures — reflecting the higher costs of living and doing business at remote rural sites; small schools in general also face higher costs because they can't take advantage of economies of scale. In 1999, per-student costs in high-turnover districts were more than twice as high as in urban districts. These high per-pupil costs make rural districts vulnerable to critics who want to reduce state education spending at the expense of small, remote communities.

Substantial income differences also exist between districts with lower turnover and districts with higher turnover. In 2000, median household income in urban districts was $51,454—nearly 40 percent higher than the $37, 284 income in rural districts with the highest turnover.

The districts with high turnover also have higher unemployment and more poverty. The 2000 unemployment rate in urban areas was 8 percent, while the rate in districts with higher turnover was 15 to 18 percent. And because of the way unemployment is defined and recorded, these data significantly underestimate real unemployment in rural Alaska (for a discussion, see McDiarmid and Goldsmith, 1998). Also, as we might expect with higher unemployment, poverty was more widespread in high-turnover districts. While 8 percent of families in urban districts—and 10 percent in rural districts with low turnover—had incomes below the federal poverty level in 2000, between 16 and 19 percent of families in high-turnover districts had incomes below the federal poverty level.

Clearly, districts that have the highest turnover rates also have smaller populations that tend to include more Alaska Natives and are economically poorer by several measures. The finding that districts with higher poverty also have higher teacher turnover rates is consistent with national data (Darling-Hammond, 2000; Hanushek, Kain, and Rivkin, 2001).

Looking at teacher characteristics in Table 2, we again find noticeable differences between districts with higher and lower rates of turnover. Districts with the highest turnover rates employ more first-year teachers (13 percent) than do urban and low-turnover rural districts (7 percent each). Grissmer and his colleagues found a strong

positive correlation between the proportion of teachers with two or more years of experience and student achievement (Grissmer et al., 2000). Correspondingly, urban and low-turnover rural districts employ teachers who have on average been teaching longer. In 2001, teachers in urban districts had been on the job an average of 10.1 years, and teacher in rural districts with low turnover had been working on average 11.8 years. By comparison, teachers in districts with the highest turnover had been working on average 7.5 years.

Table 2 also shows some differences by gender and race among teachers in high- and low-turnover districts. The percentage of women teaching in urban and low-turnover rural districts is larger than in the higher turnover districts—but the difference is not statistically significant. There are substantially more Alaska Native teachers —between 12 and 14 percent—in the high-turnover districts (which are also the districts with larger overall Alaska Native populations); in urban districts only 3 percent of teachers are Alaska Native and in low-turnover rural districts 8 percent.

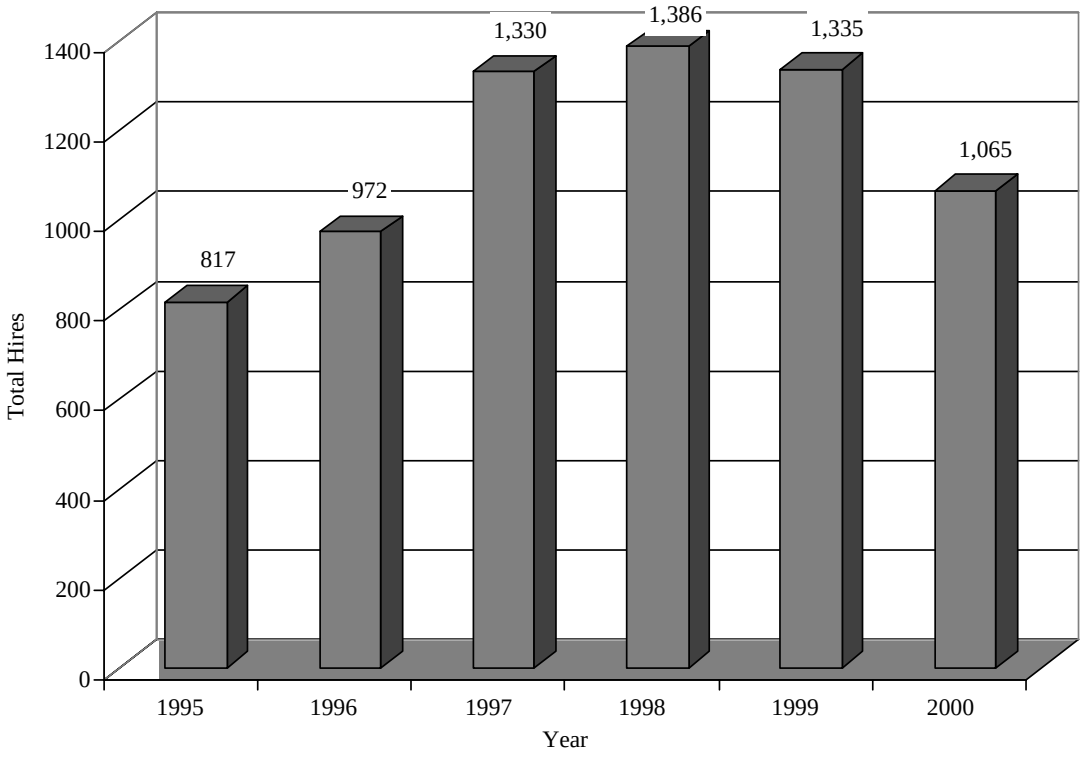
In sum, teachers in districts with low turnover rates tend to be more experienced and are far less likely to be Alaska Native than teachers in high-turnover districts.

Demand for Teachers In Alaska

The best proxy we have for teacher demand is the number of teachers hired. Chart 6 shows the number of annual hires over the six years from 1995 through 2000.

Annual new hires statewide increased dramatically between 1995 and 1998—from 817 to 1,386. Numbers of school-age children peaked during those years, which explains some of the new hires. But the need to hire more teachers may also reflect increased turnover due to a number of factors we've already discussed, including the relative decline of COL-adjusted Alaska teacher salaries and a rise in retirements. Another factor may have been the early retirement programs urban districts offered in an effort to reduce their operating expenses. The impact of these programs was less pronounced in 1999 and 2000. However, as Chart 6 shows, the trend has been toward fewer hires in recent years.

Chart 6. Number of Teachers Hired in Alaska, 1996-2000



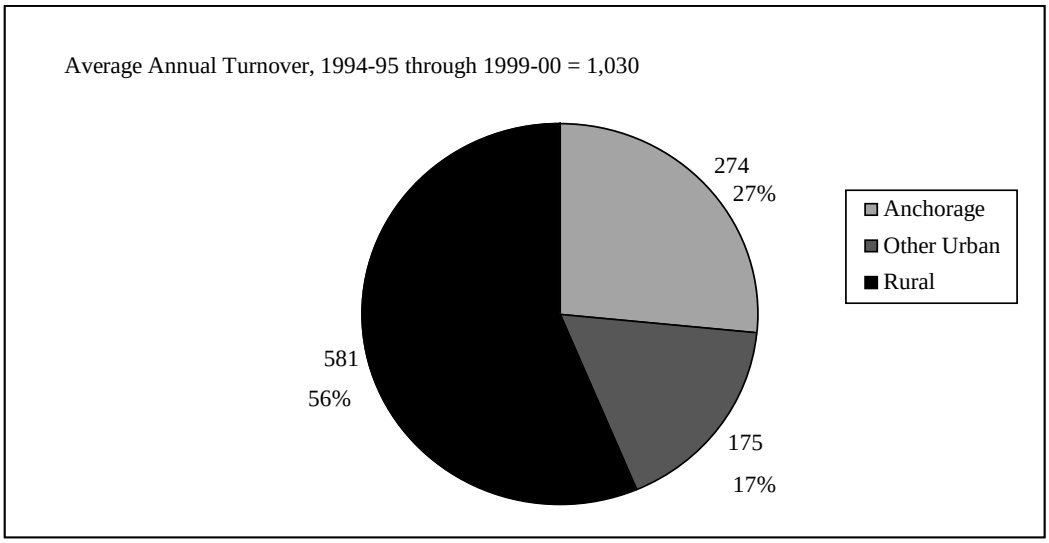
Source: Alaska Department of Education and Early Development, 2001

Teacher Demand in Urban and Rural Areas

Given the high rural turnover rates we just reported, it is not surprising that Alaska's rural districts hire a disproportionately large share of new teachers. Chart 7 below shows the average annual number of new teachers that urban (with Anchorage shown separately) and rural districts hired from 1994-95 through 1999-2000.[1] According to data from the Alaska Department of Education and Early Development, Alaska districts employed 8,206 full- and part-time teachers in 2001-02. Of these, 5,518—or 67 percent—worked for the five largest districts: Anchorage (2,836), Fairbanks North Star (911), Juneau (349), Kenai Peninsula (635), and Matanuska-Susitna (787). Yet these districts accounted, on average, for only 44 percent of the new teachers hired annually from 1994-1995 through 1999-2000. The remaining districts—mostly rural districts off the road system—employ only 32 percent of the full- and part-time teachers in the state but accounted for 56 percent of new hires during that period.

[1] The definition of "urban" here is slightly different from the one ISER used in describing teacher turnover in the previous section. These figures are from Alaska Teacher Placement, which classifies as "urban" not only the four districts ISER included as urban but also a fifth district—the Kenai Peninsula. This shift does not change the urban-rural patterns discussed throughout this report.

Chart 7. New Hires (Full-Time Equivalent), In Urban and Rural School Districts (Annual Average, 1994-95 through 1999-2000)



Source: Alaska Teacher Placement, 2001

Demand by Specialization

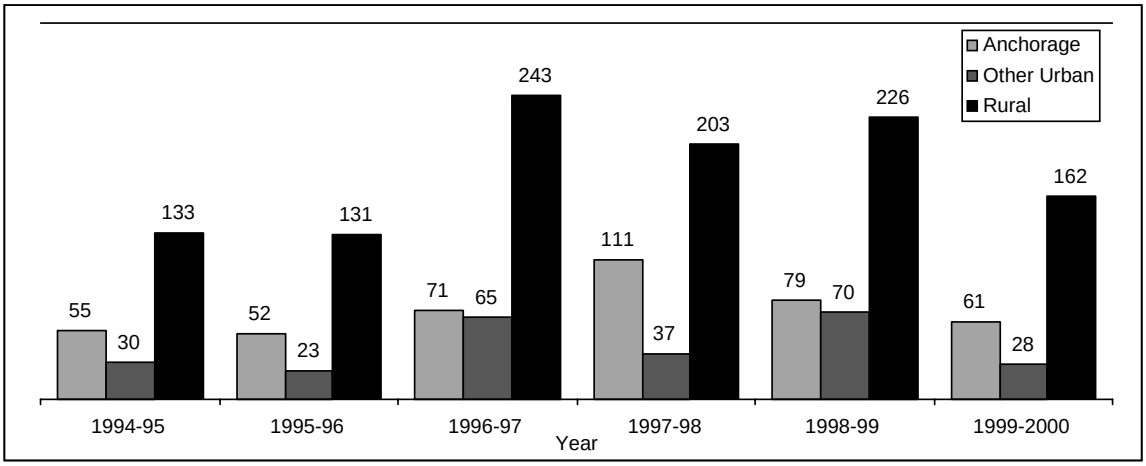
Charts 8 through 12 show average annual new hires by specialization among Alaska's urban and rural districts from 1994-95 through 1999-00. We have no reason to believe that the pattern of demand for specializations throughout the U.S. differs from that in Alaska. Chart 8 shows numbers of elementary teachers hired. On average, 297 (29 percent) of the annual average 1,030 hires were elementary teachers. Again, the number of new hires was disproportionately high in rural districts; on average, 62 percent of newly hired elementary teachers went to work for the smaller districts.

A similar pattern is evident in the hiring of secondary math and science teachers (charts 9 and 10). The school year 1997-98 presents an anomaly: that year, in the wake of an early retirement program, the Anchorage School District hired more math and science teachers than all the other districts in the state combined. But except for that unusual year, the pattern holds: rural districts annually hire a disproportionately large number of math and science teachers.

The other area of critical shortages nationally is special education. As Chart 11 shows, districts around Alaska annually hire a large number of special educators. Still, the smaller, rural districts hire a disproportionate number of special educators annually. And the number of new hires in those districts has increased annually since 1995-96.

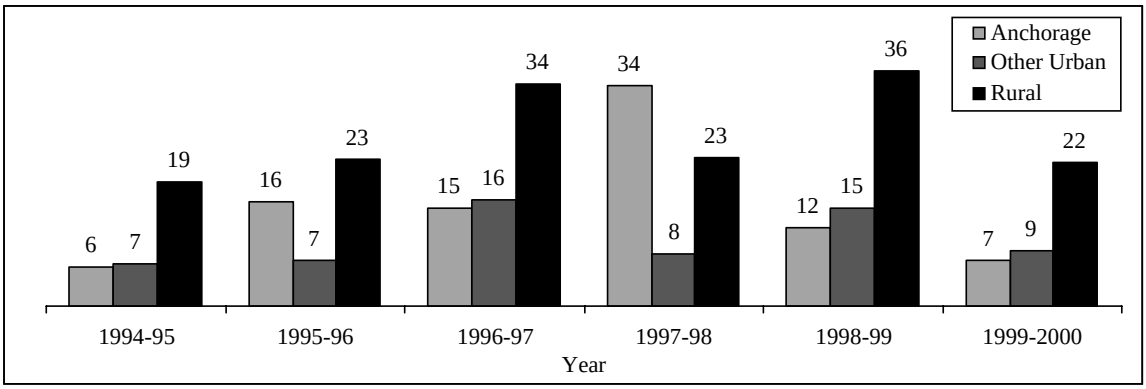
Even in an area for which a surplus of teachers exists nationally—secondary English specialists—rural districts must hire a large number of teachers annually, as Chart 12 shows.

Chart 8. New Elementary Teacher Hires (FTE) in Urban and Rural Districts, 1994-95 to 1999-2000



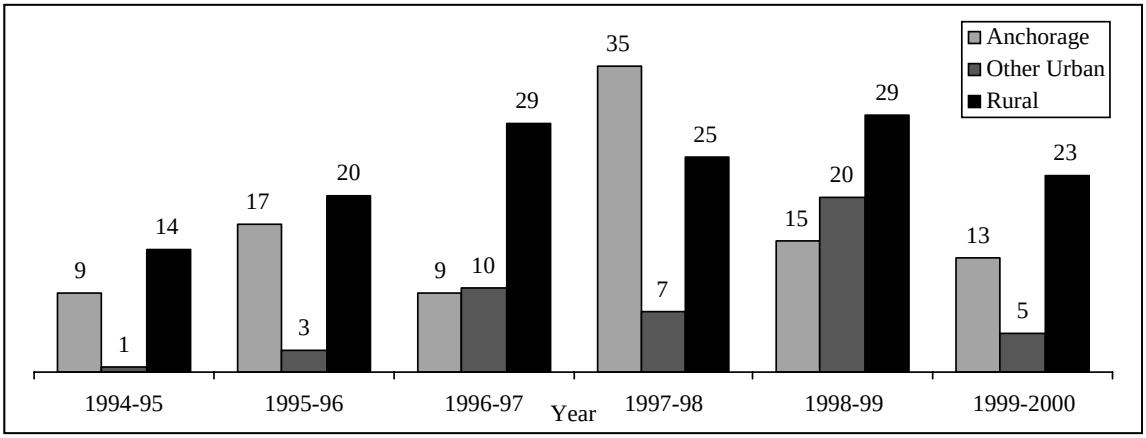
Source: Alaska Teacher Placement, 2001

Chart 9. New Math Teacher Hires (FTE) in Urban and Rural Districts 1994-95 to 1999-2000



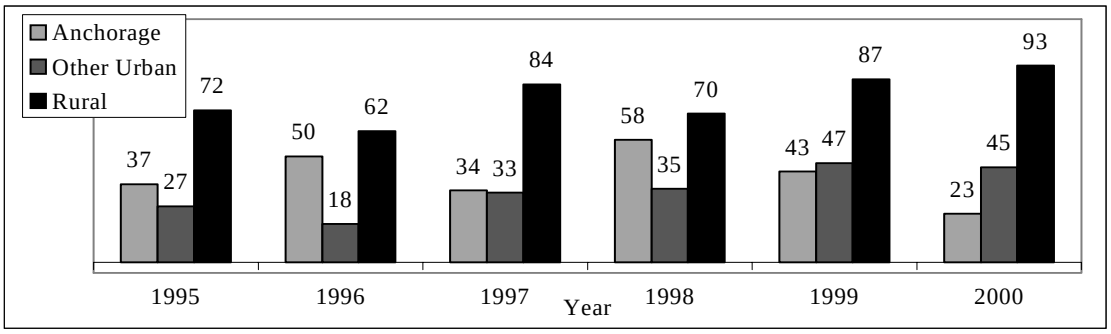
Source: Alaska Teacher Placement, 2001

Chart 10. New Science Teacher Hires (FTE) in Urban and Rural Districts 1994-95 to 1999-2000.



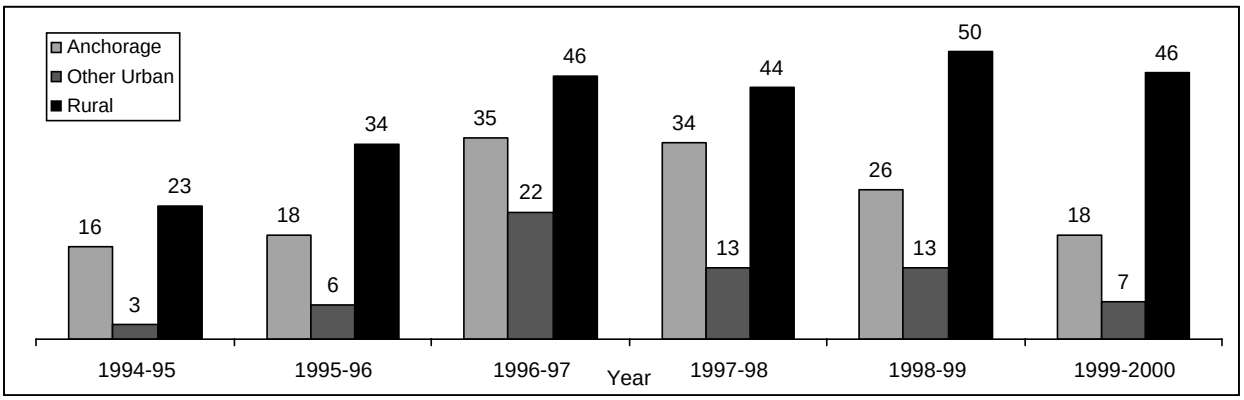
Source: Alaska Teacher Placement, 2001

Chart 11. New Special Education Teacher Hires in Urban and Rural Districts 1994-95 to 1999-2000.



Source: Alaska Teacher Placement, 2001

Chart 12. New English Teacher Hires (FTE) in Urban and Rural Districts, 1994-95 to 1999-2000.



Source: Alaska Teacher Placement, 2001

Summary of Teacher Demand

The recent pattern of hiring in Alaska school districts reflects the pattern nationwide: math, science, and special education teachers are in demand. However, when we disaggregate the data, we find that the demand for teachers of all specializations—including specializations for which there is an ample supply nationwide, like elementary school and secondary English—is much higher in the rural districts than in the larger urban districts. These data underline the data on turnover examined earlier.

III. Survey Findings: Why Alaskan Teachers Leave Their Jobs

As we showed in the previous section, teachers in some Alaska districts and individual schools leave their jobs at high rates. If we are to reduce those high turnover rates—particularly in rural districts and schools—we need to understand more about the reasons why teachers leave. Some of those reasons are beyond the reach of policy. For instance, some teachers leave because they retire. Some are looking for new challenges in other professions. Similarly, teachers who move from one school to another often do so for reasons that policy cannot address—the desire to live in a particular location, the desire to have children attend particular schools, the need to be closer to specialized medical care, or the need to care for family members.

But other reasons that prompt teachers to leave their jobs are more amenable to policy instruments. For instance, the lack of strong and effective instructional leadership could be addressed by better training or incentives likely to attract people with the requisite skills, knowledge, and talent. The lack of professional growth and development opportunities could be addressed by providing the resources—human and fiscal—needed to offer such opportunities. Even a lack of communication between school professionals and parents and community members could be addressed through several mechanisms—for instance, through training and changes in organizational structures and procedures.

Consequently, if we are to craft policies that keep committed and effective teachers in our schools, we need to know why teachers leave their jobs. This is precisely what we set out to find with ISER's 2001-2002 survey of exiting teachers.

We mailed 239 surveys to persons identified as teachers who had left their jobs in urban or rural districts at the end of the 2000-2001 school year. We had a 51 percent response rate from the urban surveys and a 59 percent response rate from the rural surveys. We had hoped for higher response rates—but nevertheless, these rates are high enough to produce useful results. Our response rates are also higher than the average for nationwide surveys of exiting teachers—who, after all, have little motivation to complete the surveys.

Research Methods

Questionnaire

Before developing our survey, we did a thorough search of the Internet and print sources for all exiting teacher surveys. In particular, survey instruments from the National Center for Education Statistics in the U.S. Department of Education served as valuable guides. We then developed our own survey, using items from other surveys that fit the Alaska context. We then asked district personnel directors and teachers to review the questionnaire, made revisions, and field-tested the revised questionnaire. (The questionnaire is online at http://www.iser.uaa.alaska.edu/).

Sampling

Existing data demonstrated that hiring and retention issues differ significantly between urban districts—defined here as those in or near Alaska's large population centers—and rural districts, many of which are remote and far from the road system. So we stratified districts into urban (Anchorage, Fairbanks, Juneau, and Mat-Su Borough) and rural (all other districts).

We further stratified rural districts by teacher turnover rates averaged across the years 1996-2000—low turnover (15 percent or less), medium turnover (16-29 percent), and high turnover (30 percent or more). We did this to increase the probability that all types of districts were equally represented in the final sample.

To design the sample, we first estimated the expected teacher turnover for each district, using the district's total teachers in 2000-01 times its annual average turnover rate from 1995-1996 through 1999-2000. We calculated the sample size for each stratum to achieve the same level of precision for all. Table 3 shows the numbers of exiting teachers from each stratum, as well as sample sizes and response rates.

Table 3. Population and Sample Size for Teacher Exit Survey, 2001-02

	Number of Exiting Teachers, 2001	Number in Final Sample	Number of Completed Surveys	Response Rate
Urban	431	77	39	51%
Rural Total	583	162	96	59%
Low Turnover	134	60	40	67%
Medium Turnover	338	57	33	58%
High Turnover	111	45	23	51%
Total	1014	239	135	56%

Survey Process

In December 2001, we mailed a survey to each respondent in our random sample for whom we had a postal address, using names and addresses supplied by district personnel directors. A month later, we followed up this initial mailing with a letter. As the data came in, we entered it into a database and analyzed it using SPSS. To date, we have looked only at frequencies and urban/rural cross tabulations; we will carry out additional analyses later.

Response Rate

A major problem with surveys of exiting teachers is that respondents have little motivation to complete and return surveys. After all, they are on their way out. Some probably are leaving because they are dissatisfied with some aspects of their work life. This makes it even less likely that they will respond.

Although not as high as we had hoped, response rates for all our samples were over 50 percent. We mailed out 239 surveys. For the 77 teachers in our urban sample, we received 39 completed surveys, for a 51 percent response rate. This rate is above the average for such surveys. As noted above, we stratified rural districts by their historic teacher turnover rates. Of the 60 surveys sent to teachers exiting low-turnover rural districts, 40 (67 percent) were returned. Of the 57 surveys sent to teachers exiting medium-turnover districts, 33 (58 percent) were returned. Of the 45 surveys sent to teachers exiting high-turnover districts, 23 (52 percent) were returned. Thus, for our total rural sample of 162, we received completed surveys from 96 exiting teachers—or 59 percent.

As much as we would like to follow up with a sample of non-respondents to learn why they did not respond, our only contact information for these exiting teachers is a postal address. Consequently, they are unlikely to respond to a request for additional information, having chosen not to respond to our first two contacts. We are also aware that some of the postal addresses we received were likely invalid. As a result, we do not know how many of the 43 percent who did not respond simply did not receive a survey. Again, these problems are typical in exit surveys.

Statistical Significance of Findings

In the tables reporting our survey findings, we note which differences in responses of urban and rural teachers are statistically significant—that is, which responses we can say with confidence reflect real differences between the two groups, rather than chance variation. Other responses that don't meet the strict test of statistical significance can still help show patterns of difference among urban and rural teachers who left their jobs, when we have other information that supports the survey findings.

Characteristics of Exiting Teachers

Most exiting teachers in our survey were women—75 percent of the urban teachers and 62 percent of the rural teachers. The mean age of respondents was 43 for the urban teachers and 40 for rural teachers. Teachers leaving urban schools were significantly more likely to be married than those leaving rural schools—88 percent compared with 73 percent (Table 4). Both groups were predominantly white (100 percent of the urban and 97 percent of the rural). Three teachers who described themselves as Alaska Natives left their jobs at rural schools.

Teachers leaving rural schools were about twice as likely to be the primary wage-earners in their families as were those exiting urban schools (65 percent to 28 percent). These rural teachers were also likely to have more financial dependents than their urban counterparts had.

Table 4. Demographics of Exiting Teachers [2]

Characteristic	Urban (N=29)	Rural (N=83)
Female	77%	62%
Mean Age	43 years	40 years
Married	88%	65%*

**Significant at the 0.05 level Source: ISER survey of exiting teachers, 2001-02*

[2] The number of respondents reported in the tables showing survey results is a maximum of 112, rather than the 135 responses reported in Table 3. This is because 23 of the responses indicated that the respondent was not, in fact, an exiting teacher, but rather an exiting administrator or other staff member who was not a teacher.

Plans for Following Year

To learn more about the future plans of exiting teachers, we asked what their main activity would be in the year after they left their jobs (Table 5). We found that many of both the urban and the rural exiting teachers planned to continue teaching in a new setting—but the proportion was much higher among rural teachers (53 percent) than among urban teachers (24 percent). Conversely, a much bigger share of the exiting urban teachers (37 percent) than of the rural teachers (10 percent) planned to retire.

Table 5. Main Activity for the Coming Year Among Teachers Who Left Their Jobs, 2000-2001 (Percentage Citing Activity)

	Urban Teachers N=29	**Rural Teachers N=83**
Following Year Activities		
Teaching K-12	24%	53%
Retiring	37%	10%
Working outside education	15%	12%
Caring for family members	10%	6%
Other activity	0	9%
College student	7%	0
Non-teaching work in education	2%	3%
Unemployed/seeking work	0	4%
Missing	2%	3%
Don't know	2%	0
Total	100%*	100%*

**May total more than 100 % due to rounding. Source: ISER survey of exiting teachers, 2001-02*

When asked if they planned to continue living in the communities where they had been teaching, 35 percent of exiting urban teachers intended to stay put, compared with only 20 percent of rural teachers. This finding is consistent with the historical pattern of rural schools, staffed largely by teachers who are recruited from outside the community and who move when they leave their jobs. Interestingly, 67 percent of exiting rural teachers who said they planned to leave the communities where they had been teaching still planned to stay in Alaska.

Why Alaskan Teachers Left the Profession

Thirty teachers in our sample said they were *leaving the profession entirely.* Nearly 60 percent identified "family or personal reasons" as important reasons they were leaving (Table 6). Responses of urban and rural teachers were not significantly different. Similarly, half of both urban and rural leavers reported that pursuing another career was a somewhat or very important reason for leaving the profession. Surprisingly, only 21 percent indicated that the opportunity for better pay and benefits was somewhat or very important in their decision to leave teaching.

Among those leaving the teaching profession, 40 percent of urban leavers and 48 percent of rural leavers cited dissatisfaction with the job of teaching as an important factor in their decision to leave. About 40 percent of urban leavers and 35 percent of rural

leavers cited dissatisfaction with community support for the schools as a very important or somewhat important reason for leaving the profession.

As Table 6 demonstrates, we found few differences in reasons why urban and rural teachers were leaving the profession. Leaving for personal reasons and leaving to pursue other careers were among the most important reasons both groups cited for abandoning the profession. For a significant number of both urban and rural leavers, job dissatisfaction, dissatisfaction with community support, and pursuit of sabbatical leaves or other breaks from work were very important or important reasons for leaving.

In short, teachers leaving the profession appear as likely to cite factors that were *pulling them away from teaching*—family or personal reasons and opportunities in other fields—as they were factors that were *pushing them out*—such as dissatisfaction with job responsibilities, inadequate pay and benefits, or disagreement with reforms. Many of these teachers appeared to be headed toward something rather than running away from teaching.

Table 6. Reasons Alaska Teachers Cited For Leaving Teaching, 2000-01 (Percentages Citing Reason as Important)

Important or Very Important Reasons for Leaving Teaching	**Urban Leavers** N=9	**Rural Leavers** N=21	**Both** N=30
Left because of family/personal reasons	67%	55%	59%
Left to pursue another career	50%	50%	50%
Dissatisfied with job description or responsibilities	40%	48%	45%
Changed residence	60%	30%	40%
Dissatisfied with community support of the school	40%	35%	37%
Took sabbatical or other break from teaching	33%	35%	35%
Left for better salary or benefits	14%	24%	21%
Left for health-related reasons	13%	20%	18%
Laid off or involuntarily transferred	0	25%	17%
Dissatisfied with CHANGES in job description or	13%	15%	14%
Enrolled in courses to improve career opportunities OUTSIDE the field of education	0%	20%	14%
Enrolled in courses to improve career opportunities WITHIN the field of education	10%	5%	7%
Felt unprepared to implement new reform measures	0%	10%	7%
Did not agree with new reform measures	8%	7%	7%

Source: ISER survey of exiting teachers, 2001-02

Why Alaskan Teachers Moved to New Districts

A second group of 57 exiting teachers were *moving from a teaching position in one district to a position in another district*. In addition to asking them why they were moving, we also asked for information about their new positions, since most of them (88 percent) knew what and where they would be teaching the following year (Table 7).

Most teachers in this group were moving to jobs similar to the ones they were leaving. Among teachers leaving their positions at urban schools, 90 percent were pursuing the same teaching specialization. Similarly, 66 percent of teachers moving from rural schools would be teaching the same subjects and age groups in new districts.

Table 7. Description of Alaskan Teachers Moving to Other Districts, 2000-01

Percentages answering "yes" to statement	**Urban Movers (N=17)**	**Rural Movers (N=38)**	**Both (N=55)**
Know next year's teaching assignment	91%	87%	88%
Specialization will be the same	90%	66%	71%
Earnings will be more	40%	25%	29%
Position described realistically	100%	65%	74%*

**Differences significant at p < .05. Source: ISER survey of exiting teachers, 2001-02*

Apparently, most teachers are not leaving to earn more elsewhere. Only 40 percent of urban teachers and 25 percent of their rural counterparts reported they would be earning more in their new positions than in their old.

We had heard anecdotal accounts from some rural teachers, saying that the jobs they took hadn't been accurately described to them at the time they signed on. So we also asked teachers who were moving to new districts whether the positions they were leaving had been accurately described to them before they took the jobs. Whereas all of the urban teachers who were changing districts reported that their jobs had been described realistically beforehand, only 65 percent of teachers moving from rural schools reported that to be true—a difference that was statistically significant.

Reasons Rural and Urban Teachers Cited as Important for Moving to New Districts

Many teachers moving from both urban and rural districts cited similar reasons for moving (Table 8). Most—all urban teachers and 73 percent of rural—reported that personal or family reasons were somewhat or very important reasons for their decision to move. Most teachers (63 percent) in both settings cited wanting to live in a new place as an important reason for moving. Similarly, the desire to teach in a different community was important to a little more than half the teachers who were moving to new districts.

Asked how well-supported they had felt in the jobs they were leaving, substantial proportions of the movers expressed dissatisfaction. Thirty-six percent of urban movers and 57 percent of rural movers cited dissatisfaction with support the school received from the community as an important reason for leaving. Similarly, 64 percent of urban movers and 60 percent of their rural counterparts cited dissatisfaction with support from their

district administrators as a prime reason for moving on. Finally, 36 percent of urban movers and 47 percent of rural movers were dissatisfied with the support they received from the school board. Clearly, almost half the teachers—both rural and urban—moving to new teaching jobs felt they had received inadequate support from the community, the district office, and the school board. Substantial minorities (36 percent of urban and 38 percent of rural teachers) also cited dissatisfaction with professional development opportunities as an important reason for moving. About one in four movers overall—9 percent of urban but 27 percent of rural—cited lack of colleague support as an important reason for moving, and similar numbers cited changes in their job responsibilities. None of these differences in responses of urban and rural movers were statistically significant.

Living conditions were also important in teachers' decisions to move to new jobs. The desire for more affordable housing was important to 64 percent of urban and 41 percent of rural movers, while 38 percent of rural and 36 percent of urban teachers cited the desire for better housing as an important factor in their decision to move.

Table 8. Reasons for Moving from One District to Another, 2000-01 (Percentages of Teachers Citing Reason as Important)

	Urban Movers (N=17)	**Rural Movers (N=38)**	**Both (N=55)**
Reason for moving:	*Percent*	*Percent*	*Percent*
Personal or family reasons	100%	73%	80%*
To reside elsewhere	50%	67%	63%
Dissatisfied with district administrative support	64%	60%	61%
To teach in other district or community	36%	57%	52%
Dissatisfied with community support of school	36%	56%	51%
Dissatisfied with school board support	36%	47%	45%
To have more affordable housing	64%	41	46%
To have better housing	36%	38%	38%
For better professional development opportunities	36%	38%	38%
For better shopping	36%	28%	30%
For cultural events	9%	35%	29%
Because job description or responsibilities changed	9%	32%	27%
Because colleague support unsatisfactory	9%	27%	23%
For better salary or benefits	50%	14%	22%**
For better medical care	0	30%	22%*
For health-related reasons	9%	24%	21%
Dissatisfied with education for movers' children	0	25%	20%
Dissatisfied with job description or responsibilities	0	22%	17%
Because not prepared to enact reforms	0	19%	14%
Because disagreed with reforms	9%	14%	13%
Because laid-off or transferred	0	11%	8%
To enroll in other career courses	9%	5%	6%

** Difference significant at <.05 level ** Significant at the <.01 level Source: ISER survey of exiting teachers, 2001-02*

Although one might expect that improved access to amenities would be a more important reason for rural teachers to move, our survey found no statistically significant difference in the importance urban and rural movers placed on access to amenities. Nine percent of urban and 35 percent of rural movers wanted access to different cultural events than those available in their previous school districts, and 36 percent of urban and 28 percent of rural movers wanted access to better shopping.

Some reasons for changing districts were important to relatively few urban or rural teachers—such reasons as being laid off or involuntarily transferred; enrolling in courses to improve career opportunities outside education; being dissatisfied with changes in the job description or responsibilities; feeling unprepared to implement new reforms; and disagreeing with new reform measures.

Areas of Disagreement Between Urban and Rural Movers

Still, despite similarities in some reasons urban and rural movers cited for moving to new districts, several differences are apparent, as Table 8 also shows.

Most teachers move at least partly for reasons that may not be directly related to their jobs—80 percent cited personal or family reasons. Another important non-professional reason why rural teachers move is for access to better education for their children: 28 percent of rural movers cited that as a reason, but no urban movers did. This difference does not, however, reach the threshold of statistical significance.

The relative lack of access to high-level medical care in rural Alaska is reflected in the fact that more than 24 percent of the rural movers cited health-related reasons as important in their decision to change districts, as compared with only 9 percent of urban movers. This difference was even more pronounced when we asked about access to better medical care as a reason for moving: 30 percent of rural movers cited this as an important reason for leaving their districts, but none of the urban teachers did—a difference that is statistically significant.

Only 14 percent of the rural movers cited wanting a better salary or benefits as an important reason for moving, while half of urban movers rated that as an important reason for moving on—a statistically significant difference. While rural teachers who moved to find better salary and benefits went to a variety of districts, all of the urban movers in our survey who were seeking better salary and benefits left the state.

Looking at teaching conditions as an incentive for changing districts, we found that a much greater proportion of rural teachers (27 percent) than of urban teachers (9 percent) reported dissatisfaction with support from colleagues as an important reason they were changing districts. Nearly a third of the rural movers reported dissatisfaction with changing job descriptions or responsibilities as an important reason for leaving—a reason judged important by only 9 percent of the urban movers.

In short, many teachers appear to be moving on to new districts because of an apparent desire to live elsewhere and for reasons related to their personal lives, families, and health. But many, especially those in rural schools, are also unhappy with their working conditions. They feel they are not getting the support they need—from district administrators, colleagues, school boards, or communities. Similarly, many urban movers also feel they are not getting the community or district support they need, and they share with their rural counterparts dissatisfaction with professional development opportunities.

Why Alaskan Teachers Retired

A third group of exiting teachers retired. This was a relatively small sample (21 teachers), and the differences between rural and urban retirees are not meaningful, so we report only the total. As Table 9 shows, most of the teachers (62 percent) were retiring because they became eligible for their full pension benefits. However, half the retirees also cited as somewhat important or very important their dissatisfaction with teaching as a profession. This dissatisfaction is also reflected in the 57 percent who cited their job descriptions or responsibilities as important reasons for retiring, and the 52 percent who identified *changes* in the job description or responsibilities as important reasons. Not all these changes appear related to recent reforms: only 26 percent of retirees rated the advent of the reforms as an important reason to retire. Clearly, more than half (58 percent) were also retiring because of personal or family reasons.

In short, many of those who retired appeared ready—not just because they were eligible for their pensions, but because they were dissatisfied with the job itself.

Table 9. Reasons Teachers Retired, 2000-01
(Percentages of Retiring Teachers Citing Reason As Important)

Somewhat or Very Important Reasons for Retiring from Teaching	**Urban and Rural Teachers (N=21)**
Became eligible to receive full pension benefits	62%
Retired for other family or personal reasons	58%
Dissatisfied with job description or responsibilities	57%
Dissatisfied with CHANGES in job description or responsibilities	52%
Dissatisfied with teaching as a career	52%
Did not agree with new reform measures	26%
Did not feel prepared to implement new reform measures	14%
Became eligible to accept early retirement incentive	9%
Wanted to teach in a different state but my state teacher certification was not accepted there	0

Source: ISER survey of exiting teachers, 2001-02

Job Satisfaction and Working Conditions

We asked all exiting teachers—including those who quit teaching, retired, or moved to new districts—two direct questions about their satisfaction with teaching and also asked them the extent to which they agreed or disagreed with a series of 30 statements about the conditions under which they worked before leaving. Finally, we asked another series of 10 questions about leadership at the schools teachers had left. These questions were motivated by what we have learned in recent years about the relationship between school leadership and teacher success (as measured by student assessment scores) and retention (see, for instance, Kelley, 1998 and Ingersoll, 2001).

Overall Satisfaction of Exiting Teachers

We asked teachers whether they were satisfied with their teaching before they left their jobs. Among exiting teachers, 56 percent of those leaving urban schools and 55 percent of those leaving rural schools expressed satisfaction. When we asked exiting teachers to compare their final year at the schools they had left with their prior years of teaching, 53 percent of urban teachers reported they were at least as satisfied with their teaching as they had been in prior years, but only 42 percent of teachers leaving rural schools expressed a comparable level of satisfaction.

As we would expect, teachers' reported satisfaction differed among those who were retiring, leaving teaching, or moving to another district. Only 30 to 35 percent of rural and urban teachers leaving the profession were satisfied with their previous year of teaching—either overall or in comparison with earlier years of teaching.

Again, as we would expect, more teachers who were moving to other districts (rather than leaving the profession) were satisfied with their previous year—just over 50 percent. However, there was a significant difference in responses of urban and rural teachers changing districts: 91 percent of urban movers but only 39 percent of rural movers were satisfied with their previous year of teaching, in comparison with earlier years. This finding suggests a higher level of dissatisfaction with teaching among teachers leaving rural schools than among those leaving urban schools.

Exiting Teachers' Satisfaction with Specific Working Conditions

To understand more about exiting teachers' satisfaction with their jobs and their profession, we asked them to respond to a series of statements, indicating whether they agreed or disagreed with each statement. Some of the statements were positive, and agreement indicated satisfaction. Other statements were negative, so that agreement indicated dissatisfaction with some aspect of their jobs. In Table 10, the positive statements are in regular typeface, and the *negative* statements are in italics. All responses show the percentage of teachers agreeing with a statement, whether it was positive or negative. Asterisks indicate differences that are statistically significant in responses of urban and rural teachers.

Table 10. Exiting Teachers' Satisfaction with Their Jobs and Teaching Profession: Areas where a majority of both Urban and Rural Teachers were Satisfied

Statements about Teaching Conditions	Urban Teachers N=29	Rural Teachers N=83	Both N=112
Areas of High Satisfaction			
I was satisfied with the grades I was assigned to teach.	93%	88%	90%
The school was located in a safe neighborhood.	86%	81%	83%
I felt safe at the school.	84%	83%	83%
The school's security policies and practices were sufficient.	77%	64%	69%
The school emphasized academic success.	84%	75%	79%
The professional caliber of the faculty at the school was high.	79%	77%	78%
I was satisfied with the level of job security at the school (e.g., low possibility of being laid off).	79%	73%	75%
I was satisfied with the policies and practices for assigning students to classes or sections for instruction.	65%	68%	67%
The procedures for teacher performance evaluation were satisfactory.	77%	62%	68%
Workplace Planning and Administration			
I did not have enough influence over the school's policies and practices.	*39%*	*36%*	*37%*
I did not have enough influence over the curriculum I taught.	*21%*	*20%*	*21%*
The school administrators' behavior toward the staff was supportive and encouraging.	68%	59%	63%
District administrators' behavior toward the staff was supportive and encouraging.	58%	55%	56%
Professional Development			
I was pleased with the opportunities for professional growth and development that the school offered to teachers.	63%	55%	58%
There were many opportunities to collaborate with other teachers in the school.	49%	68%	60%*
Required professional development activities at the school usually closely matched my professional development goals.	31%	32%	32%
Workload			
I often felt that my teaching workload was too heavy.	*65%*	*48%*	*55%*
Mainstreaming special needs students in regular classes made it difficult for me to teach.	*56%*	*46%*	*50%*
Some of the classes or sections I taught were too large.	*65%*	*29%*	*43%***
Time available for planning and preparation was insufficient.	*70%*	*64%*	*66%*
There was not enough uninterrupted class time available for instruction.	*42%*	*33%*	*37%*

Table 10, continued Statements about Teaching Conditions	**Urban Teachers N=29**	**Rural Teachers N=83**	**Both N=112**
Resources			
I was satisfied with my salary and benefits	56%	75%	68%*
Resources and materials/equipment for my classrooms were sufficiently available.	56%	78%	69%*
Computers and other technology for my classrooms were sufficiently available.	37%	81%	64%**
The school facility (buildings and grounds) was in need of significant repair.	*37%*	*45%*	*42%*
Student, Parent and Community Attitudes			
Student behavior was a problem.	*63%*	*61%*	*62%*
Most of the students in the school were motivated to learn.	65%	43%	51%*
I received little support from parents.	*43%*	*67%*	*58%**
The school received little support from the community.	*30%*	*45%*	*39%*

**Difference significant at the <0.05 level **Difference significant at <0.01 level Source: ISER survey of exiting teachers, 2001-02*

A surprisingly high proportion of teachers leaving both urban and rural schools were satisfied with many of the conditions in the schools they were leaving. Over 90 percent were satisfied with the grade level they taught. Contrary to some public perceptions—influenced perhaps by recent events in Kivalina—most rural teachers (83 percent) and their urban counterparts (84 percent) felt safe in their schools. Most (81 percent of rural and 86 percent of urban) also believed the neighborhoods where they taught were safe. And most (64 percent of rural teachers and 77 percent of urban) felt that their school's security policies were sufficient.

Although more urban than rural teachers agreed that their school emphasized academics (84 percent compared with 75 percent), a sizeable majority of both groups agreed that academic success was emphasized. Most urban and rural teachers also thought that the professional caliber of the faculty at their schools was high.

Most exiting teachers (79 percent of urban and 73 percent of rural) were satisfied with the level of job security they had. Nearly as many (65 percent of urban teachers and 68 percent of rural teachers) were satisfied with the policies and practices for assigning students to classes or sections for instruction. The majority—77 percent of urban teachers and 62 percent of rural teachers—were also satisfied with teacher evaluation procedures at their schools.

Most teachers in both settings felt they had sufficient control over their work place. Only about 20 percent of both groups felt they did not have enough influence over the curriculum they taught. However, substantial minorities of both groups felt they did not have sufficient influence over their school's policies and practices (39 percent of urban and 36 percent of rural exiting teachers).

Most of the exiting teachers agreed that school administrators had supported and encouraged them, although the percentage agreeing was higher among urban (68 percent) than among rural teachers (59 percent). Both groups were slightly less satisfied with the

level of support from central district administrators – 58 percent of urban and 55 percent of rural exiting teachers.

Over half of both groups (63 percent of urban and 55 percent of rural exiting teachers) were pleased with the opportunities available to them for professional growth and development. However, rural teachers were much more likely to be satisfied with their opportunities to collaborate with colleagues. Just under half (49 percent) of urban teachers agreed that there were many opportunities to collaborate with their colleagues, compared with 68 percent of rural teachers—a statistically significant difference. And both groups were much less satisfied with *required* professional development activities. Less than one-third agreed that the required professional development in which they participated met their needs.

On the issue of workload, 65 percent of urban and 48 percent of rural teachers agreed that their workloads were too heavy. Around half—56 percent of urban and 46 percent of rural teachers—felt mainstreaming special-needs students into their regular classes made teaching difficult. As one might expect, when asked about class size, exiting urban teachers were significantly more like to agree that their classes were too large (65 percent) than were teachers in rural schools (29 percent). Many rural schools are so small that class size is not an issue.

Along with their workload concerns, most exiting teachers felt time pressures. The majority of both groups of teachers (66 percent of the combined sample) felt that there was insufficient time available for planning and preparation. A substantial minority (42 percent of urban and 33 percent of rural teachers) was also dissatisfied with the class time available for instruction.

Three out of four exiting rural teachers were satisfied with their salary and benefits; however, significantly fewer urban teachers (56 percent) were satisfied.

Availability of instructional materials and resources and of computers and other technology does not appear to have been a problem for exiting rural teachers: 78 percent agreed adequate resources were available, and 81 percent agreed that enough computers were available. However, exiting urban teachers were significantly less likely to agree: only 56 percent of urban teachers agreed adequate resources and materials were available and just 37 percent agreed that enough computers were available.

Somewhat more exiting rural teachers (45 percent) than urban teachers (37 percent) thought their school facilities needed repair—a result not surprising to those familiar with the conditions in many rural schools, but a difference that is not statistically significant.

Although student behavior is no more of a problem for rural than for urban teachers, a majority—62 percent—of the exiting teachers in both areas agreed that student behavior was in fact a problem. However, on the question of student motivation, we found a large and statistically significant difference: 65 percent of the urban teachers agreed that most students in their school were motivated to learn, but only 43 percent of the rural teachers believed their students were motivated.

Similarly, when we asked about parental support, significantly more exiting rural teachers (67 percent) than urban teachers (43 percent) reported feeling that they had received “little support from families.” When we asked about community support, we received similar (but not statistically significant) responses: 45 percent of rural teachers

felt they received little community support, while only 30 percent of urban teachers cited such lack of support.

Summary: Teachers' Feelings About Working Conditions In Schools They Left

Many teachers from both urban and rural schools were surprisingly positive about a number of aspects of the schools they were leaving. Clear majorities (60 percent) of teachers leaving both rural and urban schools felt *satisfied* with:

- Safety at their schools
- Teaching assignments
- The school's emphasis on academic success
- The professional caliber of the faculty
- Job security
- Student assignment policy
- Procedures for teacher performance evaluations
- Influence on school policy and curriculum

In other areas, teacher satisfaction was less clear—that is, while more than half of all teachers were still satisfied with the conditions listed below, that satisfaction wasn't as pronounced. Either rural or urban exiting teachers or both were closer to being split, with less than 60 percent satisfied, with:

- Salary and benefits
- Opportunities for professional development
- Support from school and district administrators
- Mainstreaming special needs students
- Workload
- Availability of uninterrupted instructional time

And majorities from both urban and rural schools were clearly *dissatisfied* with other conditions at the schools they had left:

- Time for planning and preparation
- The match between required professional development activities and teachers' professional development goals
- Student behavior

Exiting urban and rural teachers disagreed about some conditions. Teachers leaving *rural schools* were significantly more likely to be *dissatisfied* with:

- Student motivation
- Parental support

Teachers leaving *urban schools* were significantly more likely to be *dissatisfied* with:

- Availability of computers and other instructional resources
- Class size
- Salary
- Opportunities to collaborate with colleagues

In short, exiting rural and urban teachers were dissatisfied with different aspects of their working conditions, and those differences have, of course, different policy implications. Exiting rural teachers were significantly more likely to be dissatisfied with their students' motivation and effort and lack of support from parents. Exiting urban teachers were more likely to be dissatisfied with the work environment—instructional resources, class size, and salaries—provided by their districts. And interestingly, dissatisfaction was higher about instructional resources and class size than about salaries.

These results support findings of national studies (see Ingersoll, 2001 and Kardos, 2001), which emphasize the role working conditions—rather than primarily salary and benefits—play in influencing teachers' decisions about staying or leaving.

Exiting Teachers' Satisfaction with Instructional Leadership

As noted above, we asked our sample of exiting teachers about leadership at the schools they had just left. We hypothesized that the absence of effective leadership might be a primary reason why teachers decided to leave their schools.

But what we found does not seem to bear this hypothesis out. As Table 11 shows, most teachers from both urban and rural schools were satisfied with the effectiveness of the leadership at the schools they were leaving. Differences about a few measures of leadership emerged, with smaller proportions of rural teachers expressing satisfaction—but even in those areas, the majority of rural teachers rated their leaders as effective.

The first question we asked was about the school principal's role in instructional leadership. About two thirds of teachers leaving both urban and rural schools reported that the principal took responsibility for such leadership. The next most frequently cited leaders were other teachers—including department chairs and the respondents themselves—identified by 28 percent of urban teachers and 25 percent of rural teachers. Ten percent of urban teachers and 8 percent of rural teachers reported that other administrative personnel (assistant principals or directors of curriculum or instruction) provided leadership. A few teachers in both groups reported that no one was responsible for leadership at their schools.

More than 80 percent of urban teachers and 70 percent of rural teachers rated their leaders as somewhat or very effective in encouraging them to change their methods if students weren't learning, and in working with them to develop and attain curriculum standards. Almost as many teachers (72 percent overall) rated leaders as effective in communicating respect and the value of teachers and in encouraging professional collaboration among teachers (70 percent overall).

Significant differences between responses of urban and rural teachers emerged on two leadership issues. Almost all urban teachers (89 percent), but only 66 percent of rural teachers rated their leaders as effective at communicating with parents. And 85 percent of urban teachers but only 61 percent of rural teachers said their leaders effectively facilitated and encouraged professional development.

Another dimension of leadership teachers rated somewhat lower was "working with teaching staff to solve school or department problems." Only 69 percent of the urban and 60 percent of the rural teachers agreed that their leaders engaged in such collaborative problem-solving. Differences in responses of urban and rural teachers were even smaller on the question of using student evaluation data in planning curriculum and instruction. In that area, 58 percent of urban teachers and 62 percent of rural teachers

reported effective leadership. On developing broad agreement on the school's mission, half of urban and 61 percent of rural teachers agreed that their leaders were effective.

Table 11. Exiting Teachers' Evaluation of Effectiveness of School Leadership (Percentages Who Rated Leader as Effective)

Effectiveness of Instructional Leader	**Urban N=26**	**Rural N=79**	**Both N=105**
Encouraging teachers to change teaching methods if students were not doing well	81%	75%	77%
Working with staff to develop and attain curriculum standards	85%	72%	77%
Communicating with parents	89%	66%	75%*
Communicating respect and value of teachers	78%	68%	72%
Facilitating and encouraging teachers' professional development	85%	61%	71%*
Encouraging professional collaboration among teachers	70%	70%	70%
Working with teaching staff to solve school or department problems	69%	60%	64%
Encouraging the teaching staff to use student evaluation results in planning curriculum and instruction	67%	58%	63%
Developing broad agreement among the teaching staff about the school's or department's mission	50%	61%	56%

- *Difference significant at <.05 level Source: ISER survey of exiting teachers, 2001-02*

In sum, while majorities of both urban and rural exiting teachers reported that leadership in their schools was effective under many measures, significantly more rural teachers found leaders in their schools ineffective in professional development and in communication with parents.

IV. TEACHER SUPPLY: PRODUCING TEACHERS IN ALASKA

Most of those who teach in Alaska are prepared elsewhere. Nonetheless, the roughly 30 percent of Alaska teachers who are prepared at colleges and universities in the state represent a substantial share of the teaching force. So policymakers and university administrators have responded to teacher shortages in some schools by trying to produce more teachers. In 2001, the University of Alaska's board of regents decided to revive the four-year bachelor of education degree. But just five years earlier, the regents—concerned about the quality of teachers graduating from UA—had voted to phase out the four-year program and move teacher preparation to the graduate level.

That brief history is critical to understanding the data presented below. The recent dip in teacher production at the University of Alaska has been due largely to the policy change that occurred in 1996 and began to have effects in 1997.

Research Methods

Our efforts to collect accurate information about the number of teachers graduating from Alaska's institutions of higher education were made difficult by the proliferation of education programs and by the fact that teacher candidates, enrolled in programs, may take more than the expected time to complete their course work. Thus, we focused on *graduates* rather than on the number of candidates enrolled.

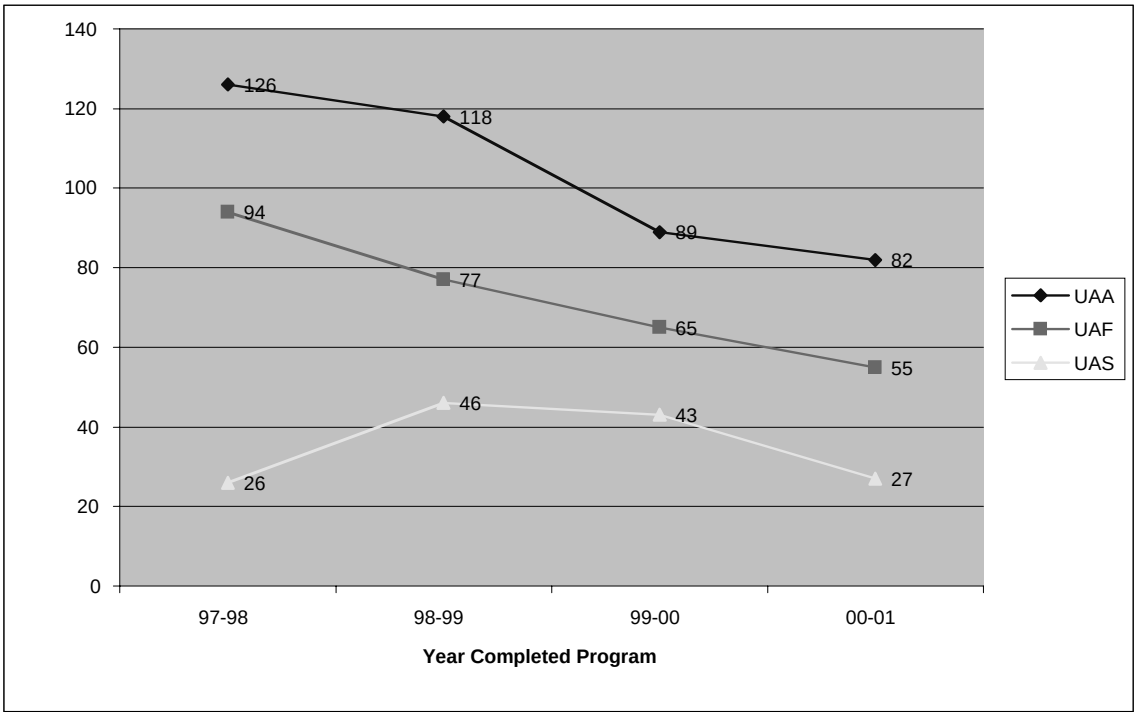
Dr. Shirley Holloway, Alaska's Commissioner of Education, contracted with Dr. Jerry Covey—a former commissioner—to gather data on teacher program graduates in preparation for the Governor's Summit on Teacher Education, held in Anchorage in October 2001. To avoid duplication of effort and the resulting imposition on educators, we asked Dr. Covey to verify the data he collected for the summit. He provided a final report in December 2001, and we used his data on teacher education program graduates.

Elementary Education Graduates

As Chart 13 shows, the number of elementary teachers graduating from the University of Alaska declined after 1998 on the Anchorage and Fairbanks campuses, the major producers of teachers in the state. After two years of higher-than-average numbers of graduates, the Southeast campus returned to its lower pre-1998 level of graduation. Overall, the number of elementary education graduates from UA declined by about one third between 1997-98 and 2000-01, dropping from 246 to 164.

One interpretation of this decline is that some potential elementary candidates may have been deterred by the prospect of having to pursue an undergraduate bachelor degree before entering a program to earn their teaching certificate—the change UA instituted in 1996, as described above. Some potential candidates might have found the additional year of study economically challenging, including not only another year of tuition costs but also the opportunity cost of being out of the labor force for an additional year. Some might have also found the prospect of pursuing a degree in a discipline rather than in education either irrelevant to teaching or academically intimidating.

Chart 13. Elementary Education Graduates (Type A), University of Alaska, by Campus, 1997-2001,

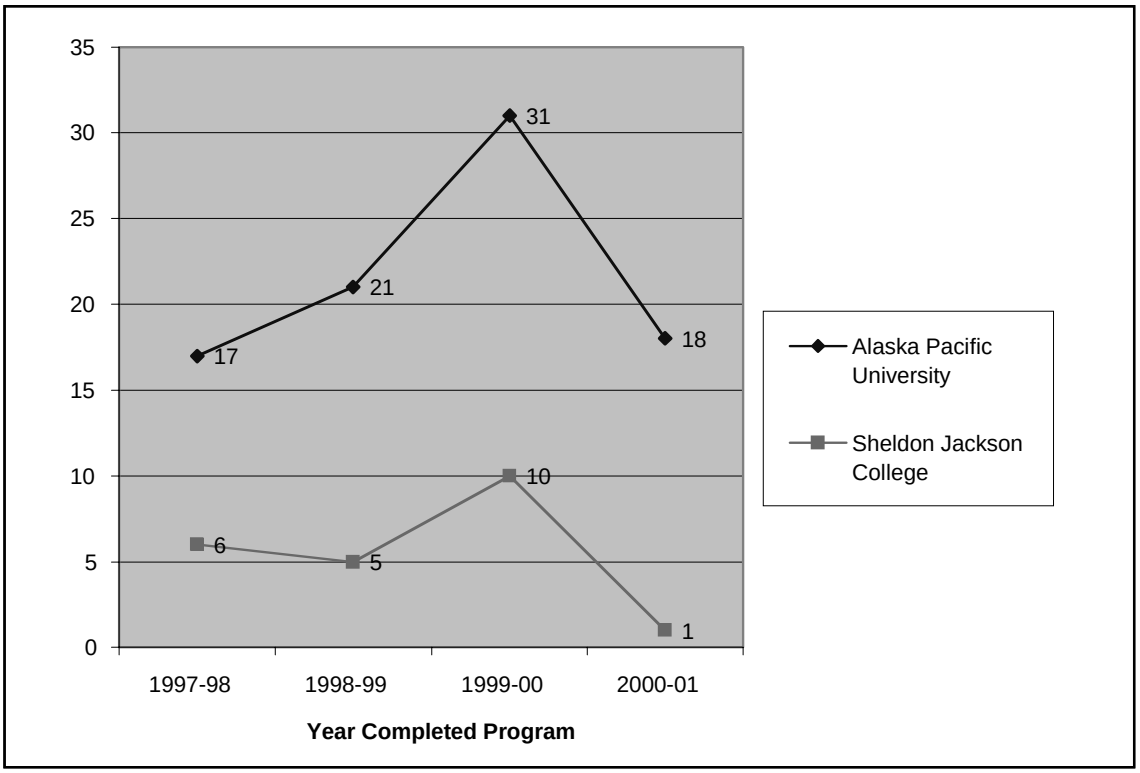


Source: J. Covey, Alaska Educator Supply, *December 10, 2001*

Understanding the reasons for the production decline is further complicated by the state board of education's decision to require passing scores on the PRAXIS I exam for initial teacher licensure. That change was instituted at the same time the UA board of regents was moving teacher preparation to the post-graduate level. Some potential candidates may have been deterred by the prospect of passing that exam—and certainly, some candidates who were already enrolled in UA teacher education programs did not complete their programs because they had failed to receive a passing score on the PRAXIS exam.

Two other institutions of higher learning in Alaska—Alaska Pacific University in Anchorage and Sheldon Jackson College in Sitka—also prepare elementary education teachers. Chart 14 shows that the number of graduates from Alaska Pacific University increased in 1998-99 and 1999-00 but declined precipitously in 2000-01, to roughly the level of 1997-98. Sheldon Jackson's number of graduates declined even more steeply; that institution has recently undergone an examination of its organization and mission. These declines after initial increases appear unrelated to UA's decision to move teacher preparation to the graduate level.

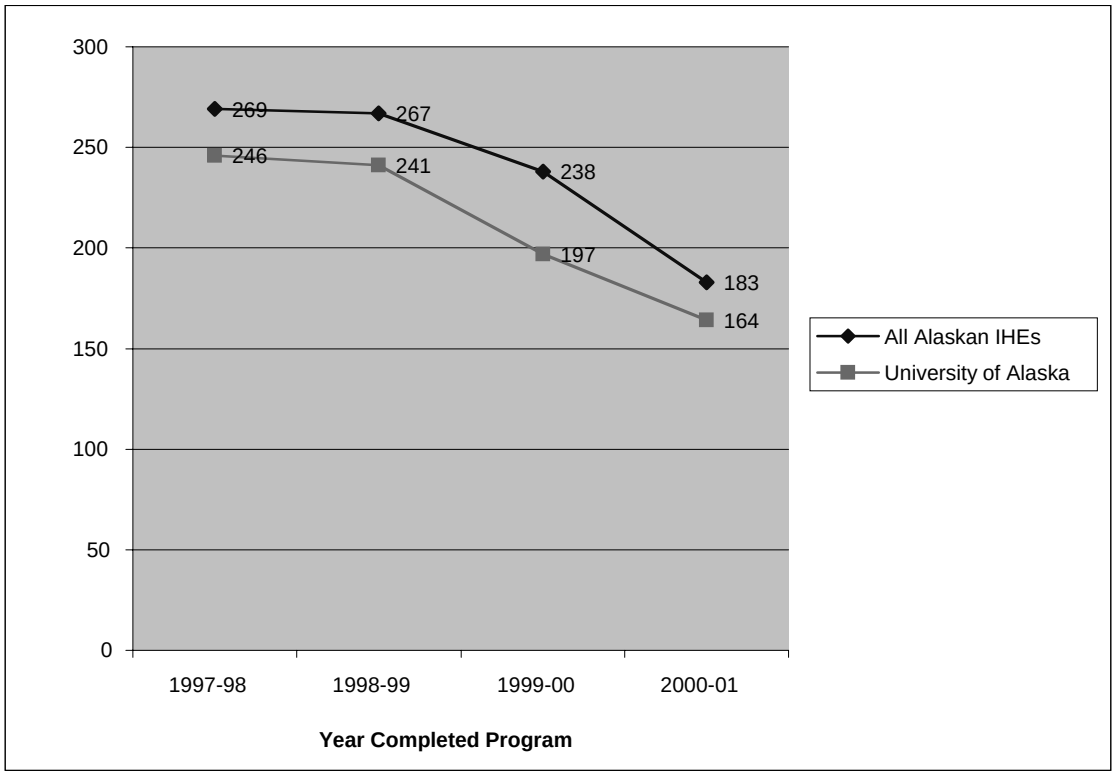
Chart 14. Elementary Education Graduates (Type A) From Other Alaska Institutions of Higher Learning, 1997-2001



Sources: J. Covey, Alaska Educator Supply, *December 10, 2001*

Finally, Chart 15 captures the primary story line: Production of elementary teachers in Alaska has declined significantly over the past four years. But at the same time, few school districts are reporting shortages of elementary classroom teachers, despite these declines. As we noted at the outset, the northwest region of the U.S. currently appears to have a surplus of elementary teachers.

Chart 15. Elementary Education Graduates (Type A), from All Alaska Institutions of Higher Education and from the University of Alaska, 1997-2001



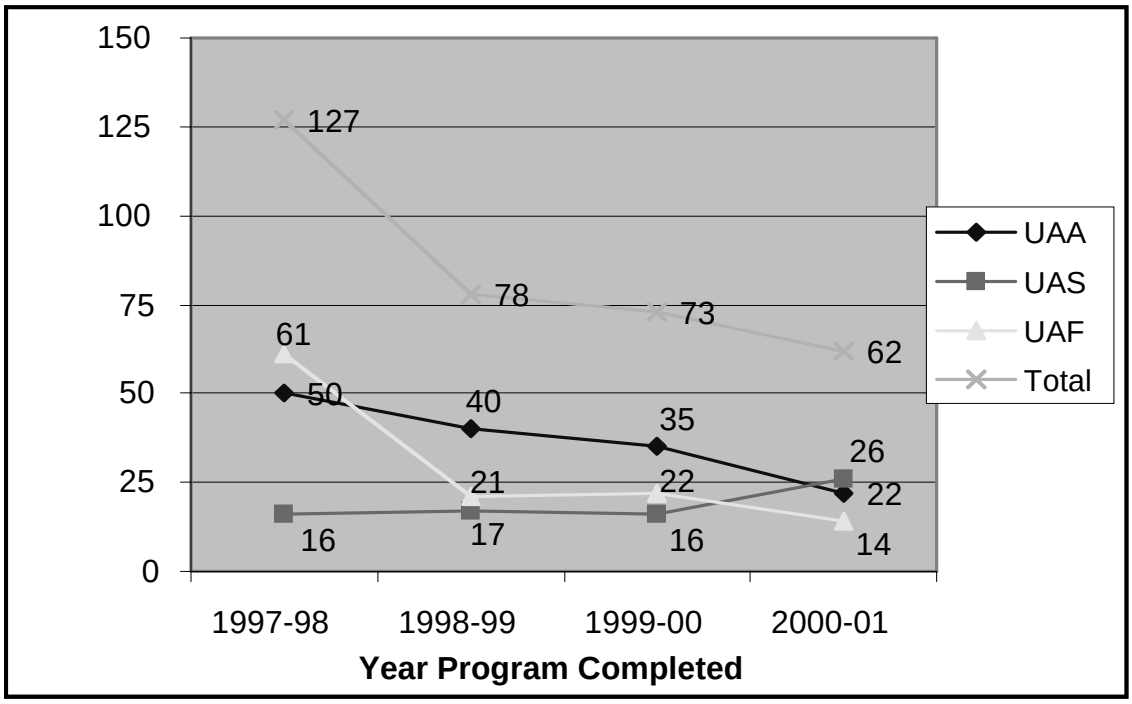
Source: J. Covey, Alaska Educator Supply, *December 10, 2001*

Secondary Education Graduates

As we noted above, Alaska, like other states, is experiencing shortages of secondary teachers, particularly in math and science. Just as the production of elementary teachers declined in the wake of the UA regents' decision to end the four-year bachelor of education program, so too did the production of secondary teachers. But that decline is less obviously related to the policy change, since the secondary programs had already evolved to the graduate level before the regents' decision.

As Chart 16 shows, the Fairbanks campus suffered the most precipitous decline, with the number of secondary education graduates dropping from 61 in 1997-98 to 14 in 2000-01. At UAA, the number of graduates declined from 127 to 62 during that period. But the Southeast campus showed no decline and, in fact, experienced a significant increase in 2000-01.

Chart 16. Secondary Education Graduates, University of Alaska, by Campus, 1997-2001

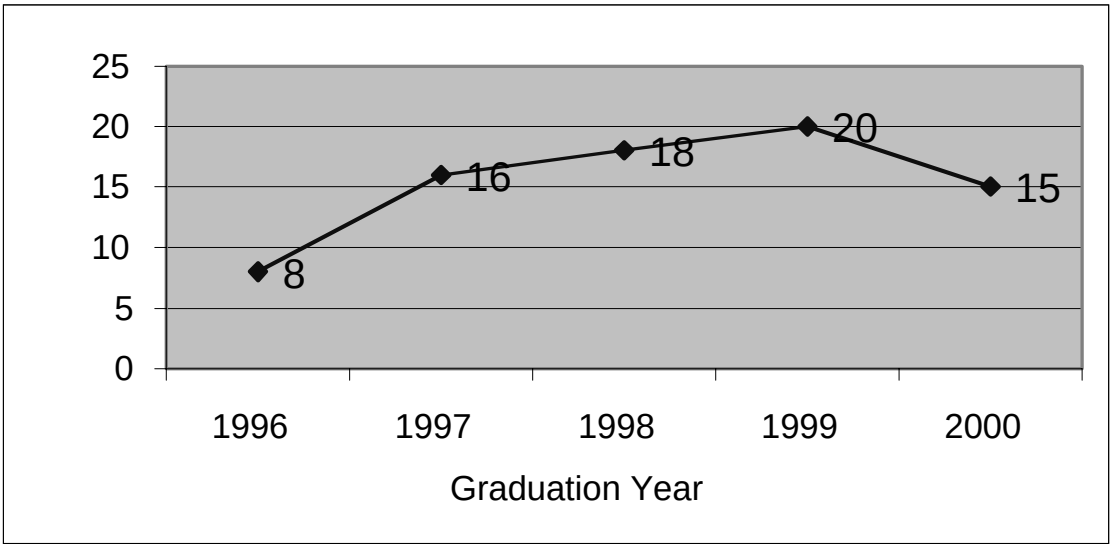


Source: J. Covey, Alaska Educator Supply, *December 10, 2001*

Special Education Graduates

Chart 17 shows the number of graduates from the special education certification program at the University of Alaska Anchorage during the period 1996-2000. This is the only special education certification program in the state. Despite the high demand for certified special education teachers—not just in the state but across the nation—the number of those entering and graduating from the program did not increase substantially between 1996 and 2000, and in fact began declining in 2000. During the five-year period, 77 certified special education teachers graduated from the program, but only 15 graduated in 2000. This reflects a national trend: as many special education teachers leave their positions because of increasing caseloads and paperwork, fewer candidates enter special education programs. In 1999-2000, more than 12,000 openings for special education teachers nationwide were left vacant or filled by substitutes (SPeNSE, 2001).

Chart 17. Graduates with Special Education Certification, University of Alaska Anchorage, 1996-2000



Source: Data supplied by Dr. Claudia Dybdahl, Director, Teacher Education Program, University of Alaska Anchorage, June 2001

Summary: Producing Teachers in Alaska

In short, overall production of teachers in Alaska has declined significantly over the past five years. Given that there is a surplus of elementary teachers in the region, it is the nearly 50 percent decline in the production of secondary teachers that should be of greatest concern to policymakers. This decline cannot be easily explained by the UA regents' decision to move teacher preparation to the graduate level, since that change had already occurred for secondary preparation programs before 1996. Other factors appear to be at work, but identifying the causes is beyond the scope of this report. Of equal concern is the recent decline in certified special education graduates.

How Many Teachers Who Graduate in Alaska are Likely to Go Into Classrooms?

In considering policy directions, we need to remember that the number of certified teachers who graduate from teacher education programs does not translate into a similar number in the classroom. As many as 40 percent of the graduates of traditional four-year bachelor of education programs do not enter classrooms after certification (Darling-Hammond, 2000). A greater percentage of the graduates of 5th year and 5-year programs enter classrooms, but as many as 10 to 20 percent do not (Andrew, 1981 and 1990; Shin, 1994). Thus, if Alaska's colleges and universities produced, on average, 230 elementary teachers over the period 1997-2001, we might expect that about 143 teachers would actually enter classrooms. A higher percentage of graduates of secondary teacher preparation programs that are 5th year programs may be expected to actually enter the classroom—roughly 80 percent of the average of 85 annual graduates from 1997-2001, or 68 teachers.

V. Survey of Alaska Instructional Aides

Overview

As Alaska faces shortages of teachers in a number of remote districts, attention has focused on a pool of potential teachers: instructional aides. For remote rural districts that often suffer turnover rates of 25 percent or more a year, supporting resident instructional aides who want to pursue certification seems an obvious strategy. Filling many or most of the positions in these schools with permanent residents of the community could improve curricular, instructional, and social continuity for rural students—and that would, in turn, improve their learning.

In addition, the recent No Child Left Behind legislation raises the ante for instructional aide qualifications. Under NCLB, paraprofessionals must have two years of postsecondary education, or demonstrate requisite skills on a "formal state or local academic assessment." All paraprofessionals who were hired after January 8, 2000 and are paid with Title I funds must meet these requirements. By 2005-06, all Title I paraprofessionals will have to meet these requirements.

Nationally, a number of school districts and institutions of higher education have collaborated to create career ladder programs to support para-educators in becoming certified teachers (DeWitt Wallace Readers Digest, 1997). Evaluations of some of these programs show that para-educators tend to persist in the programs, and that when they graduate, they go right into the classroom—and appear to be successful teachers.

In the past, the State of Alaska funded rural-based programs (such as X-CED) to provide course work and instructional support to para-educators and other rural residents who wanted to become teachers. As oil dollars—and consequently state revenues—declined, funds for such site-based support largely came to an end, although funding for a few outreach instructors and for distance-delivered programs has continued.

And as we will discuss in our survey results below, rural instructional aides need multiple supports to pursue certification. A critical area is developing the fundamental reading, writing, and numeracy skills required for college-level work. To have the time and the opportunity to develop these skills, many instructional aides would require other types of support such as tuition grants and child-care subsidies.

Against the cost of supporting aides who wish to earn certification must be balanced the high cost of teacher turnover. The costs are not only fiscal—training a new teacher typically costs $8,000 or more—but educational as well. As we noted above, high turnover rates are associated with low student achievement (Grissmer et al., 2000).

To find out more about the potential of instructional aides as a pool of prospective teachers, we surveyed a statewide sample. The questions we wanted to answer included:
(1) What are the demographic characteristics of instructional aides in Alaska schools?
(2) How many aides are interested in pursing bachelor's degrees or certification?
(3) What impediments do aides who would like to pursue certification face?
(4) What differences exist between instructional aides in rural and urban schools?

Survey Methods

Questionnaire

To learn more about instructional aides, ISER researchers drafted a survey questionnaire (available at http://www.iser.uaa.alaska.edu/) and sent it for review to six instructional aides and several educators knowledgeable about instructional aides (some of whom had previously been aides themselves). After that review process, we field-tested the instrument with aides who were attending the PRAXIS Institute sponsored by the Cook Inlet Tribal Council in the summer of 2001. We used their responses to further refine the questionnaire.

Procedures

In fall of 2001, we surveyed the personnel directors of 53 school districts in the state (the survey instrument is available at http://www.iser.uaa.alaska.edu/). All but four provided the names and mailing addresses of the aides in their districts. We drew a stratified random sample from these names. We then mailed surveys, with a cover letter, to our sample in November 2001. We continued to send follow-ups and replacement surveys until February 2002.

As we received surveys back in the mail, we entered the data into a database and subsequently analyzed these data using SPSS. In addition to running simple frequencies for all the items, we also tested the significance of differences between results from the rural and urban samples.

Sampling

We divided our sample into three strata: (1) Anchorage School District; (2) Fairbanks Northstar Borough School District, Juneau School District, and Matanuska-Susitna School district; and (3) rural school districts. We hypothesized that the instructional aides in rural districts might have issues and demographic characteristics distinctly different from those in urban areas. And given the size of the Anchorage School District (42 percent of all students enrolled in the state), we wanted to make sure that the three other urban districts were represented in the final sample. Table 12 shows the number of instructional aides in each stratum, as well as the number randomly selected for inclusion in our sample.

Table 12. Population and Sample Size for Instructional Aide Survey, 2000-01

Districts	Total Number of Aides*	Number in Final Sample	Number of Completed Surveys	Response Rate
Anchorage	609	83	39	52%
Fairbanks	178	35	14	43%
Juneau	96	19	12	63%
Matanuska-Susitna	114	23	7	35%
Rural	1,166	89	31	35%
Total	**2,373**	**249**	**103**	**41%**

**Figures on total number of aides from Alaska Department of Education and Early Development.*

Response Rate

Despite numerous follow-ups with aides who didn't respond, we were unable to achieve the response rate we had hoped for. However, the response rate we achieved is typical of self-administered, mail-out surveys. As Table 12 shows, we received 103 completed surveys of the 249 we mailed out. Among aides in urban schools, the response rate was 45 percent and among aides in rural schools 35 percent.

We do not know whether or how those who didn't respond may differ from those who did respond. We may speculate, however, that those who did respond may be more likely to have an interest in additional educational opportunities. Readers should bear this in mind. These modest response rates urge caution in interpreting the results.

Results of Instructional Aide Survey

Demographic Characteristics of Instructional aides

As Table 13 shows, all but a few of Alaska's instructional aides in the 2000-01 school year were women. Aides in urban schools were almost exclusively white, while more than half in rural areas were Alaska Natives. About three-quarters of both urban and rural aides were married; 17 percent of urban aides and 12 percent of rural aides were widowed or divorced.

Just over a fourth of the urban aides and more than half the rural aides were the primary wage earners in their families. This has implications for policy development: to pursue further education, most rural aides would probably have to continue working, unless funds could be found to support their families while they studied.

Not surprisingly, rural aides were much more likely to report that subsistence foods were an important part of their family's diet. Respondents from rural and urban schools reported comparable annual salaries—in the $15,000 to $17,000 range.

Rural aides appear to have significantly more experience than do urban aides. The rural aides in our sample had, on average, 9.1 years of experience as aides, compared with 6.2 years among urban aides. (Interestingly, nearly a third of urban aides in our sample reported that they had at some time held teaching licenses, while only one rural aide reported ever having held a teaching license.)

Table 13. Characteristics of Alaska Instructional Aides, 2000-01

Characteristic	**Urban** (N=72)	**Rural** (N=31)
Female	94%	95%
Married	76%	77%
Widowed or Divorced	17%	12%
Alaska Native	2%	54%**
White	96%	50%**
Primary wage earner	26%	56%**
Rely on subsistence foods	11%	74%**
Years as an instructional aide	6.2	9.1*

*Note: Racial composition of rural aides adds to more than 100% because two aides identified themselves as both Alaska Native and white. * Difference significant at the <.01 level ** Difference significant at the <.001 level.*

Source: ISER survey of Alaska instructional aides, 2001-02

Aides most often work in preschool through sixth grade (Table 14). Rural aides appear to work more often in the early grades (kindergarten through third grade) than do their urban counterparts—but that difference is not statistically significant.

Table 14. Grade Levels Where Alaska Instructional Aides Worked, 2000-01 (Percentage of Aides That Spent Any Time Working with Various Grade Levels)

Grade Level	Urban (N=70)	Rural (N=30)
Preschool	13%	7%
Kindergarten	16%	24%
Grades 1-3	28%	46%
Grades 4-6	39%	40%
Grades 7-8	13%	17%
Grades 9-12	20%	17%

Source: ISER survey of Alaska instructional aides, 2001-02

Significant differences do appear when we look at the distribution of aides across programs (Table 15). Nearly 9 out of 10 instructional aides in urban schools spend at least some of their time working in special education, compared with just over a third in rural schools. This difference may reflect the higher case loads that special education teachers typically face in urban schools, as well as differences in funding. Conversely, rural aides are much more likely to work in regular classrooms than are urban aides.

Table 15. Programs Where Alaska Instructional Aides Worked, 2000-01 (Percentage of Aides That Spent Any Time Working in Various Programs)

Instructional Program	Urban (N=70)	Rural (N=30)
Special Education	89%	37%*
Title I	4%	9%
Regular Instructional Program	22%	50%*
Migrant Education	0	4%
Bilingual	2%	7%

** Difference significant at the <.001 level*
Source: ISER survey of Alaska instructional aides, 2001-02

Education Levels and Post-Secondary Experience of Aides

We found significant differences in education levels of urban and rural instructional aides (Table 16). On the whole, urban aides were more likely to have education beyond high school. Among rural aides, 38 percent reported no formal education beyond high school, while another 40 percent reported "some college." Over a third (35 percent) of the urban instructional aides, on the other hand, reported having at least a bachelor's degree. This finding suggests that, in constructing career ladders for rural para-professionals, a first goal might appropriately be associate degrees.

This also speaks to the issues raised by No Child Left Behind legislation. Rural schools, especially, will face a crisis in hiring and retaining aides unless they can find

ways to increase the educational level of their aides, very few of whom currently meet the new federal guidelines.

Table 16. Education Levels Among Alaska Instructional Aides, 2000-2001

Highest level of education completed	Urban (N=70)	Rural (N=30)
High school diploma/GED	13%	38%*
Some college	43%	40%
Associate's degree	4%	0
College beyond AA degree	4%	9%
Bachelor's degree	18%	8%
Some graduate-level study	13%	4%
Graduate-level degree	4%	0
Total	100%**	100%**

** Difference significant at .01 level **May add to more or less than 100% due to rounding*
Source: ISER survey of Alaska instructional aides, 2001-02

We also asked aides—including those who held only high-school degrees—about taking college-level courses and where they took those courses. Table 17 shows the percentages of aides who had taken at least one college-course from specific institutions. Remember that any given aide may have taken courses from more than one institution—so the percentages in Table 17 add up to more than 100.

Table 17. Sources of Post-Secondary Education Among Instructional Aides (Percentage of Aides Who Have Taken Courses from Specific Institutions)

Post-Secondary Institutions	Urban (N=70)	Rural (N=30)
A community college or rural campus in Alaska	17%	24%
University of Alaska Anchorage	39%	13%
University of Alaska Fairbanks	20%	17%
University of Alaska Southeast	9%	9%
Alaska Pacific University	13%	13%
Sheldon Jackson College	0	0
Institutions outside Alaska	46%	24%

Source: ISER survey of Alaska instructional aides, 2001-02

Not surprisingly, more rural than urban aides—24 percent compared with 17 percent—had taken courses at either rural campuses or community colleges. Table 17 also shows how many aides had taken courses on the three main UA campuses. Given that a substantial share of those who responded to the survey were from Anchorage, it is unsurprising that 39 percent of urban aides had taken courses at UAA, compared with 13 percent of rural aides. About one fifth of both groups had taken courses at UAF. Smaller shares—about 9 percent of both—had taken courses at UAS.

About 13 percent of both urban and rural aides had taken classes at Alaska Pacific University, but none in our small sample had taken courses at Sheldon Jackson College.

Almost half the urban aides and a quarter of the rural aides had taken some classes outside Alaska.

Overall (eliminating the duplication in Table 17 resulting from aides' taking classes at more than one institution), 65 percent of the urban aides and 35 percent of the rural aides had taken courses on college or university campuses. That difference between the two groups was statistically significant. Interestingly, all the rural aides and 85 percent of the urban aides who had taken on-campus classes said they would take more if they had the opportunity.

Because many Alaskans rely on distance-delivered education, we also asked instructional aides about their experiences with distance education—which can include correspondence courses and telephone conference classes as well as courses offered over the Internet or via television (Table 18). Among urban aides, 26 percent had taken distance-delivered courses and among rural aides 23 percent. That amounted to just 19 urban aides and 7 rural aides. Among that small sample, most reported at least somewhat positive experiences—but rural aides were more likely than urban aides to report positive experiences.

Table 18. Experience of Alaska Instructional Aides With Distance Education

	Urban N=71	**Rural** N=31
Share who had taken distance delivery courses	26%	23%
Experience of those who had taken courses	N=19	N=7
Positive	27%	54%
Somewhat positive	36%	31%
Mixed	27%	0
Negative	9%	15%

Source: ISER survey of Alaska instructional aides, 2001-02

Share of Aides Working Toward or Interested in Pursuing Degrees

We also asked instructional aides whether they were currently working toward degrees. At the time of the survey, only 15 percent of the urban aides and 19 percent of the rural aides were actively pursuing degrees. On average, among those aides working toward degrees, the urban aides needed 29 more credits and the rural aides 24 credits to complete their degrees.

But a much larger share of aides—43 percent of urban and 48 percent of rural aides—told us they were interested in working toward degrees or certification. As we see below, instructional aides identified a number of impediments to further education.

Future Plans and Impediments to Further Education

We asked our sample of instructional aides a series of questions about their future plans. These were especially relevant in light of our finding that many aides have an interest in working toward degrees or certification. We were particularly interested in the impediments the aides faced in continuing their education (Table 19).

Table 19. Impediments To Alaska Instructional Aides Obtaining Degrees (Percentages Citing Specific Impediments)

Impediments, including lack of:	Urban (N=37)	Rural (N=17)
Money for tuition	96%	100%
Courses available when I have time	95%	76%
Required courses available in community	56%	76%
Good advice on courses available in community	60%	59%
Affordable child care	27%	48%
Child care with which I am comfortable	23%	36%
Computer skills	32%	43%
Support to help me read college-level material	18%	31%
Support to help me write at college level	25%	60%*
Support from superintendent and school board	59%	22%*
Support from principal	37%	20%
Support from family and friends	36%	8%*
Support from teachers	21%	7%
Support from my community	27%	18%
Support in community for distance delivery courses	50%	33%
Access to computer	17%	17%

** Difference significant at the <.05 level Source: ISER survey of Alaska instructional aides, 2001-02*

As Table 19 shows, virtually all the aides who expressed an interested in working toward degrees and certification identified lack of money for tuition as an impediment. Next in importance was aides' not having access to courses when they had time to take them. This was followed by the lack of access to required courses in the aides' communities—although this was an issue for only 56 percent of the urban aides compared with 76 percent of the rural aides. As we discussed earlier, rural aides in particular tend to be the major salary earners in their households and are involved in subsistence activities as well (see Table 13). Thus, many aides contemplating further education cannot easily move to places where classes are more readily available.

The majority of rural and urban aides interested in getting degrees also said that lack of good advice on which courses to take was an impediment. Where to go to get the information they need appears to be a major concern for both urban and rural aides.

Issues related to child care proved to be a concern for more rural than urban aides. Among our small sample of rural aides, 48 percent expressed concerns about the affordability of child care available to them and 36 percent had reservations about the quality. In contrast, only 27 percent of urban aides had similar concerns about the affordability of child care and 23 percent about the quality. These results are surprising, given the extended family networks on which many rural residents depend for child care.

More of the rural aides in our sample who expressed an interest in pursuing additional education saw lack of specific academic skills as barriers. In addition to the 43 percent of rural aides who thought their computer skills were not up to standard, a third judged their reading skills and nearly two-thirds their writing skills as not up to college standards. The scores of rural aides on the PRAXIS examination bear out these self-

assessments. Clearly, any program designed to help rural aides become certified must include opportunities for them to improve their reading and writing skills. Far fewer urban aides thought their reading (18 percent) and writing (25 percent) skills would impede their progress toward certification.

For instructional aides to continue their education, they need support from many people with whom they work and live. As we see in Table 19, lack of such support seems to be a bigger impediment for urban than for rural aides. Significantly more urban (59 percent) than rural (22 percent) aides saw lack of support from the superintendent and school board to be an impediment. Similarly, 37 percent of the urban aides but only 20 percent of the rural aides saw lack of support from the principal as an impediment—a difference that is statistically significant. Very few rural aides saw lack of support from family and friends as an obstacle, but more than a third (36 percent) of the urban aides did. Relatively few in either group saw lack of community support as an issue.

The lack of support in their community for distance-delivered courses was an impediment cited by fairly high proportions of both urban (50 percent) and rural (33 percent) aides. On the other hand, access to a computer was an issue for only about 17 percent of both urban and rural aides.

In sum, the greatest impediment for both urban and rural instructional aides who said they would like to become certified was the money needed to pay tuition. A majority of both groups also identified as major impediments the limited availability of and access to required courses and good advice about which courses to take. Many rural aides rated concerns about affordable, quality child care as an issue, as well as help they need to upgrade their computer, reading, and writing skills. Many urban aides, on the other hand, were concerned that they might get inadequate support from the superintendent, school board, principal, and family and friends—concerns that relatively few rural aides shared.

Future Education Options

To learn more about how educational programs might best fit the needs of instructional aides, we asked a series of questions about which arrangements would best suit their circumstances.

An important issue for aides interested in further education is whether they could afford to leave their home communities for some period of time, to take required teacher preparation courses. So first we simply asked aides who had expressed an interest in further education how long they could afford to be away from home each year. The results of that question are shown in Table 20. We then asked those same aides how long they could afford to be away from home, if their travel, tuition, and living expenses were paid; those results are shown in Table 21. Finally, we asked the aides how long they could afford to be away from home, if not only their travel, tuition, and living expenses were paid but also some support for child care were provided (Table 22).

Table 20. Longest Period Aides Could be Away From Home Each Year

	Urban N=37	Rural N=17	Both N=54
No time	20%	42%	32%
1-3 weeks	40%	36%	38%
4-6 weeks	28%	16%	21%
7-12 weeks	0	0	0
Longer than 12 weeks	12%	6%	9%
Total	100%	100%	100%

Source: ISER survey of Alaska instructional aides, 2001-02

When simply asked how long they could afford to be away from home each year to take teacher-preparation courses, a majority of both urban and rural aides said they could not afford to be away at all or only for a short time (Table 20). Among rural aides, 42 percent said they could not afford to be away at all, and another 36 percent said they could be away no longer than 1 to 3 weeks. Among urban aides, 20 percent said they could not be away at all and another 40 percent said they could be absent no longer than 1 to 3 weeks. Very few said they could afford to be away longer than 6 weeks.

However, when we asked the same question and included support for tuition, travel, and living expenses, the numbers changed dramatically (Table 21). With financial support, almost all the aides in our sample said they could afford to be away for some time—and 42 percent of urban and 24 percent of rural aides said they could be away for longer than 12 weeks each year.

Table 21. Longest Period Aides Could be Away From Home, If A Program Provided A Scholarship For Travel, Tuition and Living Expenses

	Urban N=37	Rural N=17	Both N=54
No time	8%	0	4%
1-3 weeks	13%	23%	18%
4-6 weeks	25%	42%	35%
7-12 weeks	13%	13%	13%
Longer than 12 weeks	42%	24%	31%
Total	100%	100%	100%

Source: ISER survey of Alaska instructional aides, 2001-02

And when we added child care support to the other financial supports, an even higher proportion of aides reported that they could be away from their homes to pursue further education (Table 22). Nearly a third of rural and 44 percent of urban aides said they could be away from home 12 weeks or longer each year, with all that support.

Table 22. Longest Period Aides Could Be Away From Home Each Year, If a Program Paid Travel, Tuition and Living Expenses and Provided Some Support for Child Care

	Urban N=37	Rural N=17	Both N=54
No time	4%	0	2%
1-3 weeks	13%	17%	15%
4-6 weeks	13%	30%	23%
7-12 weeks	26%	23%	23%
Longer than 12 weeks	44%	30%	36%
Total	100%	100%	100%

Source: ISER survey of Alaska instructional aides, 2001-02

Given the remoteness of many Alaska communities, computer technology represents a means to provide additional education to aides. So we also asked the instructional aides who were interested in furthering their education about their level of comfort with computer technology. Almost all the sample of both urban and rural aides said they would be at least somewhat comfortable using computers to communicate with instructors—but urban aides were almost twice as likely to report themselves as "very comfortable" with the prospect of using computers for communications (Table 23).

Table 23. How Comfortable Do Aides Feel Using Computers to Take Classes and Communicate with Instructors?

	Urban N=37	Rural N=17	Both N=54
Very comfortable	48%	25%	35%
Somewhat comfortable	35%	75%	57%
Not very comfortable	13%	0	6%
Very uncomfortable	4%	0	2%
Total	100%	100%	100%

Source: ISER survey of Alaska instructional aides, 2001-02

We also asked a series of questions about computer and Internet availability (Table 24). All rural aides and about 8 in 10 urban aides reported having access to both computers and Internet connections at school. But rural aides are far less likely to have either computers or Internet access at home. Just 55 percent of rural aides reported having computers at home, compared with 91 percent of urban aides. And only 38 percent of rural aides said they had Internet connections at home, versus 91 percent of urban aides.

Table 24. Percentage of Instructional Aides with Computer and Internet Connections at School and at Home

	Urban N=37	Rural N=17	Both N=54
Computer available at school	83%	100%	92%
School computer is connected to Internet	79%	100%	90%
Computer available at home	91%	55%	73%
Home computer is connected to Internet	91%	38%	62%

Source: ISER Survey Of Alaska Teacher Aides, 2001-02

Summary: Potential for Aides to Become Teachers

As we noted earlier, rural aides who are permanent residents of the communities where they work represent a potential pool of teacher candidates that could help reduce the high turnover rates that plague some remote rural districts. They also bring other strengths to the table besides their knowledge of the community including, on average, more than 9 years of experience in the classroom. Recent changes in federal law have profound implications for rural schools. Many of their instructional aides are paid with federal Title I monies; unless they increase their education, they will not qualify for that funding in the future.

At the same time, supporting those aides who would like to meet the new requirements or to become licensed teachers would require considerable resources. Rural aides, who are predominantly Alaska Natives, are more likely than their urban counterparts to be the primary wage earners in their families and to depend on subsistence foods. This suggests that many, if not most, could not simply stop working to continue their education. They would have to replace both their incomes and their contributions to the family subsistence effort—much of which is concentrated in the summer, when aides might otherwise have time to pursue their studies.

Nearly half the rural aides in the sample also reported that the lack of affordable, quality child care is a major impediment to their working toward a degree. This is a critical issue, because 92 percent of the rural aides are parents, and of those, 13 percent have at least one child younger than 5. On average, rural aides are parents or guardians of two children of school age.

Rural aides would also need opportunities to develop the academic skills that are critical to success in college. Four of ten have only high school diplomas and no college experience. Only about two of ten are currently enrolled in degree programs. Nearly two-thirds of the rural aides interested in furthering their education admit that they would need help in developing college-level writing skills, and a third would need help learning to read at a college level. Four of ten rural aides interested in more education also reported deficiencies in their computer skills. This suggests that before many of the rural aides could begin working toward degrees they would need courses to help them master college-level reading and writing.

Urban aides interested in becoming teachers face other challenges. Most do not feel that their superintendents and school boards would support their efforts to become licensed. More than a third do not think their principal would support such efforts, nor that their family and friends would support them.

VI. CONCLUSIONS AND RECOMMENDATIONS

Alaska, like most other states, is facing teacher shortages. These shortages are, however, confined to certain specializations and to a few rural districts. For some remote rural districts, the shortage of teachers is not new. Beset with seemingly endemic teacher turnover, these districts must scramble every year to fill numerous openings.

Because Alaska depends on universities outside the state to prepare the majority of teachers for Alaskan schools, the state is particularly vulnerable to the vicissitudes of teacher labor markets in the other states. The specialization shortages—particularly in special education and in secondary math and science—are national in scope. Consequently, Alaska is competing with other states for teachers in these areas. Alaska's school districts are not in a strong competitive position. Teachers' salaries are comparatively modest, when you consider Alaska's higher living costs—especially in rural communities, where living costs are higher than in urban Alaska and much higher than in most of the U.S.

The turnover problem in some rural districts is all the more disturbing because of recent research that shows a strong relationship between low teacher turnover and higher-than-average student achievement. Results from Alaska's High School Graduation Qualifying Examination confirm that many of the remote rural districts that fared poorly on the test are precisely those that have historically experienced the highest rates of teacher turnover. Addressing the turnover problem may not be sufficient, by itself, to improve student achievement in these districts—but it may well be a necessary condition. As noted above, the performance of schools that enroll educationally disadvantaged students is a particular focus of the NCLB legislation. Failing to improve the achievement of low-performing schools will have profound consequences for the state as a whole.

A central question for state and university policymakers is how to respond to the geographic and specialization shortages we have identified and to the high rates of turnover in some remote rural districts. To assist policymakers, we collected and analyzed data from a variety of sources. We amassed and analyzed data from the Alaska Department of Education and Early Development, the University of Alaska, and from the Alaska Teacher Placement office at the University of Alaska Fairbanks. We also collected new data through a variety of means, including surveys and interviews. Specifically, we collected data from (1) personnel directors in 49 of Alaska's 53 school districts; (2) directors of the teacher education programs in the state in 2001; (3) a representative sample of teachers who exited Alaska schools in 2001; and (4) a representative sample of rural and urban instructional aides in 2001-02. For the latter two surveys, our response rates were in the range of 45 to 55 percent—rates fairly typical of self-administered surveys with these populations. These rates do, however, urge caution in interpreting the data.

Given our analyses of these various data, what are the factors that appear to be contributing to the specific shortages that Alaska schools are experiencing?

Teacher Supply: Declining Numbers of Alaska Graduates

• UA's 1996 decision to require a baccalaureate degree for admission to teacher preparation programs may have affected the number of elementary graduates.

A major concern of policymakers has been the decline in the number of certified teachers graduating from University of Alaska preservice programs. The decline can be traced in large part to the upheaval created by the UA regents' decision in 1996 to move all teacher preparation to the graduate level. That decision was prompted by research showing that teachers, especially elementary teachers, were often inadequately prepared in the subjects they taught (National Center for Research on Teacher Learning, 1991). In the period from 1997 through 2000, the three main campuses of the University of Alaska were understandably preoccupied with creating new post-baccalaureate programs and ensuring that students already enrolled in the old programs graduated. No doubt, some potential teacher candidates were discouraged by the requirement that they earn a disciplinary bachelor's degree before beginning their professional preparation. We lack the data, however, to say how many were discouraged by the new requirements.

• UA's 2001 decision to again offer a bachelor's degree in elementary education does not address the decline in graduates where shortages are greatest—in secondary teachers, in special education teachers, and in remote, hard-to staff schools.

About a third fewer elementary teachers graduated from UA programs in 2000-01 than had graduated in 1997-98. But we could find little evidence of a shortage of elementary teachers. The only exception may be in the historically hard-to-staff districts in remote rural areas.

What should be of greater concern is the nearly 50 percent decline in secondary teachers graduating in the same period. UA's 1996 move to a post-baccalaureate degree should not have affected candidates for secondary certification, because their program was already at the graduate level. Without further investigation, attempts to identify the causes of the decline would be mere speculation.

Given the high attrition—both nationally and regionally—among teachers certified to teach special education, the small number of UA graduates in special education over the past five years is also a concern. Whereas all Alaska districts combined hired, on average, 52 special education teachers annually during the period from 1996 to 2000, the University of Alaska has averaged about 15 special education graduates annually over the same period—or about 29 percent of the demand.

The shift back to an undergraduate elementary education degree could possibly make more teachers available for the remote rural areas where there are shortages of elementary teachers. Those shortages are also exacerbated by the scarcity of certified Alaska Native teachers, who are likely to be permanent residents of the remote communities they call home. Alaska Natives may represent the best long-term solution to the chronic teacher shortages in some remote districts but currently little is being done to help them move toward certification. Reinstitution of the four-year baccalaureate in elementary education may encourage more Alaska Natives to pursue certification, but it is too early to know.

In deciding on policies to address perceived shortages, policymakers should expect pressure on the university from administrators and school boards to produce more

certified teachers: the more qualified teachers available in the market, the more selective districts can be and the better their bargaining position.

The decision to widen the gateway into teacher certification programs raises a second issue: increasing the general supply of teachers by no means insures that teachers will go where they are most needed—either geographically or by specialization. In fact, given the declining competitiveness of Alaska's teacher salaries, UA-educated teachers could leave Alaska to teach in states that are raising salaries to address their own shortages. At least three of those states are in the western U.S. Unless the state and school districts attend to teacher compensation and working conditions, the University of Alaska could find itself producing teachers for schools in California and Texas.

Policy Implications: How Can We Produce More Alaska Teachers?

• ***Developing targeted programs could address specific shortages***.

Given the specific nature of Alaska's teacher shortages, the university and the state may need to collaborate on programs designed to recruit and prepare teachers in the specializations where they are most needed. This would suggest collaboration with the historically difficult-to-staff districts to identify the specializations they need—including generalists or multi-subject endorsed teachers, who are in great demand in rural Alaska. The emphasis that the federal No Child Left Behind legislation places on reducing out-of-field teaching raises issues that cannot be ignored about preparing teachers for rural schools—where teachers frequently have to teach outside their fields. It isn't clear what preparation programs could do to qualify teachers in the range of fields they might need in rural schools, particularly since teacher education programs are required to meet the NCATE standards.

Targeted programs could be designed with an understanding that they might be phased out or transformed after a few years, as needs changed. But universities are not noted for their organizational flexibility and nimbleness. Thus creating programs that can be adapted to changing circumstances will not be easy. In addition, production of teachers lags behind identification of shortages, and predicting future shortages is always risky. However, most shortage areas—especially, secondary science and math; special education; and difficult-to-staff remote rural districts—have proven persistent over the past decade. Developing programs to address those shortages is probably a safe bet.

• ***Developing programs specifically to prepare teachers for rural schools could address shortages in hard-to-staff rural districts.***

To address historic shortages in hard-to-staff districts, the university and the state need to develop programs to graduate more teachers who are permanent residents of rural communities. The state has not funded a program that specifically targets the development of teachers in remote rural communities in more than a decade. Although the Rural Educators Preparation Partnership (REPP) has enjoyed success in helping a small number of students complete their teacher preparation in rural Alaska, it is a federally funded program that must reapply for funding every three years. Some school districts, such as the Lower Kuskokwim, have established their own professional development programs for instructional aides and have had some success in growing their

own. But districts have limited funds to commit to such programs, and smaller districts often lack the capacity to organize, fund, and oversee them.

• ***Developing career ladders for and providing support to instructional aides could produce more teachers in remote rural districts.***

As our survey data revealed, a large number of current instructional aides in rural Alaska are interested in becoming teachers. But these potential candidates face a legion of obstacles: affordable, quality day care; funds for tuition; maintaining their incomes as the primary breadwinners in their families; and the demands of subsistence activities in summer months, when they would otherwise be available for classes.

Equally challenging is the inadequacy of their basic academic skills. Nearly 40 percent have no more than a high school education. Nearly two-thirds lack adequate writing skills, a third believe their reading skills are not up to college standard, and four of ten lack basic computer skills. Sadly, these data speak to the substandard high-school preparation many of the aides experienced. Any program for rural instructional aides would have to begin with opportunities to develop the basic skills they need to succeed at college-level work.

Recent changes in federal law make the availability of additional educational opportunities even more important for rural paraprofessionals. Soon, school districts will be unable to use their Title I funds to pay aides whose educational levels fall below federal requirements.

These challenges might seem insurmountable, the costs far greater than the current political will to address the obstacles. Yet, they must be viewed against what we know of the current situation in many remote rural districts: persistent, debilitating levels of teacher turnover; the high costs of recruiting and training new teachers every year or two; persistent low student achievement; and mounting concerns about student behavior and motivation. Developing a core of teachers who are permanent residents of these communities could be the cornerstone of policies and programs to reverse the trends in remote rural districts. As anyone familiar with the history of regional boarding schools and the home-boarding program knows, returning wholesale to the failed policies of the past is not the answer (Kleinfeld, 1973).

Districts may be able to partner with their non-profit Native regional corporations to develop career ladder programs for each region. These organizations appear to have the needed experience, having previously established career development programs for village health aides.

Alaska's Declining Competitiveness

• ***Cost-of-living adjusted salaries for Alaska teachers have declined steadily over the past decade.***

In the late 1970s and early 1980s, Alaska's teacher salaries were the highest in the country. The American Federation of Teachers now ranks Alaska's cost-of-living adjusted salaries as 40th among the 50 states. Even if that ranking overstates the cost-of-living differential between urban Alaska and the Lower 48, it may understate the differences between remote rural Alaska—where the shortages exist—and the Lower 48.

Obviously, this decline must be reversed if Alaska is to recruit new teachers. Although a sizeable portion of the teaching force is place-bound, many teachers are free to sell their services to the highest bidder. Because of Alaska's historic dependence on teachers from Outside, Alaska districts are particularly vulnerable to changes in the state's competitive position.

Policy Implications: How Can We Improve Alaska's Competitiveness?

• ***Raising salaries to keep up with other states is critical***.

A priority for the state must be to raise teachers' salaries overall, to regain at least some of the competitive edge the state enjoyed in recruitment during the early to mid-1980s. Allocating more money to education at a time of declining state revenues and growing budgetary shortfalls seems unlikely. But policymakers and the electorate must be made to understand the consequences of failing to increase salaries. Hard-to-staff districts, as well as those that have not typically had to struggle to staff their schools, will find it increasingly difficult to compete for well-qualified teachers in areas where shortages are nationwide. Schools in which students are already performing poorly on the state assessments will have to rely on unqualified or under-qualified teachers and will continue to suffer high teacher turnover rates. A deck that is already stacked against many of the highest-need students in the state will become even more stacked.

• ***Addressing housing cost and quality issues could help***.

As a way to recruit and retain teachers in remote areas, districts might encourage the village corporations to provide loans for teachers to build housing. This might reduce the cost of housing for teachers and improve the quality—as well as increase the stake that teachers from outside have in the community. If teachers left during the summer, the housing could be rented out to generate income to offset high housing costs.

High Turnover Rates and Difficulty Recruiting in Some Rural Districts

• ***Many rural teachers leave because of dissatisfaction with their jobs***.

While no urban district had an average turnover rate greater than 14 percent during the period 1996-2000, one-quarter of all rural districts experienced average turnover rates of 30 percent or more during the same period. In the 1980s, unusually generous teacher salaries and benefits combined with a general teacher surplus ameliorated some of the difficulties of staffing Alaska's remote rural schools. Recently, however, as real salaries for teachers in Alaska's rural schools have fallen and shortages appeared in high-need districts across the country, staffing has become a major problem for many—but not all—remote rural districts.

When we asked a representative sample of rural teachers why they left their positions, half cited dissatisfaction with their jobs. Many felt that the job they actually did was misrepresented during recruiting. They were also dissatisfied with: (1) student motivation and behavior; (2) community and parental support; (3) the school leader's communication with parents; and (4) the relevance of professional development activities to their needs. Thus, while comparatively modest salaries may be responsible for the difficulty in *recruiting* teachers for hard-to-staff districts, it is *working conditions*, not *pay*, that is the primary issue for most teachers who leave rural teaching positions.

These findings are consistent with research done nationally. Ingersoll (2001) found that for most teachers, school and district characteristics were as critical to their decision to leave their jobs as was compensation. He found that turnover was *lower* in schools where: (1) salaries are higher; (2) teachers receive more administrative support; (3) fewer problems with student discipline were reported; and (4) teachers had relatively more influence on the decision-making process.

These results suggest several possible actions to improve working conditions in rural schools.

Policy Implications: How Can We Reduce Turnover and Increase Recruitment?

- ***School improvement efforts should include conversations between educators and the community on goals for the school and academic and behavioral expectations for students.***

To address issues of student motivation and behavior requires a concerted, collaborative effort by educators, on the one hand, and parents and community members, on the other. Problems with behavior and motivation can often be traced to inconsistent messages coming from home and school. Other research in Alaska has shown that when parents and educational professionals agree on values, and when students receive the same messages about appropriate behavior and learning goals at home and at school, students are unable to play one side off against the other and must bear down and do their work (Kleinfeld, 1979; Kleinfeld, McDiarmid, and Hagstrom, 1985).

State assessments have identified schools that clearly need additional support. A key part of that support will be convening school-community meetings to discuss goals and expectations.

- ***Professional development for principals could help them broker the conversation between the school and the community about goals and expectations for student performance and behavior***.

The conversation required to develop common expectations for student behavior and school performance should be at the core of communications between the school and the community. Each must listen to the other. Educators who do not plan to stay in the community need to make a special effort to hear what parents want from the school. As temporary residents, they need to be careful about imposing their agenda on the school when they will be gone in a year or two. Residents have to live with the consequences of educators' decisions long after most of them are gone.

The school principal is obviously the person to broker these conversations. As the results of our survey show, principals' failure to communicate with parents and community members is a major dissatisfaction among those who leave their teaching positions. This role for the principal is one that must be emphasized—and practiced —both in principal preparation programs and in state and district training for principals.

- ***District- and school-level professional development must include teachers in identifying their needs and planning activities.***

Districts and school administrators need to address teachers' perception that much of their professional development is irrelevant to the issues and problems they face.

Although a mounting body of evidence clearly demonstrates the importance of teacher involvement in planning their professional development, some districts insist on controlling the agenda (McDiarmid and Kelly, in review; Sparks 2002). Involving teachers in planning professional development activities is not difficult (for a description of how this has been done elsewhere, see McDiarmid and Kelly). What apparently is a challenge for some administrators is relaxing their control. The advent of the benchmark tests and the High School Graduation Qualifying Examination has, understandably, ratcheted up administrators' levels of anxiety, making them even less inclined to take the risk of turning professional development planning over to teachers. State-level policy interventions—such as those that were part of the Kentucky Educational Reform Act—may be needed to put teachers in control.

• ***Induction programs that support teachers through the difficulties of the first-year of teaching help keep them in the classroom***.

A major problem all states face is that a high number of new teachers—between 30 and 50 percent, depending on location—leave the profession within the first five years. Much of that attrition can be traced to the frustrations and sense of failure that new teachers feel. Even the best teacher education programs cannot fully prepare teachers for the unrelenting demands made on them when they are solely in charge of a classroom. Clearly, as other countries such as China have demonstrated, beginning teachers need and respond well to support from their more veteran colleagues and the school and district administration.

As research from California has shown, well-designed and funded induction programs for beginning teachers can dramatically reduce the number of teachers leaving the profession in their first few years (Bullard, 1998). Using a federal grant, the Alaska Department of Education and Early Development in 2001-02 funded mentor programs for new teachers in eighteen districts. Although it is too early to determine the effects of the program on teacher retention, data suggest that first-year teachers found the program helpful and felt encouraged to stay in their jobs.

The State of Alaska should fund induction programs in all districts, especially those experiencing high rates of teacher turnover. Districts can work in collaboration with the University of Alaska and NEA-Alaska to prepare teachers as mentors. This preparation is critical to the success of the program. The costs of such a program need to be weighed against the costs districts bear in recruiting and training new teachers.

In conclusion, the shortages that some Alaska districts face are unlikely to disappear in either the short- or long-term, without some major policy changes at the state and district levels and at the University of Alaska. Although graduating more highly qualified teachers should clearly remain a goal, the evidence suggests that we cannot simply "produce" our way out of our current shortages. Policymakers must directly address the conditions that cause high rates of turnover and difficulties in recruiting in some districts, if all students in all Alaska's schools are to have the high quality opportunities to learn that they need and deserve.

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Attachment B

Alaska Division of Retirement and Benefits, Teachers' Retirement System (TRS)
Plan Comparison Chart; *http://www.state.ak.us/drb/trs/tiertrs.pdf*

Alaska Division of Retirement and Benefits

Teachers' Retirement System (TRS) Plan Comparison Chart

Feature	Tier I July 1, 1955 – June 30, 1990	Tier II Entered on or after July 1, 1990	Tier III Entered on or after July 1, 2006
Employee Contribution	Pre-tax employee contribution: 8.65% beginning 1/1/91	Pre-tax employee contribution: 8.65% beginning 1/1/91	8% all employees Employee may make additional contributions.
Employer Contribution	Determined by annual actuarial evaluation.	Determined by annual actuarial evaluation.	7% - DC account 1.75% Health Plan - determined by annual actuarial evaluation after FY07. HRA - Flat dollar amount per employee based on 3% of the employer's average annual employee compensation.
Vesting	Members vest with 8 years of service.	Members vest with 8 years of service.	100% vested in employee contributions from inception. Vested in employer contributions based on the following schedule: 25% after 2 years of service, 50% after 3 years, 75% after 4 years and 100% after five years.
Qualifications for Retirement	Normal retirement age is 55, with early retirement at age 50; teachers can retire at any age after 20 years of membership service.	Normal retirement age is 60, with early retirement at age 55; teachers can retire at any age after 20 years of membership service.	None for investment account. Taxes and penalties may apply if withdrawn before age 59 1/2. See requirements for Retirement Medical Coverage.
Benefit Calculation Formula	Benefit formula is 2% for the first 20 years **and all years of service prior to July 1, 1990**, 2.5% thereafter. Benefit calculation is determined on the average of the high three contract salaries.	Benefit formula is 2% for the first 20 years, 2.5% thereafter. Benefit calculation is determined on the average of the high three contract salaries.	DC account balance plus investment earnings.
Alaska Cost-of-living Increases (COLA)	An Alaska Cost-of-Living Allowance is payable to benefit recipients who remain domiciled in Alaska after retirement. The allowance is 10% of the base benefit.	An Alaska Cost-of-Living Allowance is payable to benefit recipients 65 or older or disability benefit recipients regardless of age who remain domiciled in Alaska after retirement. The allowance is 10% of the base benefit.	None provided.

More detailed information may be found on the Division website, www.state.ak.us/drb*, or in the TRS Information Handbook.*

Feature	Tier I July 1, 1955 – June 30, 1990	Tier II Entered on or after July 1, 1990	Tier III Entered on or after July 1, 2006
Post Retirement Pension Adjustments (PRPA) **(Inflation protection)**	PRPA increases granted on an ad hoc basis. If an ad hoc is not granted, tier I employees must be age 60 or over or receiving benefits for 8 years to qualify for the automatic PRPA. The automatic PRPA legislated in 1990 applied to all members regardless of hire date.	Automatic PRPA adjustments to disabled members, retirees 60 and over, and those who have received benefits for 8 years.	None provided.
Retirement Medical Coverage	Medical coverage is provided to all benefit recipients and their eligible dependents. The retiree medical plan premium is paid by the retirement system.	The retirement system pays the retiree medical plan premium for all disabilitants regardless of age, for retirees and survivors over age 60 and for retirees with at least 25 years of membership service. This coverage includes eligible dependents. Retirees and survivors under age 60, with less than 25 years of membership service must pay the full premium cost if they want coverage.	Access to medical coverage at Medicare eligible age with 10 years of service or at any age with 30 years of service. Must retire directly from the system. If not eligible for Medicare, must pay full premium. May use health reimbursement arrangement (HRA) account to pay premiums. Once the HRA is exhausted, member self- pays premiums. When eligible for Medicare, the percentage of premium paid by the retiree or surviving spouse is: 10-14 years of service - 30% 15-19 years - 25% 20-24 years - 20% 25-29 years - 15% 30 years or more - 10%
Disability Benefits	Disability benefits are 50% of base salary, plus 10% for each eligible dependent child up to a maximum of 4 children.	Disability benefits are 50% of base salary, plus 10% for each eligible dependent child up to a maximum of 4 children.	Must be a total and presumably permanent disability whose cause is directly related to performance of duties of the job or an on the job injury. Benefit is 40% of salary, earns service while on occupational disability. Employer continues to make all required contributions as if the member were working, plus the member's required contributions to the DC account, without deduction from the member's disability payment. Disability benefits cease when the member becomes eligible for normal retirement at Medicare eligible age and 10 years of service or at any age with 30 years of service. No medical insurance until eligible for normal retirement.

More detailed information may be found on the Division website, www.state.ak.us/drb*, or in the TRS Information Handbook.*

Attachment C

National Association of State Retirement Administrators, “Myths and Misinterpretations of Defined Benefit and Defined Contribution Plans,” updated December 2003; *http://www.nasra.org*

White Paper

National Association of State Retirement Administrators

Myths and Misperceptions of Defined Benefit and Defined Contribution Plans

November 2002
Updated December 2003

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Table of Contents

NASRA White Paper

Introduction

Policymakers, public pension plan administrators and others with a political or financial interest are engaged in a debate about the retirement benefits that are provided to public employees. Considering that state and local government pension plans provide benefits for 14 million active employees and hold assets of $2 trillion, the consequences of this discussion are far-reaching.

Ninety percent of state and local government employees participate in a defined benefit (DB) pension plan. A movement has unfolded in recent years calling for defined contribution (DC) plans to replace DB plans as the primary retirement benefit for public employees. A number of myths and misperceptions surround this movement; through this paper, NASRA seeks to address and clarify some of the more popular misunderstandings and misrepresentations about these plan types.

Financial planners have long referred to an ideal mix of retirement income sources as a "three-legged stool," with one leg each representing Social Security, personal savings, and an employer pension. Although not every worker attains it, a well-balanced three-legged stool is a sensible personal financial planning strategy; an important component of an employer's benefits package; and a sound public policy objective. Without an employer pension, there can be no three-legged stool. (In states that do not participate in Social Security, pension benefits for public employees typically are adjusted upward to compensate for the absence of Social Security benefits.)

Most public employers offer a voluntary DC plan, such as a 457 or 403(b) that supplements the DB plan. These types of DC plans, which function like a 401(k) plan, are tax-deferred and can fulfill the personal savings piece of the three-legged stool.

NASRA believes that a DB plan should constitute an employee's basic retirement plan, and should be supplemented by a voluntary DC plan. A 1998 NASRA resolution said, in part:

> " ... NASRA supports the prevailing system of retirement benefits in the public sector, namely, a defined benefit program to provide a guaranteed benefit and a voluntary defined contribution plan to serve as a means for employees to supplement their retirement savings; ... NASRA supports progressive changes within this prevailing system of retirement benefits in the public sector, either within the defined benefit plan or through supplementary plans, that accommodate a changing workforce and better provide many of the features sought by advocates of wholesale conversion.

Policymakers, taxpayers, and others with an interest in public employee benefits are well-served when the discussion about DB and DC plans is based on facts and a clear understanding of these plan types and the way they function.

The Myth: "The public sector should convert from defined benefit to defined contribution plans, as the private sector has."

Summary
Defined benefit (DB) and defined contribution (DC) plans each offer their own advantages and disadvantages. NASRA believes that employers should take advantage of both plan types by offering a DB plan as the primary retirement benefit, supplemented by an optional DC plan.

The implication that government should follow the lead of the private sector in adopting DC plans overlooks important differences between private and public DB plans and the reasons that some private sector plan sponsors have adopted DC plans. This implication also ignores the resilience DB plans have exhibited among many private sector employers.

Analysis
A closer examination of the private sector trend toward DC plans reveals not only that the extent of this trend is not as great as implied by many advocates of DC plans, but also that many of the factors driving the change toward DC plans are largely irrelevant to the public sector. For example:

- State and local government pension plans are exempt from most of the laws and regulations, known as ERISA, that govern private sector DB plans. ERISA imposes a substantial cost and administrative burden on employers that sponsor a DB plan, and accounts for much of the private sector movement toward DC plans.
- Virtually all the decline in the number of private sector DB plans has occurred among small employers – those with fewer than 250 employees. A majority of large private sector employers continues to offer a DB plan. This is likely attributable to the economy of scale large employers enjoy, enabling them to incur the cost and burden of providing a DB plan; and to the relative ease and low cost of establishing a DC plan.

There are good reasons for employers to retain a DB plan as the primary retirement benefit for public employees:

- A DB plan is an effective tool for recruiting and retaining quality employees. Government's exemption from most federal pension laws creates a rare competitive advantage for state and local government employers.
- Providing a DB plan helps assure a secure source of income for retired employees, reducing the likelihood of these employees relying on public assistance during retirement.
- By creating an incentive to retire, DB plans can facilitate an orderly transition of employees whose effectiveness or productivity may have waned. DC plans provide no such incentive, and may, in fact, serve as a disincentive.

Legal and Regulatory Changes
Analysts attribute much of the increase in the number of DC plans in private industry to ERISA, the Employee Retirement Income Security Act, which became effective in 1975. ERISA established standards for DB plan participation, vesting, retirement, and reporting; and imposed a tax on DB plans to fund the Pension Benefit Guaranty Corporation (PBGC). State and local government pension plans are not subject to

most ERISA regulations, and public plans are not required to make payments to the PBGC. As a result, the primary factor—ERISA—driving the private sector toward DC plans does not apply to state and local government plans. In lieu of ERISA, public pension plan sponsors (state and local governments) establish their own governing standards and rules. One beneficial outcome of this arrangement has been a wide range of policies and benefit structures, each suited to the unique needs of their plan sponsors.

ERISA amendments, particularly the Multiemployer Pension Plan Amendments Act of 1980, the Tax Equity and Fiscal Responsibility Act of 1982 and the Tax Reform Act of 1986 – reduced or eliminated incentives to private sector employers offering DB plans, and increased the liability, expense, or regulatory requirements of maintaining a private sector DB plan. The rate of decline in the number of private sector DB plans was considerably more pronounced in the years immediately following these tax law changes, than it has been since.

Evidence suggests that recent legislative changes are encouraging a return of DB plans to smaller private sector businesses. According to *Plan Sponsor*, starting in the late 1990's, Congress relaxed some restrictions on DB plans. For example, in 1999, Congress eliminated contribution limits under section 415(e) of the tax code, which had restricted tax-deferred contributions and pension accruals for pension participants when a plan sponsor offers both a DB and a DC plan.

Large vs. Small Employers

Enactment of ERISA and subsequent amendments have especially affected smaller employers, which is where the vast majority of the reduction in DB plans has taken place. But most large employers continue to use DB plans. 346 of the S&P 500 offer DB plans as their primary retirement plan. A recent Watson Wyatt analysis[1] of Fortune 100 companies, which are many of the nation's largest employers, found:

- 50 percent provide a DB plan as their primary retirement plan option; of these, most offer a supplementary 401(k) plan.
- One-third offer a "hybrid" plan, which combines elements of DB and DC plans.
- Only 17% offer a DC plan as their primary retirement benefit.

This survey also found that during the two-year period 2000-2001, the trend away from DB plans virtually stopped, and the number of companies offering a DC plan as the primary retirement benefit held steady. This trend is consistent with other studies indicating that most of the reduction in private sector DC plans during the past 25 years took place among smaller employers, and in the wake of the enactment of ERISA and subsequent amendments.

The Watson Wyatt survey also is consistent with the findings of an EBRI study that found that since 1985, the number of employers with 10,000 or more employees offering a DB as their primary retirement plan has actually *increased*.[2] That this increase has taken place during a period of many corporate mergers of large firms (which reduces the total number of employers in this category) makes it even more notable.

Most public sector employees work for governmental entities that are large

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[1] "Trend Toward Hybrid Pensions Among Largest U.S. Companies Slows Considerably," Watson Wyatt, May 3, 2002

[2] David Rajnes, Employee Benefit Research Institute tabulations of 1985, 1993, and 1998 Form 5500 annual reports filed with the Internal Revenue Service, "An Evolving Pension System: Trends in Defined Benefit and Defined Contribution Plans," September 2002

employers, and government as an employer should be compared with large private employers. A majority of these employers continue to offer DB plans to their employees. While many factors determine the type of retirement benefit an employer provides, these large private employers recognize the important role a DB plan plays in attracting and retaining quality employees.

As an employer, government has an opportunity to directly affect the retirement income security of its employees and to exploit one of the few competitive advantages government enjoys over private sector employers. Providing a benefit that assures workers a level of retirement income that is consistent with their tenure and salary is an effective way to exploit this advantage.

The Myth: "DC plans are better because they offer greater portability than DB plans."

Summary
DC plans do offer greater portability than DB plans. Unfortunately, this often leads to less retirement income security, not more.

Studies and experience show that a majority of terminating employees with a DC plan as their primary retirement benefit, cash out their assets rather than rolling them to another retirement plan. Retirement assets that are cashed out usually are subject to federal and state taxes and sometimes a penalty. Cashing out retirement assets defeats the purpose of having a retirement plan, yet DC plans provide little defense against such "leakage" of retirement assets.

An important objective of providing a retirement benefit is to retain quality employees. DC plans do not support this objective because they do not reward or encourage longevity. Because DB plans do reward longevity, they are an important element in retaining quality employees.

Analysis
Rather than make a wholesale conversion from a DB to a DC plan, many DB plan sponsors have responded to the needs of short-term, mobile, and other employees seeking portability, by providing a voluntary, supplemental DC plan option and by increasing the portability features of their DB plan. In fact, DB plan sponsors have incorporated a remarkable range and variety of innovative portability features, while preserving the core features of a DB plan. In doing so, DB plan sponsors provide a retirement benefit that offers the best features of both plan types.

Following are some examples of the flexibility and portability that state and local pension plans have added to DB plans during the past decade:

- Reduced vesting periods
- Paying to terminating or retiring employees all or part of the employer's contributions
- Paying interest on distributed employee and employer contributions
- Sharing investment gains with participants
- Matching employees' contributions to a supplemental DC plan
- Adding alternatives to the traditional life annuity payment options made to terminating and retiring employees
- Allowing hardship withdrawals
- Allowing members receiving a pension to continue working or to return to work
- Service purchase options that feature:
  - a variety of types of service for which credit may be purchased (e.g., other public service, service only in the same state, non-public service, etc.)
  - purchase of service using pre-tax dollars
  - availability of installment payments and automatic payroll deduction to purchase service
  - direct transfers of service credit from one retirement plan to another, in lieu of payments
  - allowing other retirement assets, such as those in 457 and 403(b) plans, to purchase service on a pre-tax basis
- Establishing and expanding deferred retirement option plans (DROP), that

allow members who qualify for retirement to continue working while accumulating assets in a separate retirement account
- Incorporating a "deferred augmentation" feature, which grows pension benefits for participants who terminate prior to reaching retirement eligibility.

Reduced vesting periods
One concern DC advocates have cited about the lack of portability in DB plans is their long vesting period. Ten years ago, a majority of public pension plans had a vesting period of ten years. This has changed: one of the more notable trends among public DB plans during the last decade has been the reduction in vesting periods.

According to the Wisconsin Retirement Research Committee's *2000 Comparative Study of Public Retirement Systems*, a biannual survey that compares features of 85 of the largest public pension plans in the United States, "[t]he trend appears to be toward five-year vesting or shorter, perhaps reflecting federal [ERISA] vesting requirements that apply to private pension plans." Including changes made since publication of the Wisconsin report, 58 of the study's 85 plans (68%) have vesting periods of five years or less.

Service purchase options
Service purchase provisions accommodate workers who move from one employer to another, or who terminate and "cash out" their assets, then return to work with the same employer or one with the same retirement plan. A service purchase plan allows these employees to purchase retirement service credits in their DB plan.

The expansion of service purchase provisions has been a leading legislative trend affecting public pension plans during the past decade. More than two-thirds of the plans participating in the 2001 Public Pension Coordinating Council (PPCC) *Survey of State and Local Government Employee Retirement Systems* offer some type of service purchase option, and of the plans that do not offer service purchase, nearly half are dedicated to firefighters, police officers, or judges, whose members are predominantly career employees or who are less likely than other employee groups to terminate prior to retirement.

Other examples of DB plan flexibility and portability
During the past decade many large public DB plans have incorporated a variety of features increasing flexibility and portability, while retaining DB plan features. For example:

- Most new public employees in Washington state now participate in a hybrid plan, in which the employer funds a DB benefit more modest than that provided to longer-tenured employees, and the employee contributes to a DC plan.
- The Arizona State Retirement System offers participants with five or more years of service a portion, up to 100%, of the matching contributions made by their employer. Terminating employees with five years of service are entitled to 25% of the employer contributions made on their behalf, rising to 100% for terminating employees with ten or more years of service. Participants terminating with less than five years of service receive their contributions plus accrued interest.
- The Colorado Public Employee Retirement Association matches fifty percent of employee contributions withdrawn by non-vested employees who terminate.
- Many states provide an employer match to employee contributions made to a supplemental DC plan, such as a 457 or 403(b).
- Participants in the Public Employee Retirement System of Idaho share a portion of the system's investment gains, which are deposited into individual DC accounts. Participants may make also

elect to make contributions to these DC accounts.

- The Wisconsin Retirement System and Ohio PERS provide a hybrid retirement benefit, basing participants' pension on a combination of DB and DC plans.

These are just a few of many examples of public DB plans offering flexibility and portability while retaining the central feature of a DB plan: a guaranteed source of retirement income that reflects the worker's salary and length of service.

Portability caveat

An important concern about retirement plan portability is that many terminating employees do not transfer their retirement plan assets to another plan, such as an Individual Retirement Account or a future employer's plan. Studies indicate that a majority of terminating DC participants spend their retirement savings rather than rolling them into other retirement accounts.

A good example of terminating participants spending, rather than saving, their retirement assets is in Nebraska, where state and county government employees historically have participated in a DC plan. A recent study of the Nebraska Public Employees Retirement System, conducted by a national actuarial consultant, found that 68% of terminating participants cashed out their assets rather than rolling them over to another retirement plan. This finding is consistent with a Hewitt Associates study which found that more than two-thirds of participants terminating from DC plans cash out their lump sum distributions rather than rolling them to other retirement accounts.

Such "leakage" of retirement assets from individuals' retirement accounts increases future costs of providing retirement. This is because the assets that are spent, rather than saved and invested, must be restored eventually, either by the employee or the employer, or both.

In testimony before Congress, the president of the Employee Benefits Research Institute, said: "Preservation (of retirement assets) in the presence of portability is, in my mind, the largest single issue in the system today in terms of determining how much money will actually be available to provide retirement income in the 21st century. ... Policymakers cannot fairly assess the portability issue unless they fully consider the consequences of money leaving the system versus money staying within the system."[3]

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[3] "The Future Role of Pensions in the Nation's Retirement System," Tuesday, July 15, 1997 - Panel Discussion General Accounting Office Conference Retirement Income Security in the 21st Century

The Myth: "DC Plans are better because they allow employees to manage retirement assets themselves"

Summary

Some employees do wish to manage their own retirement assets, and most DC plans not only allow, but require participants to manage their retirement assets. DC plans also shift the risk of managing retirement assets from the plan sponsor to individual participants. Unfortunately, most employees are at best mediocre investors, unlikely to generate an investment return that will ensure an adequate level of retirement income.

DB assets have a longer time horizon, enabling them to withstand market volatility better than individuals. DC investors have a shorter investment horizon, requiring them to hold a more conservative portfolio, which leads to lower returns and less retirement income.

NASRA believes that a DB plan should constitute an employee's basic retirement benefit, and should be supplemented by a voluntary DC plan. This arrangement satisfies the objective of providing a guaranteed pension benefit, while giving employees, especially those wishing to manage their own assets, the opportunity to save and invest in accounts they manage and direct.

Analysis

A key difference between DC and DB plans is that DC plans provide the opportunity to create retirement wealth, while DB plans provide income security. The purpose of a retirement plan is not to empower employees, or to create sophisticated investors, or to make participants wealthy. The chief purpose of a retirement plan should be to ensure a level of retirement income that reflects the employee's salary and tenure.

Requiring individual employees to bear the entire risk of assuring an adequate level of retirement income ignores the fact that most employees lack the knowledge of investment concepts and practices needed to succeed. If and when employees fail to save enough for retirement, not only will
they and their families face the consequences of inadequate retirement income, but often they will become dependent on the state for public assistance. The long-term cost of dependence on public assistance can be substantial.

A benefits adequacy study prepared for the Nebraska Public Employee Retirement System in 2000 found that for the period 1983 through 1999, while the system's DB plans generated an average of 11% annually, the system's DC participants were generating returns of 6%. The study also found that despite considerable, sustained efforts to educate participants, employees were directing 90% of all contributions to just three of the eleven available fund choices, and more than 50% of the DC plan assets were invested in the stable value fund.

The experience in Nebraska is quite similar to the results of a recent study on DC participants' investment ability, described in the Wall Street Journal:[4]

[4] Ian McDonald, "Fundholder's Lament: All Bear, No Bull," Wall Street Journal, 4/25/02

> Since 1994, Boston fund consulting firm Dalbar has released an annual study that meshes sales figures with fund returns to measure the average investor's actual performance. Last year's edition found that the average stock-fund investor eked out a paltry 5% annual gain from 1984 through 2000, compared to 16% for the Standard & Poor's 500-stock index.
>
> An update, furnished by the Bogle Financial Markets Research Center, indicates that in addition to trailing the market in heady times, the average investor also managed to fall (a smidgen) harder on the way down. From the end of 2000 through the start of [May 2002], the average fund investor's account has fallen at a 9.9% annual clip, a touch worse than the index's 9.5% annual fall.

Similarly, the eighth annual John Hancock Financial Services Retirement Survey[5] of DC plan participants, published in May 2002, showed that "many have a cockeyed view of how investments work across the board." John Hancock researchers said most DC plan participants will fall well shy of the estimated 75% of pre-retirement income needed to maintain the same lifestyle in retirement. The survey also documented numerous examples of ignorance of basic investment principles among DC plan participants.

DB assets are invested on the basis of a long time horizon, enabling them to be invested more aggressively than DC assets, resulting in higher long-term returns. By contrast, DC participants, who are not professional investors and as a group tend to be risk-averse anyway, must assume increasingly conservative allocations as they near retirement, resulting in lower returns during both their working years and in retirement. The long investment horizon and professional investment of DB assets generate higher returns that compound, creating substantially greater returns over the long-term.

Ninety percent of public employees participate in a DB plan, and a supplemental, voluntary DC plan is available to nearly all public employees. NASRA believes this arrangement accommodates those employees who wish to manage their own assets, while still assuring a pension benefit for all participants.

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[5] "Eighth Annual John Hancock Financial Services Retirement Survey," January 2002

The Myth: "An employee must spend his entire career with the same employer to benefit from a defined benefit plan."

Summary

DB plans reward workers who remain with their employer long enough to become vested members. DB plans are intended to reward long-term employees: encouraging longevity among quality employees is a primary retirement plan objective—one that DB plans help promote, and that DC plans do not.

However, an employee does not need to spend his or her entire career with the same employer to benefit from a DB plan. A DB plan provides a guaranteed retirement payment for vested participants; in most public retirement plans, vesting takes five years or less. Many public retirement plans allow participants to transfer or purchase service credit from other plans. Most public plans pay interest on participant contributions, and some entitle terminating participants to their employer contributions.

Depending on the age of the participant when beginning and terminating employment, a DB plan can provide a retirement benefit that is greater than the benefit from even a well-invested DC plan, even for employees who work only for a short period of time.

Analysis

By rewarding longevity, DB plans assist employers in retaining quality employees and encouraging longevity. This feature is especially helpful in the public sector, where salaries often lag behind the private sector, requiring employers to compensate in other ways. One of the chief arguments in favor of DC plans—their portability—can work against employers seeking to retain quality employees.

Yet it is misguided to believe that a DB plan benefits only those who spend many years or an entire career with the same employer. A chief strength of DB plans is that they offer participants a guaranteed retirement benefit funded with assets that are professionally invested.

By contrast, the benefit created by a DC plan is uncertain, determined largely by the participant's investment decisions and ability to resist cashing out retirement assets prematurely. These are uncertain factors on which to base a worker's retirement income security. When a DC plan is an employee's primary retirement benefit, such uncertainty may fail to fulfill the purpose of a retirement plan for both the employee and the employer.

Even for long-term employees, a DC plan provides no assurance of a retirement benefit that exceeds or

even meets the benefit provided by a DB plan. This is because DC plans place the investment risk on the employee, and employees whose investment returns are sub-par over the course of a working life are likely to experience a lower retirement benefit than under a DB plan. The chapter *Employees want to manage their own retirement assets* addresses the likelihood of the typical DC participant achieving an investment return high enough to generate sufficient retirement savings.

Differences in benefit levels provided by DB and DC plans vary, and are determined by many factors, including the age of the employee when entering service. For example, assuming typical contribution rates and rates of investment return, an employee beginning a job at age 50 is better off in a typical DB plan regardless of how long he or she works. An employee entering service at age 45 will be better off in the DB plan after five years of service. This trend continues down the age scale—the younger the employee, the more time a DB plan needs to be relatively advantageous.[6] This analysis is based on the attainment of investment return assumptions and the use of lump-sum distributions, two factors that endanger long-term retirement income security.

The chapter on portability addresses the growing use of service purchase provisions, which allow employees who move from one state to another to transfer their DB service credit with them. Similar provisions permit employees who terminated and cashed out their DB assets in previous years, to purchase those back when they re-enter employment. These and other public plan provisions accommodate employees who relocate or who move in and out of public employment.

Today's workforce is older than it was twenty years ago, and older workers are more aware of their retirement income needs. This awareness promotes an understanding of and appreciation for DB plans. A DB plan helps employers, including government, to recruit and retain quality employees in today's competitive labor market.

[6]ORP Alternatives, Gary Findlay, presented to The Southern Conference on Teacher Retirement, 5/24/00

The Myth: "Public employees in defined benefit plans need to worry about politicians mishandling their funds, creating unfunded liabilities, and cutting benefits."

Summary
Defined benefit public pension funds are trusts, typically administered by a governing board whose members are fiduciaries, or by a sole trustee who serves as a fiduciary. Every state has established prudence standards to govern the investment and management of assets, and most public pension plan administrative officials typically prepare financial statements in accordance with generally accepted accounting principles that are subjected to independent audits in accordance with generally accepted auditing standards.

Federal constitutional provisions governing contracts and property rights are generally perceived to protect pension benefits from diminution. In addition, some state constitutions explicitly prohibit reductions in pension benefits; most other states employ statutes or case law to prohibit or limit efforts to reduce public employee pension benefits.

A legislature wishing to reduce retirement benefits can do so more easily under a DC plan than with a DB plan. DB plans have liabilities for which plan sponsors are responsible; DC plans do not.

Further, the idea that public employees must worry about elected officials creating and then ignoring unfunded liabilities is not realistic. Typically, political jurisdictions are legally obligated to pay off any unfunded the liabilities of the DB plans within their purview. Any jurisdiction not responsibly financing its DB plan ends up with a net-pension obligation that must be disclosed in the plan sponsor's financial statements. Accordingly, plan sponsors are motivated to ensure that plans are properly financed, because disclosure of a net pension obligation can negatively impact a jurisdiction's credit rating.

Analysis

Mishandling Public Funds

First, once contributed to the pension trust, they are no longer "public funds." The ability of elected officials to "handle" public pension funds is very limited. Most members of pension plan governing boards are appointed, not elected officials, and many are also members of the plan. All pension plan trustees are fiduciaries, including those who are elected officials, and are subject to fiduciary standards. An overarching theme of fiduciary standards is that the fiduciary must carry out his or her duties in the sole interest of plan participants, consistent with applicable laws, regulations, and policies.

In every state, fiduciary standards that govern the investment of assets include either a prudent person rule, a prudent investor expert rule, or a blend, or a variation of one or both.

The prudent person rule states that the fiduciary "is under a duty to the beneficiary to make such investments and only such investments as a prudent man would make of his own property having in view the preservation of the estate and the amount and regularity of the income to be derived..."[7]

The prudent expert rule, prescribed in ERISA as the standard for private sector pensions, requires that the pension plan fiduciary discharge the duties of that position "with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims."

None of the standards permit elected officials to "mishandle" public trust funds.

Creating Unfunded Liabilities

Simply expressed, states are responsible for covering the liabilities of the pension plans they sponsor. An unfunded liability is the result of the actuarial cost of benefits (liabilities) exceeding the actuarial value of assets. Elected officials can create an unfunded liability by authorizing benefits without providing immediate assets sufficient to pay for them; by not making adequate contributions to the retirement plan; or by managing or directing investments that result in returns lower than the actuarially assumed return rate. If a legislature creates pension liabilities, the state is still legally required to meet its pension obligations.

Contradicting the assertion that public employees need to worry about elected officials creating unfunded liabilities, the overwhelming majority of state and local pension plan sponsors traditionally have made all required contributions to their pension plans. One result of this has been that public pension plans as a group have amortized their pension liabilities in a manner similar to how a homeowner pays off a mortgage. Public plans covering a large percentage of public employees are now fully funded, and plans covering most other employees are nearly fully funded.

Cutting Benefits

Most states protect public employees pension benefits through their constitution, statutes, or case law. Public pensions also enjoy protections provided through property rights law: "Under federal and state constitutional law notions of due process, property or a property right cannot be adversely impacted or taken by a governmental entity without observing procedural considerations. Pension benefit coverage and entitlement will

[7] Calhoun and Moore, "Governmental Plans Answer Book," Panel Publishers

generally be considered to be property bringing due process protections."[8]

A DB plan actually is an effective vehicle for reducing the possibility of arbitrary benefit reductions, because inherent in a DB plan are liabilities for which the plan sponsor is responsible. If a legislature wished to reduce future benefits for current or future employees, it would be easier to do so with a DC plan, as there are no employer liabilities associated with that type of plan. If "politicians cutting benefits" is a concern, a DB plan is a more effective means of preventing such actions.

[8] Lawrence A. Martin, "Legal Obligations of Public Pension Plan Governing Boards and Administrators," published by the Government Finance Officers Association

The Myth: "DC Plans Cost Less than DB Plans"

Summary
Retirement plan expenses fall into one of two categories: administrative expenses, which include recordkeeping and investment management; and the cost of the benefit itself, reflected in the form of employer contributions. In almost every instance, the administrative cost of a DC plan is higher—often much higher—than that of a DB plan. The difference between these plan types is in who pays the administrative cost: the employer usually incurs most of the cost of a DB plan; the participating employee normally pays all or most of the administrative cost of a DC plan.

If an employer seeks to reduce the costs of its retirement plan by lowering contributions, the result will be a lower level of assets available for benefits. In addition, by diverting participants from an existing DB plan to a DC plan, DB plan costs in many cases will rise, and the employer will likely be required to continue to maintain its DB plan, mitigating or nullifying any expected budget savings.

Analysis
Administrative Costs
Although the administrative cost of each retirement plan varies, in almost every instance, DC plans cost more—usually much more—than DB plans. Two factors account for most of the difference in DC and DB plan expenses. First, unlike DB plans, DC plans maintain individual accounts that are typically updated daily with information that is made accessible to the participant. Secondly, the size of DB plans covering most public employees creates an economy of scale, lowering the cost of administration and investment management.

Most DC plans use mutual funds or similar instruments as investment options. The average expense ratio for a stock mutual fund is around 1.5% of assets; the typical bond fund expense ratio is approximately 1.1% of assets. When costs for recordkeeping, participant education, and other administrative expenses are added, the annual cost of a DC plan can rise to as much as 2% of assets. This rate does not include the start-up costs needed to create a new DC plan; start-up costs generally are borne by the employer, either through expenses from the general operating fund or by drawing on assets from an existing retirement plan.

By contrast, a review of 12 of the nation's largest public DB plans, which provide pension coverage for more than one-third of all active state and local government employees, found an average annual expense ratio of 0.25%, including costs for administration and investment management. Corroborating this finding is a California state law that

places a limit of 0.18% on the administrative expenses of county pension plans. When expenses are included for investment management and other activities outside the allowed limit, the total cost of these California county plans is well under one percent. Although smaller public pension plans are likely to have higher relative costs than larger ones, we can safely conclude that a substantial majority of public DB plans have an expense ratio that is considerably less than that of a typical DC plan.

Public DB plans are able to reduce their costs through economies of scale attained by their size, by negotiating favorable investment management fees, and in some cases by investing some assets using internal staff rather than external managers. Also, DB plans do not provide some services that drive DC plan costs higher, such as updating participant accounts on a daily basis and distributing quarterly statements.

Lower expenses have the same end result as higher investment returns. Higher returns increase the pool of assets available for pension benefits, and reduce required contribution rates. Higher investment costs have the opposite effect. Lower returns reduce the assets available for retirement benefits. For example, a DC plan with an expense ratio of 1.5% will reduce a participant's 8% investment return to 6.5%. Compounded over time, this difference will have a substantial negative effect on the value of a retirement account.

In his essay, *In Defense of the Defined Benefit Plan*, Gary Findlay presents the basic retirement benefit equation:

> Reduced to its simplest form, the financial mechanism behind the operation of both types of plans may be described by the formula:
>
> **C + I = B + E**
>
> Where:
>
> **C** = Contributions (employer, employee, or both)
> **I** = Income from investments
> **B** = Benefits paid
> **E** = Expenses for plan administration

Findlay then explains the effects of expenses on each plan type:

> In a conventional DB plan, the amount of 'E' will usually be a small fraction of a percent of the assets under management. The amount of 'E' will increase the amount of the employer's 'C', but will not have an impact on 'B'.
>
> In a DC plan, with investment vehicles being individually selected by employees, it is not unusual for 'E' to be in the range of 1% to 2% of assets under management. The amount of 'E' will not affect the employer's 'C', but will have an impact on 'B'. (The greater the expenses, the less there is available for benefits.)

Findlay's formula is illustrated by the following example:

An employee begins working at age 25, and leaves his employer at age 35 with a retirement account balance of $50,000. If this balance earns 8% (8.5% minus 0.5% for expenses) the account value will be $437,000 when the employee reaches age 65. The same starting balance earning 7% (8.5% minus 1.5% for expenses) will have a value at age 65 of $330,000, a difference of $107,000, or 25% less.

A DB plan typically does not pay benefits on the basis of individual participants' account balance. However, the effect of higher fees is fundamental: they reduce the amount available for pensions and other benefits; or they increase required contributions.

Costs and consequences of switching from a DB to a DC plan

Attempts to reduce costs by replacing a DB plan with a DC plan are unlikely to produce the anticipated level of budget savings. As described by Cynthia Moore in *The Preservation of Defined Benefit Plans*, laws governing public pension plans generally protect pension benefits from diminution. This prohibition against reducing benefits requires a public employer to continue administering its DB plan at least for existing plan participants. If a DC plan also is established, the employer will need to administer both plans, limiting any budget savings.

Also, some methods used to value public pension plan liabilities rely on continuous flow of new, younger members to help fund the cost of the plan's liabilities. For plans that use such valuation methods, diverting future employees from a DB to a DC plan can increase the cost of the DB plan.

One predictable consequence of a DC plan whose benefits prove inadequate is political pressure to create or revert to a DB plan. This situation recently occurred in Nebraska, where the DC plan failed to create a sufficient level of retirement income security for plan participants. Nebraska switched to a cash balance plan. Switching from a DC to a DB plan can result in shifting pension plan costs to future taxpayers, as insufficient pension accruals under the DC plan are funded.

DC plans offer certain advantages, including greater portability, the opportunity for participants to manage their own investments, greater access to account information, and a chance to directly benefit from investment returns that exceed market averages. But these advantages come with risks: investment risk that is borne entirely by the participant; the risk of leakage, when assets are cashed out and spent before retirement; longevity risk, when participants outlive their retirement assets; and the risk of diminished retirement savings as a result of high administrative expenses.

The Myth: "Workers want a defined contribution plan as their primary retirement benefit."

Summary

The reality is that most workers are unfamiliar with the differences between defined contribution and defined benefit plans. To the extent that employees have preferences for a retirement benefit, they are more likely to be for the *features* of the benefit rather than for a particular plan *type*; workers understand features like value, portability and flexibility, investment risk, and retirement income security.

A DB plan offers considerably more opportunity than does a DC to design a retirement benefit with features that are attractive to employees. In doing so, the DB plan facilitates a key objective for offering a retirement benefit: assisting employers in attracting and retaining quality workers.

As evidence of employee preferences for their retirement benefit, in recent years, when given the opportunity to choose between a DB and a DC plan, preponderant majorities of public employees have chosen the DB plan.

Analysis

Over the past two decades, many Americans have become familiar with the term *401(k) plan*. In the wake of more than three years of equity market declines and corporate accounting scandals, the 401(k) plan also is perceived as a risky and unreliable retirement benefit arrangement.

401(k) plans are only the most popular and recognized of several forms of defined contribution plans. Among public employees, 403(b) and 457 plans are common. Regardless of which plan type is available, recent equity market declines have heightened participant sensitivities about some plan features when a DC plan is an employee's primary potential source of retirement income. These pitfalls include:

- retirement plan account balances can decline, and sometimes they decline significantly
- these plans offer no assured retirement benefit
- plan assets can be exhausted well before death
- requiring amateur investors to make their own investment decisions can result in poor returns, even in a rising market
- market conditions at the date of retirement can significantly affect the level of retirement income available

The abstract notion, which may have peaked during the late 1990's, that a DC plan can generate considerable wealth, has given way to a more sober and realistic perception that a DC plan by itself is an unreliable and precarious method for attaining retirement income security. Although DC plans have many positive attributes, this plan type is limited in its ability to include features that meet important employer objectives and that are attractive to employees.

By contrast, a DB plan design lends itself to extensive creativity to accommodate employer needs, including attracting and retaining quality employees. Some features that are attractive to employees and that can be designed into a DB plan include value, portability and flexibility, reducing investment risk, and increasing retirement income security.

Value

As with any other form of compensation, value is a primary consideration when assessing a retirement benefit. A worker's perception of value in a retirement benefit may take several forms, perhaps most notably the presence and size of an employer contribution, and some protection against loss of principal.

Nearly all DB plans offered to public employees provide an employer contribution; in some cases, public employers fund the entire cost of the DB plan. This increases the ability of employees to contribute to a supplemental DC plan account or other savings plan.

By definition, a DB plan protects participants' principal. Vested DB plan participants qualify for a retirement benefit that is assured regardless of market performance. By contrast, DC plans typically provide no protection against market losses: even the most generous employer contribution to a DC account can be eroded through poor investment returns.

Portability and Flexibility

This paper's chapter on portability highlights the progress DB plans have made toward providing portability to plan participants, including reduced vesting periods, distributing employer contributions to terminating participants, and paying interest on participant accounts.

DB plans also offer flexibility. For example, a growing number of DB plans feature PLOP's—partial lump sum option plans. A PLOP allows retiring participants to take a portion of their retirement annuity as a lump sum. DROP's – deferred retirement option plans—also make DB plans more flexible and portable by allowing employees to postpone retirement and accumulate a cash balance that supplements their retirement annuity.

Most DC plans offer more portability than DB plans. Yet as discussed in the chapter on portability, too much portability can damage long-term retirement income security. Evidence shows that a majority of terminating participants cash out their DC plan assets, rather than rolling them into another retirement account. This defeats a fundamental retirement benefit objective—providing a source of retirement income.

Similarly, portability challenges retiring DC plan participants, as retirees have no assurance their assets will last the remainder of their lives. Retirees may spend all their assets at once, or at a rate that exhausts the assets well before their death.

In theory, *portability* and *flexibility* are salutary features of a retirement benefit, and to some extent, these features add value. Prudent retirement plan design, however, which considers the long-term retirement income security of plan participants, suggests there should be some limit on the extent of the plan's portability and flexibility.

A DB plan enables employers to balance the plan's portability and flexibility while protecting participants' long-term retirement income security needs. There are restrictions to offering such balance through a DC plan.

Investment Risk

The opportunity to manage their own retirement assets appeals to some employees. Most public employees have access to a voluntary DC plan that supplements their DB plan, enabling those who wish to manage a portion of their own retirement assets to do so.

As discussed in a previous chapter, most employees do not consider themselves to be knowledgeable about investments. Experience demonstrates that employees engage in a variety of practices resulting in investment returns that often fall well short of both market returns and returns of professional investment managers. This is a primary reason for NASRA's support of a DB plan as an employee's primary retirement benefit arrangement, supplemented by a voluntary DC option.

The Experience of Employee Choice
Since 1997, large numbers of public employees in Michigan, Florida, Ohio, and South Carolina have been given an opportunity to participate in a DC plan as their primary retirement benefit. The experience in these states creates a persuasive case study of employee retirement benefit preferences.

In each case except Michigan, the employer contribution equaled or exceeded the contribution to the DB plan; in Michigan, the employer contributes four percent of salary plus a matching amount of up to an additional three percent.

In each state, an overwhelming majority—more than 90%—of those eligible to switch elected to stay with the DB plan.

This experience is consistent with a survey conducted by the Ohio Public Employees Retirement System of its members with less than five years of service credit. The purpose of the survey was to determine these employees' attitudes and preferences for a retirement benefit. The findings of Ohio survey included the following:

- When members were asked to rank the importance of 17 plan design features, the ability to direct money to a private investment company ranked 16 out of 17. Among the highest ranked features overall were portability, guaranteed monthly benefit after retirement, and health care coverage.
- A majority of members did not consider themselves to be knowledgeable about investments.
- More than half of the members surveyed (56%) expressed a preference for the DB plan, and an additional 32% said they would select the Combined Plan, which combines features of a DB and a DC plan. 6.4% said they would select the DC plan.

The Myth: "Workers in defined contribution plans will receive substantially higher benefits than those offered by defined benefit plans."

Summary

Although accumulating wealth is an admirable objective, the chief purpose of an employer-sponsored retirement plan is not to make workers rich. Rather, the central purpose of an employer-sponsored retirement plan is to promote workers' retirement security.

Among participants whose primary retirement benefit is a defined contribution plan, some will, in fact, receive substantially higher benefits than they would under a defined benefit plan. However, many workers will fare worse under a DC plan, and some DC plan participants will have no retirement assets at all.

By providing an assured benefit whose value is known in advance of retirement, a DB plan meets the fundamental and imperative objective of a retirement benefit: to promote retirement security.

Analysis

Proponents of establishing a DC plan as workers' primary retirement benefit contend that simple math illustrates a compelling argument in their favor: by calculating the contributions an employee and his employer will make during the employee's working life, and factoring in projected investment returns, a DC plan will generate a larger annual benefit than would be available through a DB plan.

The problem with this argument is that it ignores decisions made by plan participants that can reduce and even eliminate the value of a DC plan. Some of these decisions are discussed in greater detail previously in this paper, and are summarized briefly below.

Factors Limiting the Value of a DC Benefit

- Many DC plan participants "cash out" their retirement savings when changing jobs, instead of transferring those assets to another retirement savings plan. A recent study by Hewitt Associates found that 42% of 160,000 401(k) plan participants who terminated employment cashed out their assets, rather than rolling them to an IRA or to a future employer's retirement plan. This paper's chapter on portability presents substantial empirical evidence of pervasive "leakage" from retirement savings accounts.

- Most workers make poor investors, resulting in investment returns well below the level needed to ensure retirement security. The chapter on DC plan participants managing retirement assets themselves describes workers' lack of knowledge and financial acumen necessary to generate investment returns anywhere near those assumed by DC plan advocates. The studies cited in this chapter describe a litany of harmful investment strategies engaged in by DC plan participants, such as taking on excessive or inadequate investment risk, market timing, borrowing from their retirement savings, and following trends, rather than establishing and staying with an appropriate asset allocation.

- Contrary to the theoretical models presented by DC proponents, every worker does not promptly enter the workforce in a full-time job after completing high school or college, and continue working until reaching retirement age. A substantial body of research has described the growth in so-called non-standard work arrangements, in which many jobs are seasonal, part-time, temporary, contract, or otherwise not permanent and full-time. The *2002 Census of State and Local Government and Payroll* found that state and local governments employed 13.8 million full-time employees and 4.5 million part-time workers. Whatever pension arrangements are in place for these part-time workers, their contributions are undoubtedly less than those implied in the models used by DC plan proponents.

  Non-standard work arrangements are especially prevalent among workers under the age of 35, a time when making contributions and taking advantage of compound interest is critical to accumulating sufficient assets to ensure retirement security.

  Similarly, many employees move into and out of the workforce for a variety of reasons, such as to have and raise children, for other family reasons, and for retraining or to increase their education. Some workers stop working before reaching normal retirement due to health reasons. In each of these instances, contrary to the assumptions of DC plan advocates, DC plan contributions are not being made.

Each of the factors listed above results in fewer assets available to plan participants at retirement. A worker who experiences one or more of these factors is likely either to have lower benefits in retirement than those offered by a DB plan, or to be required to work longer than they would if a DB plan were their primary retirement benefit. The idea that DC plan participants will retire with higher benefits is simply untrue for many workers.

Effects of Longevity and COLA's

Even for a DC plan account with an initial retirement benefit that is greater than the benefit the worker would receive under a DB plan, there is good chance that the real purchasing power of the benefit will fall below that of a DB plan during the worker's remaining life. There is also a chance that the worker will outlive his or her assets.

The median life expectancy of a 65 year-old American is 85. One-fourth of all women in America age 65 will reach 93; one-fourth of American men who are 65 will live to be 88. Most DC plans contain no cost-of-living provision. Yet, an annual inflation rate of 2.5 percent from age 65 to 93 will reduce the purchasing power of a retirement benefit by more than half.

Even worse than a benefit that is deteriorating due to inflation is a benefit that is exhausted before death. Yet this is a very real possibility for retirees with a DC benefit who live long enough, or who spend their assets quickly enough.

Thus, even in cases where a DC benefit initially exceeds the amount that would be provided by a DB benefit, that advantage is likely to disappear during a worker's retired life. For these reasons and others described throughout this paper, NASRA supports a defined benefit plan as a worker's primary retirement benefit, supplemented by a voluntary defined contribution benefit.

Attachment D

Rachel Christensen, “Value of Benefits Constant in Changing World: Findings from the 2001 EBRI / MGA Value of Benefits Survey,” *EBRI Notes,* Vol. 23, No. 3 (March 2002); *http://www.ebri.org*

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Value of Benefits Constant in a Changing World: Findings from the 2001 EBRI/MGA Value of Benefits Survey

by Rachel Christensen, EBRI

Introduction

Despite the downturn in the economy and fears resulting from the Sept. 11, 2001, terrorist attacks on the World Trade Center and the Pentagon, the value placed on various employee benefits and on employee benefits in general, is largely unchanged from 1999, according to the most recent Value of Benefits Survey, conducted in early November 2001 by the Employee Benefit Research Institute (EBRI) and Mathew Greenwald & Associates, Inc. (MGA).[1] In 2001, 60 percent of Americans reported that health insurance was the most important employee benefit, down only slightly from 64 percent in 1999.

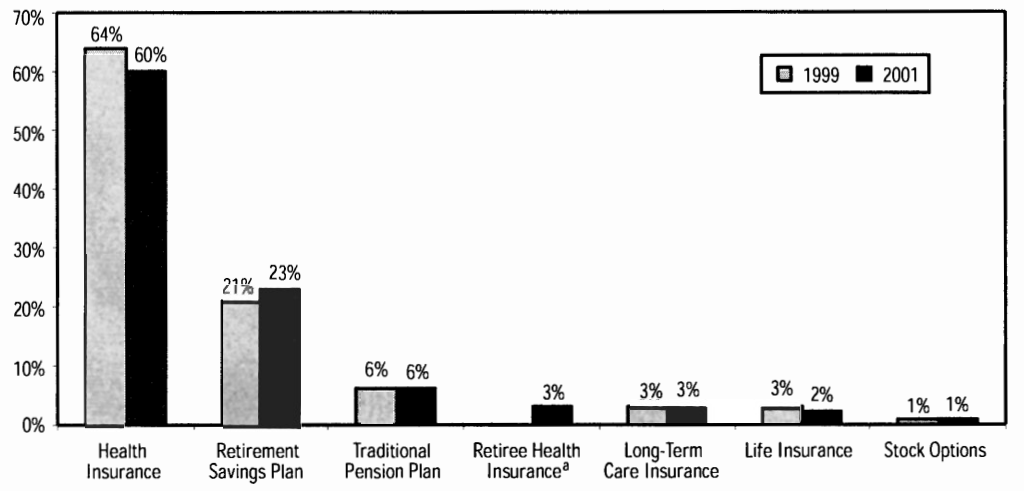
At the time of the previous Value of Benefits Survey, conducted in August 1999, the U.S. unemployment rate was at 4.2 percent. The unemployment rate increased to 4.9 percent by August 2001 (before the terrorist attacks), to 5.4 percent by October 2001 (after the attacks), and to 5.7 percent by November 2001, when the 2001 Value of Benefits Survey was conducted. Also during the time between the two surveys, the level of consumer confidence decreased, and the Dow Jones Industrial Average declined by more than a thousand points. Despite these negative economic indicators, however, preferences for employee benefits were clearly consistent across the two surveys, with only very small shifts where any changes did occur.

Ranking of Benefits

Employees continue to rank health insurance as the most important benefit. Sixty percent of workers rated health insurance as number one in 2001, down slightly from 64 percent in 1999. Twenty-three percent of workers ranked retirement savings plans, such as 401(k)s, as the most important benefit in 2001, up from 21 percent in 1999. Six percent ranked traditional defined benefit pension plans as their top benefit, the same percentage as in 1999 (figure 1).[2]

Health insurance and retirement savings plans are the first and second most important employee benefit for the vast majority of workers. In both 1999 and 2001, those who named health insurance as the most important employee benefit most often chose retirement savings plans as the second most important benefit. Of the 60 percent of workers who ranked health insurance as most important in 2001, 61 percent named retirement savings plans as second in importance. In 1999, of the

Figure 1
MOST IMPORTANT EMPLOYEE BENEFIT, 1999 AND 2001



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 2001 Value of Benefits Survey.
[a] Retiree health insurance added to survey in 2001, not ascertained in 1999.

64 percent who chose health insurance first, 60 percent rated retirement savings plans as second. Similarly, for those workers who named retirement savings plans as the most important benefit, health insurance was the most common second choice. In 2001, of the 23 percent who chose retirement savings plans as the most important benefit, 49 percent named health insurance as the second most important. In 1999, of the 21 percent who rated retirement savings plans as most important, 59 percent named health insurance as the second most-important benefit.

There is evidence that immediately after the Sept. 11 terrorist attacks, the demand for life insurance increased, presumably due to fears related to the attacks. According to MIB Group, Inc., applications for life insurance in October 2001 were up 26 percent from September. November then showed a 9.9 percent decrease from the October levels, and the December level was down 4.6 percent from November. Still, the December 2001 level was 11 percent higher than the December 2000 level.[3] The Value of Benefits survey results, however, do not show any significant changes in the level of preference for life insurance as an employee benefit.

Workers' Perspective on Benefits

Employee benefits also continue to be very important in job selection. Seventy-seven percent of workers reported that the benefits that a prospective employer offers are very important in their decision to accept or reject a job, nearly unchanged from 79 percent in 1999. Only 5 percent said that benefits are not very or not at all important in their decision to accept or reject the job. However, only one-fourth of workers (25 percent) reported that they have accepted, quit, or changed jobs because of the benefits that were or were not offered.

While benefit preferences did not change significantly between 1999 and 2001, there are some differences in benefit preference by worker characteristic, such as age (figure 2). For example, 60 percent of all workers ranked health insurance as the most important employee benefit, while only 48 percent of workers age 60 or older chose that benefit as the most important. Workers age 60 or older were more likely than other age groups to prefer long-term care insurance and retiree health insurance. This may reflect a simple replacement of one type of health insurance with another, the need for which is more immediate for those in older age groups. When the three health categories are combined, the preference for some type of health insurance coverage is more consistent among the age groups, ranging from 64 percent for the oldest group to 69 percent for the youngest group.

Retirement savings plans, such as 401(k) plans, may be less important to American workers than in the recent past. Highly publicized corporate bankruptcies, such as that of Enron, which severely reduced some workers' 401(k) balances, may have caused the public to be concerned (rightly or wrongly) about the security of the funds in those retirement plans. However, the Enron story broke too late to be reflected in

Figure 2

PERCENTAGE OF WORKERS WHO PREFER VARIOUS BENEFITS, BY AGE, 2001

	All Benefits Combined	Health Insurance	Retirement Savings Plan	Pension Plan	Retiree Health Insurance	Long-Term Care Insurance	Life Insurance	Stock Options
	(percentage within each age category)							
All Workers	100%	60%	23%	6%	3%	3%	2%	1%
Age								
Under 30	100	64	23	2	1	4	4	1
30–34	100	64	26	6	1	a	1	2
35–39	100	60	25	8	3	1	1	1
40–44	100	63	24	4	2	1	2	1
45–49	100	63	18	10	5	—	3	1
50–59	100	55	22	8	7	4	1	a
60 or older	100	48	21	4	7	9	3	2

Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 2001 Value of Benefits Survey.
[a]Less than 0.5 percent.

the data from this survey. Still, in 2001, 36 percent of workers reported that they would choose a retirement savings plan (or more retirement savings benefits) over higher pay, down from 40 percent in 1999.

On the other hand, traditional defined benefit pension plans may be more important to workers. In 2001, more workers said they would like a more generous pension versus higher wages (20 percent) than said so in 1999 (17 percent). However, fewer said that they would pass up a new job offer in order to vest in their pension plan (46 percent in 2001 versus 50 percent in 1999). An even lower percentage said they would pass up a new job to vest in their retirement savings plan, such as a 401(k) (40 percent in 2001).

In 2001, fewer workers reported that they would choose a better 401(k) plan and a smaller traditional pension (23 percent, down 6 percentage points from 29 percent in 1999). And more said they would choose a better pension and a smaller 401(k) (21 percent, up from 18 percent in 1999). A third continued to say they would choose a 401(k)-type plan only (34 percent in 2001), and 13 percent continued to prefer a traditional pension only.

The downturn in the economy may have affected employee preferences for stock options as well. In 2001, only 9 percent of workers preferred stock options or more stock options over higher pay or wages. This is down from 13 percent in 1999 and may reflect decreased confidence in the stock market.

Conclusion

The findings of the 2001 *EBRI/MGA Value of Benefits Survey* show that workers continue to place a great deal of importance on employee benefits. Benefits are an important consideration in employees' decisions to accept or reject job offers. By a wide margin, health insurance remains the most important benefit to today's workers, as it was in 1999. Any changes in worker sentiment toward employee benefits between the 1999 and 2001 surveys were very small and suggest little or no change in employee preferences for employee benefits in light of the slowed economy or feelings of diminished personal safety.

Endnotes

[1] The Employee Benefit Research Institute (EBRI) conducted "value of employee benefits" surveys in 1991 and 1996 to determine the relative importance of different benefits to workers and to assess the role played by benefits in job choice and job change. The survey was repeated in 1999 in collaboration with *WorldatWork* and again in 2001 in collaboration with Mathew Greenwald & Associates, Inc.

[2] Respondents were asked to rank seven different types of benefits in order of importance. The list of benefits included: health insurance, retirement savings plan (such as a 401(k), 403(b), or profit-sharing plan), pension plan (or defined benefit pension plan), retiree health insurance, long-term care insurance, life insurance, and stock options. Retiree health insurance was added in 2001, taking the place of disability insurance, which was included in the 1999 survey.

[3] "Decrease in insurance applications might be holiday-driven," *BenefitNews.com Adviser*, Jan. 16, 2002.

Pension Plan Participation Continued to Rise in 2000—What Next?

by Craig Copeland, EBRI

Introduction

The number of wage and salary workers ages 21–64 participating in a pension plan reached 62.1 million in 2000, up from 50.3 million in 1992 (figure 3). Furthermore, the percentage of these workers participating in a pension plan also increased, from 47.1 percent in 1992 to 52.3 percent in 2000. These estimates are from the 1993–2001 March Current Population Surveys (CPS), which include the results from the latest March CPS.[1] Using these data, this article examines pension plan participation among wage and salary workers ages 21–64 across various worker characteristics and the characteristics of the workers' employers.

Data Source

The CPS is a monthly survey conducted by the U.S. Census Bureau, and is the primary source of data on labor force characteristics of the U.S. civilian noninstitutionalized population. The March CPS has questions on workers' pension plan participation in the previous calendar year. It asks workers whether their employer sponsored a pension plan for any of its employees and, if it did, whether they were included in the plan. The survey's strength is its very rich detail of workers' characteristics and their employers' characteristics, but it does not provide details on the pension plans. Thus, breakdowns for pension plan types (e.g., defined contribution versus defined benefit) and reasons for not participating are not available from this data source.[2]

Worker Characteristics and Pension Participation

Pension plan participation varied—in many cases widely—across all worker characteristics. Pension plan participation increased as workers became older, up to the oldest age group, when the percentage of participants fell (figure 4). Almost 64 percent of wage and salary workers ages 45–54 participated in a pension plan in 2000, compared with 23.3 percent of those ages 21–24. Pension plan participation increased in all age groups from 1994 to 2000, with the largest percentage gains being in the two youngest age groups. Males were more likely to participate in a pension plan than females, but females did close the gap somewhat between 1994 and 2000.

White workers were more likely to participate in pension plans than were workers in other race/ethnicity groups. In 2000, 56.8 percent of white workers participated in a pension plan, compared with 47.5 percent of black workers, 32.0 percent of Hispanic workers, and 45.6 percent of workers falling in the "other"

Figure 3
PERCENTAGE OF WAGE AND SALARY WORKERS AGES 21–64 PARTICIPATING IN AN EMPLOYMENT-BASED PENSION PLAN, 1992–2000

	1992	1993	1994	1995	1996	1997	1998	1999	2000
					(millions)				
All Workers	106.7	107.1	109.3	110.7	112.2	113.5	115.5	117.2	118.6
Work for an employer:									
sponsoring a plan	63.3	62.4	67.2	67.2	70.1	70.9	74.2	74.7	76.4
participate in a plan	50.3	50.3	53.6	54.3	55.8	56.6	59.7	60.9	62.1
					(percentage)				
All Workers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Work for an employer:									
sponsoring a plan	59.3	58.2	61.5	60.7	62.5	62.5	64.3	63.7	64.4
participate in a plan	47.1	47.0	49.0	49.0	49.8	49.9	51.7	52.0	52.3

Source: Employee Benefit Research Institute estimates from the 1993–2001 March Current Population Surveys.

Figure 4

PERCENTAGE OF WAGE AND SALARY WORKERS AGES 21–64 PARTICIPATING IN AN EMPLOYMENT-BASED PENSION PLAN, BY VARIOUS CATEGORIES, 1994–2000

	1994		1995		1996		1997		1998		1999		2000	
	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)
Age														
21–24	11,948	18.6%	11,319	19.7%	11,262	18.2%	11,335	20.0%	11,771	21.1%	11,848	21.1%	12,019	23.3%
25–34	32,628	42.8	32,560	42.2	32,081	44.4	31,756	44.0	31,017	44.5	30,690	45.9	30,493	45.9
35–44	31,840	55.1	32,748	55.1	33,295	55.1	33,621	54.3	34,329	56.9	34,601	55.9	34,762	56.3
45–54	22,019	62.6	22,844	61.0	23,997	61.3	24,871	61.5	25,896	64.3	27,203	64.0	28,124	63.7
55–64	10,883	56.0	11,241	56.5	11,525	56.4	11,910	57.5	12,451	58.1	12,843	59.1	13,217	59.0
Gender														
Male	56,650	52.1	57,197	52.0	58,029	52.6	58,478	52.7	59,360	54.7	59,926	54.9	60,783	54.8
Female	52,670	45.7	53,515	45.9	54,131	46.8	55,014	46.9	56,104	48.5	57,260	49.0	57,832	49.7
Race/Ethnicity														
White	82,632	52.2	82,755	52.4	82,937	53.2	82,800	53.7	84,204	55.7	84,664	56.2	84,981	56.8
Black	12,660	45.8	12,663	46.8	12,938	45.8	13,619	46.1	13,710	46.2	14,167	47.3	14,441	47.5
Hispanic	10,301	29.7	10,674	28.6	11,419	31.9	11,922	30.1	12,293	32.4	12,933	32.1	13,502	32.0
Other	3,728	43.4	4,620	42.3	4,865	44.0	5,150	44.6	5,257	47.4	5,422	46.8	5,691	45.6
Education														
No high school diploma	12,061	26.0	12,302	25.6	12,432	26.4	12,384	25.8	12,237	25.6	12,101	26.1	12,136	25.9
High school diploma	36,294	45.9	36,466	45.6	37,411	46.1	37,429	45.8	37,518	47.8	37,236	47.2	37,236	46.9
Some college	32,405	47.3	32,592	48.5	32,641	49.0	32,888	49.2	33,589	50.6	34,693	51.2	35,052	51.5
Bachelor's degree	19,546	60.9	20,152	59.9	20,694	61.9	21,504	62.7	22,261	64.5	22,713	64.1	23,555	65.0
Graduate/professional degree	9,013	72.8	9,200	71.9	8,982	72.5	9,287	71.5	9,859	74.2	10,444	75.3	10,636	75.8
Earnings														
Less than $5,000 per year	13,300	8.6	12,643	9.0	11,974	8.4	10,880	8.0	10,128	9.5	9,768	9.6	8,328	9.8
$5,000–$9,999	13,191	18.0	12,226	18.2	12,076	17.9	11,495	17.1	10,643	18.0	10,298	18.2	9,493	17.5
$10,000–$14,999	14,058	29.6	13,753	29.0	13,401	27.5	13,177	27.5	12,896	27.5	12,124	26.3	11,731	25.1
$15,000–$19,999	13,048	46.0	13,458	43.4	12,923	42.5	12,677	41.0	12,148	40.9	12,613	38.5	12,182	38.1
$20,000–$29,999	21,639	61.5	22,123	59.2	22,728	59.0	22,921	56.1	23,474	56.2	23,368	54.9	23,741	53.3
$30,000–$39,999	14,239	74.1	15,197	72.2	15,890	71.5	16,896	71.4	17,629	70.4	17,516	69.7	18,561	66.1
$40,000–$49,999	8,379	80.0	8,940	78.3	9,425	79.7	9,932	76.5	10,887	76.8	11,586	76.6	11,793	75.5
$50,000 or more	11,465	81.4	12,373	81.1	13,742	81.8	15,516	80.3	17,658	81.4	19,913	81.2	22,785	79.8
Work Status														
Full-time, full-year worker	73,863	60.9	76,324	59.7	77,614	60.9	79,862	60.4	83,075	61.5	84,358	61.8	86,993	61.0
Full-time, part-year worker	18,085	30.4	17,472	31.4	17,793	31.6	16,937	31.0	16,407	33.3	16,849	32.4	16,053	34.2
Part-time, full-year worker	8,016	23.5	8,011	25.0	8,174	23.7	8,506	23.9	8,087	25.7	8,380	26.4	8,367	28.1
Part-time, part-year worker	9,356	13.2	8,906	13.5	8,578	12.3	8,187	13.7	7,894	14.2	7,600	15.1	7,202	16.5

(continued)

Figure 4 (continued)

	1994		1995		1996		1997		1998		1999		2000	
	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)	Number of workers (000s)	Percentage participating (%)
Sector														
Public	19,260	77.6%	18,571	76.7%	18,310	77.2%	18,420	75.5%	18,740	77.2%	19,478	77.2%	19,445	77.4%
Private	90,060	42.9	92,141	43.5	93,849	44.5	95,072	45.0	96,724	46.8	97,708	47.0	99,170	47.4
Employer Size														
Fewer than 10 employees	13,536	11.3	14,017	11.1	13,435	12.8	13,583	13.1	13,606	14.7	13,744	16.3	13,652	17.5
10–24 employees	9,573	20.0	10,305	20.0	10,217	21.8	9,954	22.1	10,080	25.9	10,274	27.3	10,811	26.8
25–99 employees	13,817	33.3	14,257	36.6	14,525	36.5	14,729	37.0	14,867	38.6	15,148	39.4	15,206	40.3
100–499 employees	14,807	47.7	14,869	49.7	15,484	49.6	14,717	49.5	15,869	51.9	15,809	51.7	15,551	53.0
500–999 employees	5,870	56.0	5,982	56.5	5,958	57.5	6,058	58.6	6,083	58.6	5,756	58.1	5,908	57.7
1,000 or more employees	32,457	62.3	32,712	62.5	34,231	62.4	36,032	62.4	36,218	63.8	36,978	63.2	38,042	62.9
Public	19,260	77.6	18,571	76.7	18,310	77.2	18,420	75.5	18,740	77.2	19,478	77.2	19,445	77.4
Industry														
Agriculture, mining, and construction	8,128	27.8	8,630	28.7	8,856	29.1	8,735	30.0	8,888	32.6	9,047	32.5	9,331	33.8
Manufacturing	26,406	59.8	26,455	59.9	27,327	60.5	27,283	60.3	26,924	63.1	27,183	62.7	26,927	61.5
Wholesale and retail trade	33,175	35.5	34,162	36.5	34,689	37.6	35,278	38.3	36,566	40.3	36,680	40.7	37,545	42.0
Personal services	22,352	39.5	22,894	40.4	22,978	41.6	23,776	42.7	24,346	43.7	24,798	44.3	25,368	45.4
Public sector	19,260	77.6	18,571	76.7	18,310	77.2	18,420	75.5	18,740	77.2	19,478	77.2	19,445	77.4

Source: Employee Benefit Research Institute estimates from the 1995–2001 March Current Population Surveys.

category. All race/ethnicity groups experienced an increase in the percentage of workers participating in a pension plan from 1994 to 2000. However, white workers had the highest percentage point gain during this period.

As workers' educational level and earnings increased, the likelihood that they participated in a pension plan also increased. Among workers earning less than $5,000 in 2000, 9.8 percent participated in a pension plan, compared with 79.8 percent of those earning $50,000 or more. Of those workers without a high school diploma, 25.9 percent participated in a pension plan in 2000, while 75.8 percent of workers with a graduate/professional degree participated. The percentage of workers at each educational level who participated in a pension plan increased between 1994 and 2000, except for the percentage of workers without a high school diploma (which remained unchanged).

Full-time, full-year workers were the most likely to have participated in a pension plan in 2000, with 61.0 percent having done so. The worker status category that had the next-highest percentage of pension plan participation was full-time, part-year workers, at 34.2 percent. Participation increased from 1994 to 2000 in all categories except the full-time, full-year worker category, which remained unchanged.

Employer Characteristics and Pension Participation

Where wage and salary workers are employed affects their probability of participating in a pension plan.

Approximately 77 percent of public-sector wage and salary workers ages 21–64 participated in a pension plan in 2000, compared with 47.4 percent of those in the private sector (Figure 4). Furthermore, the likelihood of a worker participating in a pension plan increases with the size of the employer (measured by the number of employees). In 2000, 17.5 percent of those working for an employer with fewer than 10 employees participated in a pension plan, while among those working for employers with 1,000 or more employees, 62.9 percent participated. The industry of the worker also affects his or her chance of participating in a pension plan. In the manufacturing industry, 61.5 percent of workers participated in a pension plan in 2000, whereas 33.8 percent of workers participated in the agriculture, mining, and construction industry.

The private sector accounted for virtually all of the growth in the percentage of workers participating in a pension plan between 1994 and 2000, as the percentage of workers employed in the public sector remained virtually unchanged. Furthermore, the growth was concentrated in employers with fewer than 1,000 employees. Workers in all private-sector industries had a higher percentage of pension plan participation between 1994 and 2000, but the manufacturing sector had a growth rate significantly below that of other industries.[3]

Conclusion

The percentage of wage and salary workers ages 21–64 who participated in a pension plan continued to increase in 2000, reaching 52.3 percent. However, the likelihood of a worker participating in a pension plan was significantly affected by the worker's characteristics and/or the characteristics of his or her employer. In particular, a worker who was white, male, high-earning, highly educated, ages 45–54, and working for a public-sector employer was the most likely type of worker to participate in a pension plan. Yet, workers without these characteristics also experienced an increased likelihood of participating in a pension plan from 1994 to 2000. The economy was strong during this time, and much of the growth in pension plan participation occurred in areas where pension plan participation has traditionally not been the highest (e.g., among small employers and part-year and private-sector workers). The recent slowing of the economy may portend the end of this growth, likely making it more difficult for employers to sponsor plans and for these types of workers to participate in a plan when it is offered.

Endnotes

[1] Each year's March Current Population Survey (CPS) refers to pension participation in the previous year. Thus, the 2001 survey has estimates for 2000.

[2] The February Current Population Survey (CPS) breaks out the reasons for not participating in a pension plan (e.g., not eligible, chose not to participate). Analysis of the 2001 February CPS shows that between 90.7 percent and 93.2 percent (based upon inclusion of the "other" category responses) of eligible wage and salary workers ages 21–64 participated in a pension plan. This includes both defined benefit and defined contribution plans, which explains the rather high participation rate. One other difference between the March and February CPSs (aside from the richness of the data on workers in the March CPS) is that the March CPS results refer to the previous calendar year, while the February CPS findings reflect pension participation only in February of the year of the survey. An annual estimate of pension participation would likely be lower than a monthly estimate, because more individuals without a strong attachment to work force are included as being in the work force in a yearly estimate than are included in a monthly estimate. This appears to be the case, as 54.8 percent of wage and salary workers ages 21–64 are found to participate in a pension plan in February 2001. See Craig Copeland, "Pension Participation: February 2001," *EBRI Notes,* no. 12 (Employee Benefit Research Institute, December 2001): 1–5.

[3] This excludes public-sector workers, whose percentage remained unchanged.

Washington Update

by Steve Blakely, EBRI

Treasury Report Criticizes Company Stock Caps in 401(k) Plans

The U.S. Treasury Department Feb. 28 issued a report criticizing congressional proposals to place a 20 percent cap on the amount of company stock that workers could invest within their 401(k) plans.

In formulating its conclusions, the Treasury Department reviewed surveys of 401(k) participants conducted by the Employee Benefit Research Institute—specifically the recent *EBRI Special Report,* "Company Stock in 401(k) Plans: Results of a Survey of ISCEBS Members"—and a report by the Investment Company Institute, as well as information provided by the Department of Labor. Treasury also held discussions with a number of benefit administrators of plans that hold employer stock.

The Treasury report argued that such caps would improperly limit workers' freedom to invest and could drive down a company's share price. It also said caps might discourage companies from contributing stock to match employee contributions to their 401(k) plans. As many as 8 million of the nation's 42 million 401(k) participants would be forced to alter their investment allocations if workers were forced to limit their company stockholdings to 20 percent, the report said.

Sens. Barbara Boxer (D-CA) and Jon Corzine (D-NJ) have proposed the 20 percent cap as legislation in Congress, saying it is necessary to protect workers against over-concentrating their retirement investments in one stock.

Flood of Enron Bills Building in Congress

The collapse of Enron has generated a flood of retirement legislation in Congress, and the pressure is building for some sort of legislative action.

While it remains unclear whether something will ultimately be enacted into law during this election year, it is likely that Senate Democrats will try to pass new legislation this month (March) to impose new restrictions on retirement plan sponsors. Sen. Edward Kennedy (D-MA), chairman of the Senate Health, Education, Labor, and Pensions Committee, is expected to hold a markup March 13 of a pension bill he is currently drafting, and the full Senate may act on it soon thereafter.

Congressional Republicans have introduced the Bush administration's retirement plan proposals, which would impose relatively few new restrictions on plan sponsors. But key GOP leaders—notably Rep. Bill Thomas (R-CA), chairman of the tax-writing House Ways and Means Committee, and Sen. Charles Grassley (R-IA), ranking Republican on the Senate Finance Committee—are going their own way and appear likely to support broader restrictions than the White House is calling for.

To help keep track of all the retirement-related bills, the Joint Committee on Taxation (JCT) Feb. 11 released a summary of bills introduced up to that point, along with a primer addressing common questions and answers regarding employment-based retirement plans as well as their investment in company stock. The report, *Background Information Relating to the Investment of Retirement Plan Assets in Company Stock* (JCX-1-02), also includes statistics on the demographics of employment-based retirement plans. The JCT report is available on the Web at www.house.gov/jct/x-1-02.pdf

Just a few of the more notable proposals in Congress (so far) related to 401(k) plans, company stock, and retirement policy:

- President Bush's retirement security proposal has been introduced in the Senate by Sens. Kay Bailey Hutchison (R-TX) and Trent Lott (R-MS), as S. 1921. In the House, it was introduced by Reps. John Boehner (R-OH) and Rep. Sam Johnson (R-TX) as the "Pension Security Act," which also features a proposed list of 401(k) operating changes, including Boehner's long-time effort aimed at making investment advice more available to participants.
- Sen. Edward Kennedy (D-MA), chairman of the Senate Health, Education, Labor, and Pensions Committee, has proposed a bill that would allow employers to either make matching contributions to 401(k) plans in company

stock or allow employees to invest their own contributions in company stock, but not both.

- Separately, Sen. Joseph Lieberman, chairman of the Senate Government Affairs Committee, has called for a review of tax incentives that have encouraged companies to shift from guaranteed defined benefit plans to retirement plans that place investment risk with employees, saying that Congress should work to increase the use of defined benefit plans. Lieberman also would require publicly listed companies to retain an independent fiduciary to participate in the administration of 401(k) plans that include a significant amount of company stock.
- House Minority Leader Richard Gephardt (D-MO) Feb. 14 unveiled details of forthcoming legislation to consolidate the structure of individual retirement accounts (IRAs), Roth IRAs, simplified employee pension plans and savings incentive match plan for employees (SIMPLE) IRAs, into a tax-favored Universal Retirement Savings Account.
- The most prominent bill that would limit company stock in 401(k) accounts—to 20 percent—is S. 1838, introduced earlier this year by Sens. Barbara Boxer (D-CA) and Jon Corzine (D-NJ). Rep. Bill Pascrell, Jr. (D-NJ) has introduced a companion bill in the House.

Keeping on Track

Supreme Court Limits Reach of ADA—The U.S. Supreme Court recently narrowed the perceived scope of the Americans With Disabilities Act (ADA) by making it more difficult for individuals to qualify as disabled under the law. The court held unanimously that for an individual to be "disabled" under the ADA because he or she is substantially limited in the major life activity of performing manual tasks, the individual must be unable to perform tasks that are of central importance to most people's daily lives, not just be unable to perform a limited class of manual tasks associated with a specific job (*Toyota Motor Manufacturing, Kentucky, Inc. v. Williams*).

New DOL Toll-Free Number for Participant/Employer Assistance—U.S. Department of Labor (DOL) Secretary Elaine Chao this week announced the activation of a new toll-free number (1-866-275-7922) to help both participants and employers with questions regarding their retirement and health benefit plans. The DOL press release is available at www.benefitslink.com/cgi-bin/show_a_pressrelease.cgi?database_id=26170

White House Targets DOL, EEOC Rules for Review—The White House Office of Management and Budget's Office of Information and Regulatory Affairs (OIRA) recently issued a report to Congress on the costs and benefits of federal regulations. In its report, OIRA targeted a handful of DOL regulations and one regulation by the Equal Employment Opportunity Commission (EEOC) for priority review. These include overtime compensation, wage and hour record keeping and notification requirements, the Office of Federal Contract Compliance Programs' equal opportunity survey, and the EEOC's Uniform Guidelines for Employee Selection Procedures.

President Bush Renews Call For Social Security IAs

Speaking at the 2002 National Summit on Retirement Savings, President Bush renewed his call for partial privatization of Social Security through the creation of individual accounts (IAs) that would allow workers to invest part of their Social Security contributions in the stock market.

In a preview of the coming mid-term congressional election campaign, Democrats wasted no time criticizing the president's privatization plan, characterizing it as irresponsible and a threat to guaranteed benefits under Social Security. Sen. Tom Daschle (D-SD), Senate Majority Leader, called the president's proposal a "retirement insecurity plan."

Bush also repeated his proposal that top corporate executives be prohibited from stock trading in their executive compensation plans during so-called "blackout" periods when a company's 401(k) plan is changing administrators, saying "What's fair on the top floor should be fair on the shop floor."

The Bush administration's retirement plan also would allow workers to sell company stock they receive as a company match in a

401(k) plan and diversify into other investments three years after receiving the stock. It also would require that workers be given 30 days' notice before a blackout period begins.

House May Act on Social Security Reform

House Majority Leader Dick Armey (R-TX) has vowed soon to have the full House of Representatives vote on a series of Social Security reform bills that would allow workers to invest part of their Social Security contributions in the stock market. Armey's bills also would, for the first time, guarantee all current Social Security recipients that their benefits would not be cut, despite the program's pending insolvency, and would call for increases in benefits to women.

News reports about possible House action on Social Security suggest that the votes are primarily designed to neutralize Democrats' arguments that the Bush administration and congressional Republicans have put Social Security at risk because of last year's tax cuts. But even if the Republican-controlled House were to actually pass one or more Social Security privatization bills, it is virtually impossible that the Democrat-controlled Senate would go along and enact the legislation. If nothing else, voting on Social Security will preview the political TV, radio, and newspaper ads that the public will be hearing as the midterm congressional campaigns heat up later this year.

Bush Proposes $300 Billion for Health Care

President Bush Feb. 11 outlined a $300 billion, 10-year health care plan that he said would overhaul Medicare, provide a prescription drug discount plan for the elderly, and double funding for the National Institutes of Health. He also repeated his call on Congress to enact a patients' bill of rights and to prohibit health insurers from refusing to cover patients with genetic diseases.

Sen. Edward Kennedy (D-MA), chairman of the Senate Health, Education, Labor, and Pensions Committee, who is working with the White House to resolve differences on a patients' rights bill, quickly dismissed the president's prescription drug plan as "just another broken promise" to the elderly. Health issues are almost certain to be the focus of intense midterm election battles this year.

EBRI in Focus

Second National SAVER Summit Held

The second National Summit on Retirement Savings was held in Washington, DC, Feb. 27–March 1, and brought in about 250 delegates from around the country. This was the second of three national summits as called for under the Savings Are Vital to Everyone's Retirement (SAVER) Act; the first was held in 1998, while the next (and last) will be in 2005. EBRI CEO Dallas Salisbury and ASEC President Don Blandin were among the delegates, with many others from EBRI members and ASEC partners.

The Summit was co-hosted by U.S. Secretary of Labor Elaine Chao and congressional leaders, and brought together some of America's leading experts on saving and retirement planning to develop new strategies and action plans to encourage Americans to save more for their financial future. This year's Summit theme was "Saving for a Lifetime: Advancing Generational Prosperity." President Bush attended the Summit Feb. 28 to renew his call for partial privatization of Social Security through the creation of individual investment accounts. More information on the Summit is available on the Internet at www.asec.org/saversummit/2002summit/

Choose to Save® also sponsored several events for Summit

delegates, friends of Choose to Save®, and news reporters, including:

- Release of the 2002 Retirement Confidence Survey (see next item) at a Feb. 27 press conference.
- A "welcome" luncheon for delegates that same day, which included a presentation on the importance of savings education by Comptroller General David Walker of the U.S. General Accounting Office and a review of RCS results.
- A "farewell" Choose to Save® luncheon for delegates on March 1 at which a five-minute video was shown reviewing the success of Choose to Save® along with the first showing of the newest Choose to Save® public service announcement (PSA).

The newest 60-second PSA for Choose to Save® focuses on young people and the value of compound interest. President Bush highlighted the need to educate young people on the concept of compound interest in his speech to the Summit.

2002 RCS Released at Start of SAVER Summit

Just ahead of the SAVER Summit, the 2002 Retirement Confidence Survey (RCS) was released on Feb. 27 at a morning press conference for reporters and a luncheon for Summit delegates and policy-makers. Tracking the Summit's theme of "Advancing Generational Prosperity," the RCS focuses on how a person's age and personality type can affect saving and preparing for retirement.

The 12th annual RCS, co-sponsored by EBRI, the American Savings Education Council (ASEC), and Mathew Greenwald & Associates, is a national survey that gauges the views and attitudes of working and retired Americans on various financial issues related to retirement planning. The survey was underwritten by a large group of EBRI members on a subscription basis, and EBRI Sustaining Member Principle Financial sponsored a satellite video tour that provided television news coverage on the RCS around the nation. Between 6:30 and 9:00 a.m., live and to-tape interviews were conducted with 14 stations from Baltimore to Sacramento, and specially produced interview footage was provided to numerous others as well. The findings received extensive national news coverage, including a segment on the *Today Show* on the day of the RCS release, in the *Washington Post,* and an article distributed nationally by the Associated Press, among many other news outlets.

This year's RCS finds that in addition to individuals' age and specific stage in life, their attitudes and behavior toward money and financial planning can also have an enormous impact on how much they actually save for their future. Factoring in all these elements is essential in helping to create targeted savings messages and educational campaigns that speak to individuals of different generations and backgrounds—one of the major points of focus of the SAVER Summit.

Compared with last year's survey, respondents to the 2002 RCS appeared to be more confident in their saving for retirement. However, the RCS also found that most Americans do not appear to be doing a good job in planning and preparing for retirement, and that most Americans have saved only modest amounts for retirement. For the complete RCS results, visit EBRI Online at www.ebri.org/rcs

EBRI Busy With Capitol Hill Testimony and Briefings

EBRI staff were kept busy during February providing background briefings on 401(k) plans to congressional staff and news reporters. In addition, EBRI testified before various committees on Capitol Hill about retirement-related issues:

- Senate Finance Committee (Feb. 27, 2002) and House Ways and Means Committee (Feb. 26, 2002), "Retirement Security and Defined Contribution Pension Plans: The Role of Company Stock in 401(k) Plans." Testimony was provided by Jack VanDerhei, Temple University and research

director of the EBRI Fellows Program.

- House Education and Workforce Subcommittee on Employer-Employee Relations (Feb. 13, 2002), "The Role of Company Stock in 401(k) Plans." VanDerhei also provided the testimony at this hearing.
- Senate Health, Education, Labor, and Pensions Committee (Feb. 7, 2002), "Protecting the Pensions of Working Americans: Lessons From the Enron Debacle." Testimony was provided by EBRI President and CEO Dallas Salisbury.
- Senate Banking Committee (Feb. 6, 2002), "Financial Literacy." Testimony was provided by ASEC President Don Blandin.

All testimony is available at EBRI Online at www.ebri.org

CEO Speeches

During February, EBRI President and CEO Dallas Salisbury made two major addresses to benefits-related groups:

- Feb. 19 before the International Union of Bricklayers & Allied Craftworkers in Bal Harbour, FL, on "Prospects for Economic Security Reform."
- Feb. 25–26 before Milliman USA, Inc., conferences in Seattle, WA. He presented the keynote address: "Economic Security Issues Update – Are We Ready for Retirement?"

CHEC Opens New Phase of Research Project

The EBRI-ERF Consumer Health Education Council (CHEC) has began the second phase of its Robert Wood Johnson Foundation-supported research project to learn more about the attitudes and practices of employers affecting health care coverage made available through the workplace. Because more than 85 percent of the 40 million uninsured Americans live in households headed by workers, CHEC is working actively with employers to help them understand the implications of the uninsured in the context of their business concerns. This research project consists of three phases: the first was a Web-based survey endorsed by 13 organizations that produced more than a thousand responses; the second phase, now under way, involves meetings with employers in four cities—Chicago, Phoenix, Atlanta, and New York—to probe the findings of the survey more deeply; and the third will be a search of academic and trade literature. The project is scheduled for completion this summer.

EBRI & CHEC Join "Sync" Project

On Feb. 1, EBRI and CHEC staff met in Washington, DC, with several large employers and employer organizations that comprise the Policy Goal Work Group of the "Synchronizing National Health Care Purchasers" project. The goal of the "Sync" project is to establish some strategic common ground underneath employers on health care policy and resources important to employers. The purpose of EBRI and CHEC participation in the February meeting was to discuss the influence of America's uninsured on other employer priorities and to encourage employers to play a more active role in programs to expand coverage. EBRI and CHEC will continue to use their research and knowledge resources to inform the deliberations of this group.

New Publications & Internet Sites

[*Note: To order publications from the U.S. Government Printing Office (GPO), call (202) 512-1800; to order congressional publications published by GPO, call (202) 512-1808. To order U.S. General Accounting Office (GAO) publications, call (202) 512-6000; to order from the Congressional Budget Office (CBO), call (202) 226-2809.*]

Employee Benefits

Bryan, Pendleton, Swats & McAllister, LLC. 2001 Benefits Survey Analysis. $100. Bryan, Pendleton, Swats & McAllister, LLC, 5301 Virginia Way, Suite 400, Brentwood, TN 37027, Liz Emerick, (615) 665-5313 or elizabeth.e.emerick@bpsm.com.

William M. Mercer. Spotlight on Benefits: A 2001 Study of Benefit Plans. $450. William M. Mercer, Corporate Publications, 462 S. Fourth Ave., Suite 1500, Louisville, KY 40202, (800) 333-3070.

Health Care

Communicating for Agriculture & the Self-Employed. Comprehensive Health Insurance for High-Risk Individuals: A State-by-State Analysis: Includes Operating Statistics, Model Bill, Current Premiums, Funding Mechanisms, State Contacts. $29.95. Communicating for Agriculture, 112 E. Lincoln Ave., Fergus Falls, MN 56537, (218) 739-3241, (800) 432-3276 ext. 3500, fax: (218) 739-3832.

Gluck, Michael E., and Kristina W. Hanson. Medicare Chart Book. Free. Kaiser Family Foundation, www.kff.org or call (800) 656-4533. For multiple copies, call (800) 242-2626.

Health Insurance Association of America and LifePlans, Inc. Who Buys Long-Term Care Insurance in 2000? A Decade of Study of Buyers and Nonbuyers. $55. Health Insurance Association of America, 555 13th St., NW, Suite 600 East, Washington, DC 20004-1109, (800) 828-0111, www.hiaa.org.

National Committee for Quality Assurance. The State of Managed Care Quality: 2001. $50. National Committee for Quality Assurance, 2000 L St., NW, Suite 500, Washington, D.C. 20036, 202-955-3500.

SMG Marketing Group. Preferred Provider Organizations (PPOs): Industry Characteristics, Trends, Market Projections, & Comparative Analysis. $275. SMG Marketing Group Inc., 875 N. Michigan Ave., Suite 3100, Chicago, IL 60611, (312) 255-4227 or (800) 678-3026.

Tanabe, Ramona P., and Susan M. Murray. Managed Care and Medical Cost Containment in Workers' Compensation: A National Inventory, 2001–2002. $125. Workers Compensation Research Institute, 955 Massachusetts Ave., Cambridge, MA 02139, (617) 661-9274, fax: (617) 661-9284.

University of Wisconsin - Madison, Sonderegger Research Center and Kaiser Family Foundation. Prescription Drug Trends: A Chartbook Update. Free. Kaiser Family Foundation, www.kff.org or call (800) 656-4533. For multiple copies, call (800) 242-2626.

Wye River Group on Healthcare. An Employer's Guide to Patient-Directed Healthcare Benefits. Free. Wye River Group on Healthcare, P.O. Box 1682, Austin, TX 78767, (512) 472-2005, fax: (512) 263-5776, e-mail: jcomola@texas.net.

Pension Plans/Retirement

Fultz, Elaine, and Markus Ruck. Pension Reform in Central and Eastern Europe: An Update on the Restructuring of National Pension Schemes in Selected Countries. Free. ILO-CEET, 14 Mozsar u., H-1066 Budapest, Hungary, (+36-1) 301-4900, fax: (+36-1) 353-3683, e-mail: budapest@ilo.org.

Parker, Thornton. What If Boomers Can't Retire? How to Build Real Security, Not Phantom Wealth. $27.95. Berrett-Koehler Publishers, c/o AIDC, P.O. Box 565,

Williston, VT 05495, (800) 929-2929, fax: (802) 864-7626.

U.S. General Accounting Office. United States Postal Service: Information on Retirement Plans. Order from GAO.

Social Security

Edelman, Peter, Dallas L. Salisbury, and Pamela J. Larson. The Future of Social Insurance: Incremental Action or Fundamental Reform? $24.95. The Brookings Institution, Dept. 029, Washington, DC 20042-0029, (800) 275-1447 or (202) 797-6258, fax: (202) 797-2960, Attn: Order Dept.

U.S. Congressional Budget Office. Social Security: A Primer. Order from CBO.

Training Programs

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Attachment E

"How Do Retirement Plans Affect Employee Behavior," *Watson Wyatt Insider*, April 2005; *http://www.watsonwyatt.com/us/pubs/insider/default.asp*

How Do Retirement Plans Affect Employee Behavior?

Recent trends in U.S. private pensions are undeniable. Over the last 25 years, defined benefit plans — once the centerpiece of the retirement portfolio — have lost considerable ground to defined contribution plans, which have become the primary vehicle for saving for retirement. Some analysts claim that traditional defined benefit plans are a dying breed (if not already dead). Detractors typically contend that defined benefit plans are too complicated, too risky for plan sponsors and underappreciated by employees.

Watson Wyatt set out to learn how employees felt about their defined benefit and defined contribution plans and how these plans affect employees' workforce decisions. Watson Wyatt's *Retirement Attitude Survey* found that most workers value both types of plans very highly. And workers who strongly value their retirement plan are more likely to want to continue working for their current employer than workers who don't. As such, the design and features of a retirement program can have very meaningful effects on workers' behavior, which can deliver favorable economic returns to the organization.

Business Case for Employer-Sponsored Retirement Plans

In addition to serving as a tax-advantaged means of accumulating retirement income, retirement plans can enhance productivity. Pensions strongly influence workers' behavior, giving younger workers a compelling reason to continue working for their employer and encouraging older workers to retire on a timely basis. Empirical evidence indicates that pensions influence the type of worker a firm attracts and can help an employer attract workers who exhibit desirable behavior patterns. While the productivity effects have been associated mostly with defined benefit plans, recent research has shown that 401(k) plans exhibit similar effects in shaping workers' behavior (Ippolito, 1997).

Lower employee turnover reduces costs and improves productivity, and thus can significantly increase shareholder value. To measure the influence of both types of retirement plans on employee behavior, we examined how a plan's value to employees affects their desire to stay with their employer. The *Retirement Attitude Survey* asked respondents to indicate the importance of their defined benefit and defined contribution plans in two ways. First, we asked employees whether and to what extent the retirement plan was an important reason for taking their job. Second, we asked them whether and to what degree the retirement plan gives them an important reason to stay with their employer. We combined both responses into a single summary variable of plan importance.

Separate from their feelings about their plans, we asked employees to indicate their likelihood of staying with their current employer until retirement and their likelihood of leaving their employer within the next two years. We again created a summary indicator by combining employee responses to measure the overall likelihood that an employee will stay with his or her employer.

Responding workers who consider their defined benefit plan highly important are over three times more likely to express a strong desire to stay at their current organization than other workers (Table 1). Employees who consider their defined contribution plan very important are 2.5 times more likely to intend to stay with their current employer. In fact, for both plan types, more than half of respondents who value their retirement plans highly also indicate a high likelihood of staying with their current employer. For employees who assign low importance to their defined benefit plan, roughly equal numbers say the plan would (36.3 percent) or would not (37.1 percent) influence their decision to remain with their current employer. The situation is much the same for workers who assign a low value to their defined contribution plan.

What does this mean for shareholder returns? Responding employees who consider their defined benefit plan very important tend to work for companies whose total returns to shareholders (TRS) averaged 26.7 percent from 1999 to 2003 (Table 1). This compares very favorably with 21.8 percent TRS over the same period at companies whose employees value the plan the least. At the median, TRS during the most recent five-year period was more than 12 percentage points higher at firms whose workers strongly value their defined benefit plan than at firms whose workers are less enthusiastic about their plans.

The differences in five-year TRS between employees who value their defined contribution plan the most and those who value it the least are more modest. There is very little difference between the two groups on average five-year TRS, but there is more than a six-percentage-point difference in median shareholder returns.

Table 1
Relationship between the Retirement Plan's Importance to Employees and Retention and Shareholder Returns

All Respondents	Likelihood of Staying with Current Employer until Retirement			5-Year TRS (1999 to 2003)	
Importance of DB plan	**High**	**Low**	**Ratio**	**Mean**	**Median**
High	55.4	18.0	3.08	26.7	12.8
Low	36.3	37.1	0.98	21.8	0.7
Importance of DC plan	**High**	**Low**	**Ratio**	**Mean**	**Median**
High	52.3	20.6	2.54	32.3	18.9
Low	36.3	38.3	0.95	31.1	12.5

Notes: Plan importance combines employees' indications of the importance of their retirement plan as a means of attracting them to the firm and as a reason for staying with the organization. High and low represent the top one-third and bottom one-third of respondents. For individuals covered by both plan types, a separate indicator is created for each plan. All respondents were asked to indicate their likelihood of staying with their firm regardless of the plans offered by their employer-sponsor.

Source: Watson Wyatt *Retirement Attitude Survey.*

Higher plan satisfaction is also strongly associated with an employee's intention to remain with his or her current employer (Table 2). For defined benefit plans, employees' overall satisfaction was determined by combining employee ratings of eight features: value of benefits as future income, information about current value, information about projected value, form of benefit payout, benefit availability age, years of service before vesting, ability to access funds before retirement and how the plan compares with competitors' plans.

For defined contribution plans, overall plan satisfaction also was determined by employees' satisfaction with eight features: match rate, type of matching funds, contribution limits, investment options, information about balances, education programs, plan administration and how the plan compares with competitors' plans.

Employees who are most satisfied with their defined benefit plan are more than three times more likely than other employees to plan on remaining with their employer until retirement. An equivalent relationship emerges for employees who are highly satisfied with their defined contribution plans. However, employees who are much less satisfied with their defined benefit and defined contribution plans are equally likely to plan on staying with their employer or not.

A popular pension plan translates very favorably into higher shareholder returns. Average five-year TRS is over 10 percentage points higher at companies whose employees are highly satisfied with their retirement plans — either type of plan. In fact, in comparing median satisfaction, five-year TRS is –3.6 percent at companies whose employees are least satisfied with their defined benefit plan compared with 18.9 percent at companies whose employees are most satisfied. A very similar relationship holds true for defined contribution plans as well — a link between higher employee satisfaction with the 401(k) plan and significantly higher shareholder returns.

Table 2
Relationship between Employee Satisfaction with the Retirement Plan and Retention and Shareholder Returns

All Respondents	Likelihood of Staying with Current Employer until Retirement			5-Year TRS (1999 to 2003)	
Satisfaction with DB plan	**High**	**Low**	**Ratio**	**Mean**	**Median**
High	57.1	18.3	3.12	29.0	18.9
Low	34.8	34.5	1.01	18.4	–3.6
Satisfaction with DC plan	**High**	**Low**	**Ratio**	**Mean**	**Median**
High	55.0	19.1	2.88	38.0	21.7
Low	31.9	39.0	0.82	24.6	7.0

Notes: Employee satisfaction is determined for both DB and DC plans by combining employee responses across several plan design features. High and low represent the top one-third and bottom one-third of ratings. For individuals covered by both plan types, a separate indicator is created for each plan. All respondents were asked to indicate the likelihood of their remaining with their current firm regardless of the plans offered by their employer-sponsor.

Source: Watson Wyatt *Retirement Attitude Survey.*

Although plan importance and satisfaction strongly influence employees' desire to stay with their current employer, age also affects their degree of commitment. As workers mature and settle into their careers, their desire to stay with their current employer generally becomes stronger. While we have left the details out of this condensed analysis, our results confirm that workers 45 and older are more likely to plan on remaining with their current employer regardless of their feelings about their retirement plans. Yet, commitment is higher still for older employees who are satisfied with their plans and consider them valuable than for older workers who value their plans less.

Employers typically experience significantly higher rates of turnover among younger segments of their workforce. For many employers, reducing turnover among these ranks is critical to their overall success. Employees younger than 35 who value their plans most highly and are very satisfied with them are more likely to remain with their current employer than other young employees (Tables 3 and 4). This is particularly true for defined benefit plans. Of those who are happy with their defined benefit plan and consider it very important, one-half say they firmly expect to stay with their employer. On the defined contribution side, those who value their plans and consider them very important also indicate a greater likelihood of sticking around, but the difference is less pronounced than it is for defined benefit plans. Not surprisingly, younger workers who don't consider their plans important and are not particularly satisfied with them appear much less committed to their employer. In fact, more than one-half of younger workers who neither value their plans highly nor express high satisfaction indicate a low probability of staying with their employer.

Table 3
Relationship between the Retirement Plan's Importance and Retention for Younger Employees

	Likelihood of Staying with Current Employer until Retirement		
Importance of DB plan for employees under 35	**High**	**Low**	**Ratio**
High	51.0	19.8	2.58
Low	19.0	55.7	0.34
Importance of DC plan for employees under 35	**High**	**Low**	**Ratio**
High	40.0	30.5	1.31
Low	20.0	56.7	0.35

Notes: Plan importance combines employee responses to two questions: how important was their retirement plan in attracting them to the firm and how important is it in giving them a reason for staying with the organization. High and low represent the top one-third and bottom one-third of respondents. For individuals covered by both plan types, a separate indicator was created for each plan. All respondents were asked to indicate their likelihood of staying with their firm regardless of the plans offered by their employer-sponsor.

Source: Watson Wyatt *Retirement Attitude Survey.*

Table 4
Relationship between Plan Satisfaction and Retention for Younger Employees

	Likelihood of Staying with Current Employer until Retirement		
Satisfaction with DB plan for employees younger than 35	**High**	**Low**	**Ratio**
High	50.0	23.4	2.14
Low	18.0	55.3	0.33
Satisfaction with DC plan for employees younger than 35	**High**	**Low**	**Ratio**
High	39.3	30.0	1.31
Low	17.5	59.7	0.29

Notes: Employee satisfaction is created for both DB and DC plans by combining employee responses across a number of plan design features. High and low represent the top one-third and bottom one-third of respondents. For individuals covered by both plan types, a separate indicator is created for each plan. All respondents were asked to indicate their likelihood of staying with their firm regardless of the plans offered by their employer-sponsor.

Source: Watson Wyatt *Retirement Attitude Survey.*

Importance of Retirement Plans

As noted above, our measure of plan importance is based on employees' responses to two questions: (1) How did the plan affect your decision to work for your current employer? (2) How does the plan affect your desire to continue working for your employer? The answer to the first question measures the retirement plan's effect on *attraction*; the answer to the second question indicates the plan's effect on *retention*.

Table 5 shows the effectiveness of retirement plans at attracting and retaining younger and older employees. In general, retirement plans do a much better job of retaining workers than attracting workers. Roughly twice as many respondents say their plan strongly affects their decision to remain with their current employer than say the plan convinced them to sign on in the first place. Older employees are significantly more likely than younger employees to have been attracted to their firm by the retirement plan. Older respondents are also more likely to consider their retirement plan an important reason to continue working for their employer. This is not surprising, given that older workers are generally much more focused on retirement issues than younger workers.

Table 5

Importance of the Retirement Plan in Attracting and Retaining Employees

	Attraction		Retention	
All Respondents	**Low or No Importance**	**High Importance**	**Low or No Importance**	**High Importance**
Workers younger than 35				
DB	64.2	14.6	45.3	29.1
Traditional	63.8	16.2	42.4	31.5
Hybrid	65.0	11.2	51.8	23.8
DC	63.0	14.5	43.6	28.1
Workers 45 and older				
DB	50.7	25.5	26.9	52.8
Traditional	51.4	24.5	28.6	51.7
Hybrid	49.4	27.6	24.1	54.9
DC	58.5	20.0	33.7	44.1

Notes: On a scale of 1 to 5, "High Importance" indicates a response of 4 or 5; "Low or No Importance" indicates a response of 1 or 2.

Source: Watson Wyatt *Retirement Attitude Survey.*

Across plan types, defined benefit and defined contribution plans are generally equally effective in attracting and retaining employees within each age group. These results are surprising, since 401(k) plans are generally considered to be more attractive than defined benefit plans, especially to younger workers. In fact, defined benefit plans are just as important in convincing younger workers to take a job as 401(k) plans (14.6 percent versus 14.5 percent). Defined benefit plans have slightly greater attraction value to older workers than 401(k) plans (25.5 percent versus 20.0 percent).

In terms of retention, defined benefit plans are more likely to convince older workers to remain with their employer than 401(k) plans (52.8 percent versus 44.1 percent). Defined benefit and 401(k) plans exert very similar effects on younger employees. As you may recall from Table 3, however, younger workers who rate their defined benefit plan as highly important are nearly twice as committed to their organization as comparable employees with a defined contribution plan. So while younger employees seem to value their defined benefit and 401(k) plans fairly equally, defined benefit plans appear more effective in boosting employee commitment among young workers than 401(k) plans, at least for younger employees who strongly value their plan.

The tables above show only modest differences in the extent to which plan type affects employee commitment. However, these results do not account for the different mix of retirement programs that employers offer. Table 6 shows employees' perceptions about the attraction and retention power of their retirement plans for workers whose employers offer (1) a defined benefit and defined contribution plan, (2) only a defined benefit plan or (3) only a defined contribution plan.

In general, retirement plans have the strongest attraction and retention power at defined-benefit- only firms. Employees at these firms are twice as likely to cite their retirement plan as an important factor in choosing their employer than workers at firms that offer only a defined contribution plan. In fact, employees at firms that offer only a defined benefit plan are significantly more likely than employees covered by both a defined contribution and a defined benefit plan to rate their retirement plan as a highly important reason for joining the company.

Table 6

Importance of Plan in Attracting and Retaining Employees by Plan Type

	Attraction		Retention	
	Low or No Importance	High Importance	Low or No Importance	High Importance
Both DB and DC:				
DB	54.7	21.4	31.1	45.4
DC	56.7	20.3	30.2	45.4
DB only	49.7	30.8	28.8	53.1
DC only	62.7	15.2	43.5	31.3
All Respondents:				
DB	54.1	22.6	30.8	46.4
DC	59.2	18.2	35.7	39.5

Notes: On a scale of 1 to 5, "High Importance" indicates a response of 4 or 5; "Low or No Importance" indicates a response of 1 or 2.

Source: Watson Wyatt *Retirement Attitude Survey.*

Employees at defined-benefit-only firms also tend to credit their retirement plan with the greatest retention effect. Fifty-three percent of respondents at defined-benefit-only firms who highly value their plans say their retirement plan gives them a very important reason to stay with their current employer. This is comparable to the retention effect we identified among older workers (Table 5). In companies that offer both a defined benefit and a defined contribution plan, both plans appear to improve employee retention. Workers at defined-contribution- only firms, on the other hand, are significantly less likely to cite their retirement plan as a reason to stay on the job than workers whose employers offer a defined benefit plan. This further supports the assertion that defined benefit plans engender employee loyalty and commitment.

Satisfaction with Retirement Plans

Employers have long sought to enhance organizational performance by improving employee satisfaction. The idea that a satisfied employee is a better employee seems intuitive. And, as shown above, designing a retirement plan that strongly appeals to employees can create significant value for an organization.

Which plan characteristics elicit the most favorable ratings from employees? The *Retirement Attitude Survey* asked employees to indicate their degree of satisfaction with a number of retirement plan features. Table 7 shows the responses, indicating the percentage of employees who are highly satisfied with various features of their defined benefit plans, including plan generosity, vesting, eligibility, age when benefits become available and plan communications. Overall, about one-half of the respondents say they are highly satisfied with their defined benefit plan. Responding employees indicate the highest satisfaction with their plan's vesting requirements, benefit availability age, plan generosity and form of benefit payout in retirement. Employees report being least satisfied with limited access to their money before retirement. To a lesser extent, employees also are less satisfied with plan communications and with how their plan compares to plans at other organizations.

Table 7

Defined Benefit Plan Satisfaction by Plan Design Feature

Percentage with High Satisfaction	All	Hybrid	DB Only
Value of benefits as future income	55.9	55.6	54.4
Information about value today	49.9	52.1	47.4
Information about projected value	47.4	45.7	49.3
How benefits are paid out	54.0	55.6	55.2
Age when benefits are available	58.4	60.0	55.5
Years of service until vested	67.9	71.4	66.4
Ability to access before retirement	35.2	36.8	28.4
How plan compares with competitors	40.9	40.3	42.2
Overall satisfaction with plan	**56.4**	**57.1**	**54.5**

Note: High satisfaction includes those who responded "satisfied" or "very satisfied" on a 5-point Likert scale. "All" represents all respondents with a defined benefit plan; "Hybrid" represents all respondents with a hybrid plan; "DB Only" represents all respondents with any type of DB plan and no DC plan.

Source: Watson Wyatt *Retirement Attitude Survey.*

Worker satisfaction is relatively consistent across the various plan types and mix of retirement programs. Most notable is that responding employees seem to be just as enthusiastic about their hybrid pension plans as they are about their traditional defined benefit plans. These survey findings do not confirm the popular media's portrayal of employees being passionately unhappy with their hybrid pensions. This could be the result of increased communication around recent hybrid plan conversions, raising awareness of and appreciation for these plans. Similarly, employees at defined-benefit-only firms are just as satisfied with their plan as those who are also covered by a defined contribution plan.

The survey asked employees to indicate their satisfaction with defined contribution plan features such as value and type of matching contributions, available investment options, permissible employee contributions and educational materials (Table 8). Roughly two-thirds of all responding employees are satisfied with their 401(k) plan, which is about 10 percentage points higher than employee satisfaction with a defined benefit plan. Employees appear most satisfied with communication of their account balances, contribution limits and available investment options. Workers are least satisfied with their employer's investment education programs and how their plan compares to plans offered by other organizations. However, employees at defined-contribution-only firms tend to be slightly less satisfied with their plan than the average respondent. This difference is perceptible with each plan design feature.

Table 8

Defined Contribution Plan Satisfaction by Plan Design Feature

Percentage with High Satisfaction	All	DC Only
Match rate	53.3	51.9
Type of matching funds	55.4	53.7
Amount can contribute	79.8	74.9
Investment options	68.7	63.6
Information about balances	74.2	67.5
Education programs	40.7	36.1
Quality of plan administrator services	57.2	50.8
How plan compares with competitors	45.8	40.4
Overall satisfaction with plan	**68.2**	**62.2**

Note: High satisfaction includes those who responded "satisfied" or "very satisfied" on a 5-point Likert scale. "All" represents all respondents with a DC plan; "DC Only" represents all respondents with a DC plan and no DB plan.

Source: Watson Wyatt *Retirement Attitude Survey.*

Conclusion

Most employees appreciate their retirement plans and value them highly. In fact, it appears that an attractive plan plays a very significant role in both attracting and retaining employees. Although employee attraction and retention are always important, they are likely to become increasingly hot issues as the baby boom generation starts retiring.

Defined benefit plans appear to exert a stronger influence on employees' decisions to remain with their employer, but respondents overall express greater satisfaction with their defined contribution plans. This could be because benefits in defined contribution plans are often communicated more clearly, accrue at younger ages and seem more tangible than those in defined benefit plans. As employees get older, defined benefit plans seem to acquire greater appeal, perhaps because the benefits become more valuable with age and the payout begins to feel less distant. While no one would deny that defined benefit plans face many challenges today, these plans clearly remain a valuable and important part of the U.S. private pension system, continuing to provide value to both employees and employers across changing workforce environments.

This article is the second in a series analyzing employees' attitudes toward their employer-sponsored retirement plans. In the March 2005 Insider, we analyzed the effect of employer-sponsored pension programs within the context of retirement security. The final article will investigate the ways in which plan generosity and plan communications affect employees' perceptions of the value of their plans.

About the Survey

The Watson Wyatt *Retirement Attitude Survey* was completed by roughly 8,000 employees from a national panel in summer 2003. Every employee in the sample was matched to his or her actual plan design information using the Watson Wyatt COMPARISON™ database. All respondents are covered by a defined benefit plan or a defined contribution plan or both. Tw o-thirds of employees have both a defined benefit plan and a defined contribution plan, while 27 percent have only a defined contribution plan. The remaining workers have only a defined benefit plan. The final sample includes employees from 982 firms.

Attachment F

California Public Employees' Retirement System, "Pension Debate: The Myths and Realities of Defined Benefit and Defined Contribution Plans," *CalPERS Research Brief,* January 2005; *http://www.calpers.ca.gov/*

Research Brief

Pension Debate: The Myths and Realities of Defined Benefit and Defined Contribution Plans

January 2005

Moving from a Defined Benefit Plan to a Defined Contribution Plan Won't Help Current Budget Crisis

The change to a defined contribution (DC) plan would not save the State and local government money for at least 10 years, and in fact, it will add a second pension system that will add start up costs to government budgets. In addition, the State would also have to pay more money to cover disability and death benefits for these employees, as well as Social Security, which State safety personnel and others don't currently receive.

The CalPERS Defined Benefit Plan Works Very Well

CalPERS has been a proven great investor for the taxpayers of California. Over the last 10 years ended June 30, 2004, CalPERS returns averaged 9.7 percent even with two years of negative returns. It has generated positive investment returns 18 of the last 20 years, and costs less than a DC plan. Some 75 percent of income to fund pensions came from good investment earnings during the last 10 years.

CalPERS investment earnings have made up the lions share of the fund over the last 22 years. According to its pension consultant Wilshire Associates, wealth created through investments has totaled $171.9 billion from 1982-2004. During the same period, employer and employee contributions totaled $29.7 billion and the System paid out $48.6 billion in retirement benefits.

A report compiled by Cost Effectiveness Measurement Inc. found that CalPERS investment staff added $7 billion in excess returns over the five-year period ended December 31, 2003, while taking less risk than other public pension funds in the United States, Europe, Canada and Asia.

Excessive Benefits in the Defined Benefit Plan Is a Myth

Average pension is small. No one is getting rich on pensions. Some 25,000 CalPERS members retire each year. The average age at retirement for the largest segment of workers is 60, with 19.5 years of service, and a benefit allowance of $1,673.82 a month. The average CHP employee retires at age 55, with 27.9 years of service, and receives an allowance of $3,811.27 a month.

The majority of State cost increases are due to market downturn, not to increased benefits. Nearly 80 percent of increases in employer rates between 2002-04 are due to the two-year downturn in the economy. And as a percent of payroll, the State pays less per employee than it did 25 years ago for school employees, state miscellaneous employees, state industrial workers, state safety workers and state peace officer and firefighters.[1]

Defined Contribution Plans Don't Cost Less, They Cost More

Dollar for dollar, DC plans cost more. Administrative costs of DC plans are higher – often much higher – than a DB plan.[2] The average cost of administering CalPERS defined benefit plan is 0.18 percent. The annual cost of a DC plan can rise to as much as 2 percent of assets. The expense ratio for a stock mutual fund is 1.1 percent of assets.

CalPERS investment portfolio is low cost and less risky than other public pension funds. A Cost Effectiveness Measurement Inc., found that CalPERS saved $144 million compared to its peers, paying less for consulting, custodial and active management services. Costs to run the pension fund's investment portfolio were $413.2 million in 2003, compared to a peer benchmark of $557.1 million.

In a typical DB plan, 80 cents of each $1 is spent on members who retire; in a DC plan 50 cents of each $1 is spent on benefits with the other 50 cents spent prior to retirement. For retiring members to receive the same amount of benefits, contributions to the fund would need to increase substantially.[3]

There is no guarantee that tax dollars put into an employee account will be used for retirement. Research indicates that most employees who leave one job for another, cash out their accounts – including the monies contributed by the employer for the purpose of retirement -- rather than roll them over to the next employer's retirement plan.[4] If DC proceeds fall short of basic retirement income needed, the State will end up paying more in public assistance when employees are old, ill and infirm.

A comparison of operation expenses favors DB plans. Employees pay big fees to mutual funds and other investment mangers on their investment dollars in

DC plans. On average, mutual funds charge $1.35 for "load" and/or administrative expenses for every $100 invested. For each of the last 6 years, CalPERS spent less than two tenths of one percent of the fund's value – 18 cents on every $100 invested.[5]

The State will bear start-up costs of a DC plan, bringing to two the number of plans it will need to budget for. The State's contributions to the CalPERS plan do not require direct payment of administrative costs to run the system. If the State were to set up a DC plan, it would have to pay for start-up costs. The DC plan does not cover costs of disability retirements and death benefits, which are embedded in the cost of the DB plan. The State would also have the added expense of starting to pay 6.7 percent of payroll for police, firefighters, and others in safety classes who don't get social security under the existing DB plan.

The State throws away an opportunity to use future investment returns to cover retirement costs, relieving taxpayers from some of the burden of funding pensions. A DC plan does not give the State the ability to use investment returns to pay for a portion of pension costs. For example, investment returns and employee contributions generated enough income in the mid-1990s that the State did not pay any contributions during four years -- Fiscal year 1998-99 through Fiscal Year 2001-02 -- for 350,000 classified school workers. That represented a savings of over $4 billion alone.

Over the last 10 years, 75 percent of the income to CalPERS has been from investments, not employer or employee contributions. Over the last decade, members' contributions have actually exceeded the amount of employer contributions by $1.1 million.

Replacing a Defined Benefit Plan with a Defined Contribution Model Turns Off The Future Spigot of Pension Dollars For Investments in the State Of California

Under the existing CalPERS defined benefit plan, more than $19.5 billion in pension dollars is set aside for California investments. Replacing CalPERS with a DC plan would mean that future contributions needed for a DC plan could not be re-deployed for California investments. It would turn a blind eye to the opportunity to redeploy capital to strengthen California business, promote job growth, and build communities and infrastructure. These investments – a part of CalPERS diversified portfolio of investments -- help strengthen the State's economy and tax base.

Currently, CalPERS invests more than $10.7 billion in companies based in California – from blue chip corporations on the New York Stock Exchange to start-up firms in south central Los Angeles and the Silicon Valley.

CalPERS holds $2.4 billion in fixed income assets, including corporate bonds in California, that enable corporate expansion. And CalPERS invests $6.4 billion in California real estate. These include investments in industrial office properties, office buildings, senior housing and retail establishments. CalPERS is also one of the largest real estate developers, financing more than $2 billion worth of single family homes.

CalPERS pension dollars have financed the building of more than 43,000 homes and developed 33,000 lots for single family homes. This public pension capital has provided $13.8 billion in mortgages for nearly 100,000 California families.

The private equity portion of the CalPERS portfolio has invested in many start-up companies, including biotechnology which capitalizes on the advent and convergence of new technologies including genomes, bioinformatics and therapeutic agents.

During the recession of the late 1980s, CalPERS was among the only sources of construction capital in the State. After the terrorist attacks on September 11, 2001, CalPERS helped stabilize the New York Stock Exchange by continuing to invest into the stock market in spite of the market uncertainty.

Defined Contribution Plans Threaten Employee Retirement Security

DC Plans Make Future Uncertain. Tax dollars set aside for employees' use to finance their pension under a DC plan may never be used as is intended. That is because under a DC plan, participants will face daunting risks investing on their own. Some may not be able to resist cashing out retirement assets prematurely. These are uncertain factors on which to base a worker's retirement income security. And research suggests that DC plan participants generally earn rates of return on investment far below what DB plan funds typically earn.[6]

Even if employees in a DC plan do manage to earn the same rate of return as a DB plan fund and resist the urge to cash out prematurely, at the end of a full career they will likely receive a smaller benefit than similar employees in the DB plan. For example, an employee in a DB plan (with a benefit formula of 2% at age 60 and employer and employee contributions of 10% of pay) hired at age 30 with a starting salary of $25,000 and 5% pay increases each year will have a retirement benefit with a present value of $732,100 upon retirement at age 60.

In contrast, the retirement benefit for an employee in a DC plan hired at the same age with the same salary (assuming that the DB plan and DC plan both earn a rate of return of 8%) will have a present value of $497,529 upon retirement at age 60.[7]

Employees could outlive their retirement assets in a DC plan. DC plans do not take into account the risk that the employee will outlive their retirement assets. If public servants didn't earn enough through their DC plan, the question will become who will help them when their retirement nest egg runs out? Will the State's safety net – currently stretched to its limits – be responsible?

DC plans do not include inflation protection, disability benefits or death benefits. For retirees in a DC plan, an annual inflation rate of 2.5 percent from age 65 to 93 would cut purchasing power in half. Employees would be without either disability or death benefits in a DC plan. This is an inequitable arrangement when workers with the DB plan work along side of them. (Disability & death benefits are already factored into a DB plan.)

When offered a DC plan, some employees don't even contribute and most contribute less than the maximum amount allowed. 26 percent of employees who are eligible for 401(k) plans do not participate. Non participation is concentrated in lower-income employees. Among all employees, less than 10 percent contribute the maximum allowable amount, which further restricts their ability to match DB payout amounts.[8]

Chances that the DC plan would not provide an adequate benefit are high. Research suggests employees do not invest well on their own to ensure an adequate benefit through their later years. An annual study conducted by Dalbar, a Boston fund consulting firm, found that the average stock fund investor had a 5 percent annual gain from 1984 to 2000; compared to a 16 percent annual average gain for the Standard & Poors (S&P) 500 stock index for that period.[9] Over the last 10 years ending June 30, 2004 CalPERS returns averaged 9.7 percent.

A John Hancock Financial Services Retirement Survey of defined contribution participants published in May 2002 showed that "many have a cockeyed view of how investments work across the board. " John Hancock researchers said that most defined contribution participants will fall well shy of the estimated 75 percent of pre-retirement income needed to maintain the same lifestyle in retirement.[10]

One half of DC plan investors do not diversify, almost none rebalance portfolios periodically.[11]

Defined benefit plans outperform 401(k)'s in a down market.
According to a 2004 analysis by Watson Wyatt Worldwide, defined benefit plan returns tend to do better than those of 401(k) plans during bad market years that follow periods of hot stock market returns. Watson Wyatt Worldwide analyzed

2000 and 2001 Form 5500 data for companies that sponsor both defined benefit and defined contribution plans.

Previous studies by Watson Wyatt showed that from 1995 to 1998, defined benefit plan returns beat those of 401(k) plans. Once the market turned sharply downward in March 2000, defined benefit plan returns began to dominate again, with Watson Wyatt researchers theorizing that better downside protection came from the higher portfolio diversification of the professionally managed defined benefit plans.[12]

Defined Contribution Plans Will Hamper Recruitment and Retention and Make State Attract Less Capable, Not More Capable Work Force

DB benefits help recruit for classifications when the State experiences a labor shortage. The State competes with the public sector for many specialized workers – especially safety employees. The State has and will continue to have challenges recruiting scientists, researchers, technology workers, nurses, doctors, accountants and other specialized workers. (This occurred when the State had mandatory tier 2 programs in the early 1990s.) Human Resource specialists indicate that it is not the pay that attracts people to work for the State, but rather the retirement benefits. State workers have not kept pace in pay – most of whom went without annual pay raises for many of the last 13 years.[13]

DB plans promote longevity which gives good return on the investment in training specialized workers such as firefighters and safety personnel. In contrast, under a DC plan, employee turnover may be higher, causing the State and local government to waste taxpayer dollars training a revolving door of workers.

DC plans would encourage older, more expensive workers to continue working longer, rather than retire. The performance of the markets would have a significant influence on when people retire. When the economy is doing poorly and individuals' DC accounts are down, they may decide to work beyond a reasonable retirement date, creating less opportunity to replenish the workforce with younger workers.[14]

People who retire with a defined contribution plan end up retiring later than earlier. The expected retirement age of a DB plan is 63.9 nationwide; the expected retirement age of a DC plan participant is 65.1 years.[15]

Market timing would determine when people retire. Retirement trends, not age periods of market growth would spawn large numbers of employees retiring. Down markets would restrict the number of workers retiring.

Contrary to Popular Belief, DC Plans Get Thumbs Down From Large Employers

The decrease in DB plans has been limited nearly exclusively to small, not large employers. Companies that are electing to discontinue DB coverage have been small employers, not large employers, and they are doing so because of the expense of complying with complex federal regulations, most of which do not apply to the public sector.[16]

Large employers have generally kept their DB plans rather than convert to DC plans.

- **Most of the decrease in DB plans has occurred among small and medium size employers** (employers with less than 1000 employees).[17]

- **Eighty percent of professional service firms offer DB plans, with the average contribution rate from companies with over 1,000 employees sitting at $40 million in 2003.[18]**

- **Due to their size, public employers are more comparable to large private-sector employers, most of which offer DB plans.** In 2003, 68% of large private-sector employers offered DB plans compared to 45% of all private sector employers.[19]

- **Although DB plans are more prevalent in the public sector, it is likely that more private sector employers would adopt or continue DB plans were it not for the cost and administrative burden imposed by ERISA laws and regulations.** Because public pension plans are exempt from most of ERISA, DB plans are even more advantageous for public employers than for private employers.[20]

- Large and medium private companies value DB plans as primary recruitment and retention tool (American Benefits Council).

- Examples of large companies with DB plans:

    - Chevron
    - Unocal
    - Lockheed Martin
    - Boeing
    - Albertson's
    - Boise Cascade
    - Louisiana Pacific
    - Safeco
    - Weyerhaeuser

Only 17 percent of Fortune 100 companies have a DC plan as their primary benefit, according to Watson Wyatt. Most large employers continue to offer defined benefit plans as their primary retirement program and its use among large employers with 10,000 or more employees is increasing. The highly regarded Employee Benefits Research Institute (EBRI) found that since 1985, there was an actual increase in the number of large employers that offered a defined benefit plan as their primary retirement plan. This occurred during a period of many corporate mergers of large firms, who had a unique opportunity to select one or the other.[21]

The majority of U.S. companies with 1,000 or more employees that offer a DB plan believe their plan directly impacts employee retention. According to a September 2004 study by Diversified Investment Advisors.[22]

Public Sector Experience with DC Conversions Has Not Been Highly Successful

Since 1997, large numbers of public employers have been given an opportunity to participate in a DC plan as their primary retirement benefit. In Florida and Michigan, an overwhelming majority – more than 90 percent of those eligible to switch to a DC plan – elected to stay with the DB plan.[23]

The state of Nebraska recently converted back to a DB plan from a DC plan. A study showed that over 20 years, the typical worker posted an average annual return of 6 to 7 percent. (Money managers running the state's old-fashioned defined benefit plan ran 11 percent average returns.) Even though the state made much effort to help individuals invest wisely, half of all employees stayed in the default fund, even though they had 11 choices. Nebraska retirement system officials were concerned that the state was wasting taxpayer money via matching contributions to workers accounts.[24]

In Florida, where employees could leave the DB plan for the DC plan, most opted to stay in the DB plan.

When the Illinois Municipal Retirement Fund looked into switching from a DB to DC plan, it found that is total cost – administrative and investment expenses – could rise from 0.44 percent of assets to as much as 2.25 percent of assets, a difference that approached $315 million a year.[25]

The Value of "Defined Contribution Portability" Is Not What It's Cracked Up To Be

The conventional wisdom is wrong that workers today are more mobile and want more portability of their retirement benefits.

- **Workers are not necessarily more mobile**. From 1983 to 2000, median job tenure increased or stayed the same for all workers in the U.S. with

the exception of workers in two sectors (manufacturing and transportation/public utilities).[26]

- **Public-sector workers are even less mobile**. From 1983 to 2000, the median tenure for government workers in the U.S. increased from 5.8 years to 7.2 years. In 2000, the median years of tenure for government workers (7.2 years) was more than twice that for workers in the private sector (3.2 years).[27]
- **DC plans are not necessarily the solution to deal with the issue of pension portability**. A significant proportion of workers with DC plans "cash out" their accounts when they change employers rather than leave it in the account or roll it over to their new employer's plan. For example, a study conducted by the human resources consulting firm Hewitt Associates found that 57% of employees who leave their companies choose cash payments from their retirement savings plans instead of rolling over the balances to their new employer's plans or into individual accounts.[28]
- **DB plans have been adopting changes to make benefits more portable** (e.g., shorter vesting periods and expanded reciprocity).
- **In cases where public employees have the option of participating in an alternative DC retirement plan, it appears that most opt for the DB plan.** During the first two years of Florida's optional retirement program, only 3.4% of eligible employees opted for the DC alternative (8% of new hires).[29] In Michigan, state employees hired prior to March 31, 1997 had the option to remain in a DB plan or switch to a DC plan that was mandatory for all new employees. Only 6% of eligible employees switched to the DC plan.[30]

DC plan would hurt "portability" via reciprocity with public agencies within CalPERS. One of the recruitment features of the CalPERS DB plan is that there is reciprocity with other public agencies in the State; these employees would not have the same reciprocity benefit as others who work for the State.

Employees taking money out of CalPERS when they leave State service will drain the fund. The Sacramento Bee in a 1996 editorial pointed that "Every worker intending to leave public service short of vesting for a pension – political appointees, highly paid managers, and professionals who have private sector skills – would likely choose the new option, draining funds from the system. That would leave taxpayers with the same pension obligations but less money to fulfill them."

Moving to a DC Plan Helps and Hurts the Wrong People

Higher costs and fees are charged for DC plans. Wall Street money managers will make money on these assets even if investors lose. Many people would

rather have investment managers within public service manage the assets rather than mutual funds whose goal is to make profits for itself. DC plans prevent participation in the full range of investments such as real estate and private equity investments.

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Attachment G

Personal Communication with Bill Bjork, executive director, National Education Association-Alaska, October 26, 2005

Mr. Chuck Burnham,
Thank you for your inquiry. The new defined contribution system will not be applied until July 1, 2006, therefore, there is no hard data (e.g. the number of positions unfilled by schools and public employers) to apply to your question. Despite the absence of statistics, the public policy implications of SB 141 richly deserve to be explored.

NEA-Alaska believes the impact of SB 141 will be so severe that the proposed defined contribution system will have to be changed or Alaska simply will not attract the high quality employees we want and need to maintain quality Alaska K-12 schools.

I will focus on teachers' salaries, certification and retirement and teacher recruitment in this response.

Salary

In recent years, Alaska teacher salaries have fallen from #1 to #14 in the country. Alaska no longer has a salary "edge" for recruiting new teachers. The empirical evidence of this is the Retired/Rehired laws passed by the legislature. Over the last decade, Retired/Rehired allows school districts to hire retired teachers in areas of declared shortage. Districts' wage and benefit packages are not attracting new candidates so many Districts have declared areas of shortage in special education, speech and language, school psychologist, and school counseling. Districts fill vacancies with retired teachers who already have a pension and medical insurance from the retirement system. The Retired/Rehired system is an abuse of the retirement system. Its actuarial impact impact was belatedly addressed in 2005.

Certification

The Department of Education and Early Development (DEED) recently instituted a new certification system that will be mandatory for non-tenured teachers in 2006. The new system subjects teachers to additional requirements and includes a mechanism by which DEED can deny a teacher's re-certification application thereby ending that teacher's career. Simply put Alaska teachers will be subject to "new hoops" that do not exist in other states, in order to maintain a Alaska teaching certificate.

Retirement

SB 141 changes a retirement system that was rated in the "top 10" retirement systems in the country to a system that is ranked in the "bottom 10" retirement systems. SB 141 took the last "edge" away for recruiting new teachers. Prior to SB 141, Alaska had a retirement system that attracted new teachers. The system needed to be attractive because Alaska teachers do not participate in Social Security. Any Social Security benefit earned through other employment is reduced by 2/3 by the Government Pension Offset (GPO) and the Windfall Elimination Provisions (WEP) of Social Security. Without Social Security benefits to provide a retirement safety net, Alaska teachers rely solely on TRS.

The changes in Salary, Certification and Retirement considered in aggregate, substantially reduce Alaska's competitive standing in the market place for new teachers. Alaska currently hires 80% of the new teachers we need each year from outside Alaska. It is folly to ignore the economics of the market, Alaska needs to offer competitive wages and benefits to attract and retain quality teachers.

Two anecdotes illustrate the tip of the iceberg of approaching recruitment problems.

The MatSu Borough School District and the MatSu Education Association have a negotiated agreement in place. The MatSu Borough School District administration has approached the Association because they want to bargain signing bonuses for new teachers for next year. MatSu Borough School District administration recognizes they will not be competitive in the market for new teachers when SB 141 is implemented.

The second anecdote is from Sitka. The superintendent of Sitka schools says flatly he will not be able to recruit new teachers to come to teach in Sitka in 2006 after the new pension system begins. The superintendent further reports that his nephew will take a teaching job in California in

2006, rather than teach in Alaska, because he will receive a $10,000 signing bonus, a higher annual salary and will participate in a defined benefit retirement system in California.

SB 141 actually places an incentive into law for teachers to leave Alaska. After five (5) years, a teacher is fully vested in the teacher's contributions AND the employers contributions. We believe that teachers who have taught for five years will leave Alaska and move to a state where they will have access to social security as part of their retirement.

Alaska is on a path to become the training ground for Pacific Northwest states. SB 141 places an incentive into law for public employees including teachers, architects, engineers and public safety officers to leave Alaska within their first five years of employment for states where salaries and retirement benefits are competitive.
Sincerely,

Bill Bjork phone: 907-274-0536
NEA-Alaska President
bill.bjork@neaalaska.org
1-800-996-3225, ext. 533
4100 Spenard Road
Anchorage, AK 99517

Attachment H

ACSA Resolution #8 (2005) and AAESP / AASSP Joint Resolution 05-03

Anonymous comments from members of the Alaska Council of School Administrators (ACSA), supplied by Mary A. Francis, PhD., executive director, ACSA, October 31, 2005

Chuck Burnham
Legislative Research: Defined contribution
Retirement system

AASA's position on the defined contribution system is imbedded into resolution #8 that was passed at our recent fall meeting. We believe the switch to a defined contribution retirement system will have a negative impact on not only attracting, but also retaining new teachers and administrators to our state. Following are comments from some AASA members who responded to my request for specific examples of how they expect the change to impact recruitment and retention:

1) "The new retirement system will make recruitment much more difficult. At this point in the teacher shortage crisis, anything that further reduces our pool of applicants will result in either unfilled positions, or worse yet, hiring poor teachers.

   The real devastation will be its effect on teacher retention. We know that high teacher turnover has a strong negative effect on student learning. Typically it takes a teacher from Outside two or three years to start to become effective in a rural village, and despite our efforts to the contrary, we are not producing enough home-grown teachers. Now, to go along with our substandard housing and lack-luster salaries, we will have a weak retirement system that is totally portable. What is going to keep teachers here?"

2) "We had to hire two local people who had already retired in order to fill positions. We had no applicants. I know from talking to people in the Lower 48 that they will not come with the change in the retirement system because most of them are working in a state that has a defined contribution program."

3) "With so many items in the hopper regarding teacher recruitment/retention (tiered licensure, low pay, poor teaching environments), it gives an upfront opportunity for our staff and prospective staff to depart well before their time."

4) "I have been told that there are states that went to a defined contribution system and which have reverted back to a defined benefits system because of competitiveness, and the fact is that a defined contributions system is just not cost effective when weighed against a loss of competitiveness. And, we are very much in a sellers' market.

   This state is woefully short of applicants, let alone "qualified" applicants, as things stand. Subtract out those who are in the pool but not certificated and those who want only to be on the road system, and the supply is critically short; it forces rural school districts into the position of hiring just to put warm bodies in the classroom.

   Compound the retirement issue with the increased requirements for licensure (certification) and you have a formula that guarantees an inadequate supply of teachers."

5) "I have worked with a teacher who went to the private sector because the retirement benefits were poor at Tier 2."

6) "It is important to note that the present deficit in TRS and PERS has been caused in part by returns on investments being too low. We are going to have problems with retaining those folks who come up and spend two to five years. They can leave and take all of their contributions with them, as well as the contributions made by the districts. Under the present tiered system, an employee can take their contribution but the district portion stays in the system."

7) "The thing that concerns me about the defined contribution retirement system is if my governing board were to allow current Tier 2 employees to move over to the new

retirement system, there is a cost of the up front matching funds that are apparently required of a district if a Tier 2 employees moves over. Also, when an employee that has contributions in the new system leaves the state, they apparently take the employee contribution as well as the employer contribution with them."

8) "Recruitment of young people may not be greatly affected. It will be the person well along in their career that will be more concerned about the new system. In my opinion, it may not change the number of people coming to the state but I believe it will influence the numbers who stay. The big hurdle will be if our state remains in the forefront and other states do not follow with a similar system.

   The issues surrounding retention based solely on retirement will affect age groups differently. Younger people just entering the profession look at the prospect of retirement much differently than a person with a growing or grown family and 10-15-20 years of experience. Those that were coming to earn a state retirement based on eight years will look elsewhere.

   Younger people were encouraged to remain in the state for the eight years, for vesting purposes. I speculate the rate of people leaving the state before vesting will increase. In the end, our defined benefits program remains a great incentive and I fear the defined contribution program will reward short-term thinking.

   The transition period for those individuals who are able to move from the defined benefits program to the defined contribution program presents one significant and potentially expensive issue for districts. School districts have already contributed their share of an employee's retirement and will be asked to contribute a second time for the same person.

   The second part of this issue is the actual cost to the district when an employee makes the switch. If each person eligible in our district chose to move to the defined contribution program next fall, we would need to secure a dollar amount in excess of 1.2 million dollars!
   Burnham, page 3

   What this new plan has offered is real incentive to not remain in the state or in education. For a teacher of five years, this means they will have an account of $39,000 where they would have had $19,575. Even with taxes and a withdrawal penalty, we have offered young folks a sizeable reason to not work in Alaska education."

Attachment I

Traci Carpenter, Project Manager, Alaska Division of Retirement and Benefits, Memorandum: "Impact of Defined Contribution Plan on Teacher Recruitment and Retention," November 7, 2005

MEMORANDUM

STATE OF ALASKA
DEPARTMENT OF ADMINISTRATION

To: Chuck Burnham
Legislative Analyst
Legislative Research Services

Date: November 7, 2005

File No:

Phone: 465-4817

From: Traci Carpenter
Project Manager
Division of Retirement and Benefits

Subject: Impact of Defined Contribution Plan on Teacher Recruitment and Retention

Thank you for giving the Division an opportunity to respond to your research into the potential impact of a defined contribution (DC) retirement plan on the recruitment and retention of teachers in Alaska. In all the research that has been done over the past several years we have found no empirical evidence to support the contention that retirement benefits are crucial in a person's decision to become or remain a teacher, whether in Alaska or elsewhere in the country.

Two Alaska-specific reports written within the last five years suggest that recruitment and retention is related to the teaching profession itself rather than factors associated with earning a living to retirement. Copies of these reports are attached: "1999 Statewide Educator Supply & Demand Report State of Alaska", Alaska Teacher Placement (ATP), University of Alaska Fairbanks; and "Retaining Quality Teachers for Alaska", Institute of Social and Economic Research (ISER), University of Alaska Anchorage, December 2002.

What can be gleaned from these reports is this: a significant number (30-40%) of people who are trained to be educators do not enter the classroom; a large number of teachers quit the profession every year (14-15%); at least 30 percent of teachers quit within their first five years; and almost half of new hires are teachers that are moving from another school/location.

Neither of these reports contains the reasons why a large number of people who are trained to be educators never actually teach. The 2002 ISER study, however, contains an exit survey from the 2000-01 school year that sought to discover why Alaskan teachers leave their jobs. Of those teachers changing districts, more than half the respondents cited residing elsewhere, dissatisfaction with district administrative support, and more affordable housing as important reasons for leaving. Only 21 percent of both urban and rural exiting teachers cited better pay and benefits as important in their decision-making. Although 50 percent of urban teachers indicated better pay and benefits as important, it stands to reason that salary was the enticement since Alaska teachers (elementary and secondary education) participate in the same retirement system.

All data indicates that teachers' salaries are relatively modest among the professions. Additionally, according to the American Federation of Teachers, Alaska's national ranking for cost-of-living adjusted salary has fallen from 8th in 1990 to 40th in 2000. Recognizing this, both the 1999 and 2002 studies suggest that raising teachers' salaries, not their retirement benefits, may help with recruitment and retention.

Unfortunately, Alaska's local governments are feeling the pinch of a defined benefit retirement system that requires them to pay rich benefits but that is not self-supporting. The Alaska Teachers' Retirement System (TRS) is underfunded by $2.3 billion. School districts should be paying 38.85 percent of teachers' salaries in FY 2006 to meet the actuarially calculated liabilities of the system. Projections calculated to amortize this unfunded liability over 25 years show school districts paying rates in the range of 51-63 percent through FY 2028. These school districts probably cannot afford to raise salaries, at least not right now.

The new defined contribution (DC) retirement plan addresses the recruitment issue on two levels: 1) as the existing workforce retires and the new workforce phases in, employer contribution rates stabilize to known factors, freeing up resources for monetary inducements such as increased salaries, signing bonuses, and health insurance cost-sharing; and 2) it is attractive to the mobile workforce that has been emerging for some years.

Data from the TRS Actuarial Valuation Report as of June 30, 2004, prepared by Mercer Consulting, indicates the average age of a teacher entering the TRS is 34. Historically, Alaska "imports" more than half its teachers from the lower 48 states. The DC retirement plan would seem to be a perfect recruiting tool for these people because of its portability. New entrants can roll in benefits acquired in previous employment. Contributions to the DC plan are generous, a combined 15 percent of gross salary. Further, the DC plan offers retiree medical coverage, with the state sharing the costs of premiums.

Research has determined that a medical plan is a very valuable benefit to members. It is also an expensive benefit for employers to provide. Workplace Economics provided a report in 2004 (copy attached) titled "State Government Retiree Health Benefits: Current Status and Potential Impact of New Accounting Standards." This report found that premiums for retiree medical benefits, for Medicare-eligible retirees, were paid entirely by the retiree in 22 percent (or 11) of the states. In 40 percent (or 20) of the states, the retiree shared the cost of premiums with the state, ranging from a low plan amount of $46.40 to a high of $464.23 for single coverage. Only 34 percent (or 17) of the states paid 100 percent of the retiree medical premium (for at least for the low cost plan). Two of the states ceased offering medical coverage when the retiree reached Medicare-eligible age.

For the Alaska Teachers' Retirement System, the medical cost component represents 31 percent of the accrued liability. Additionally, the retiree medical benefits are protected from diminishment under Article XII, Section 7, of the Alaska Constitution. Not all states have a constitutional protection for its retiree health benefits.

Over 60 percent of current TRS benefit recipients retired with 20 or more years of service. If that trend were to continue, then DC plan retirees would pay only10-20 percent of health insurance premiums when they reach Medicare-eligible age. Additionally, these retired teachers will have access to a newly created pre-tax contribution savings account, paid for entirely by the *employers*, to reimburse their out-of-pocket medical expenses, including premiums. We have yet to identify another state's retirement plan that offers this benefit, although there may be some since this tool has been available for several years.

As an aside, Alaska's teachers are not completely unfamiliar with the concept of a defined contribution account. Tax-deferred savings accounts called 403(b) are offered as a supplemental retirement plan by a number of Alaska's school districts, including the Municipality of Anchorage and the City and Borough of Juneau. Although the teacher participation rates sampled are less than 50 percent, other states have demonstrated that education campaigns can greatly improve those rates. As an example, I have also attached a recent update from the State of Florida on their 401(a) DC choice plan, called the FRS Investment Plan. Over a two-year period, the plan administrator increased active enrollments of new employees in the FRS Investment Plan from 8 percent to 21 percent, and also decreased default enrollments (into the pension plan) by 25 percent.

Again, thank you for the opportunity to respond. If you have questions about any of the information contained in this memorandum, please do not hesitate to contact me at 465-4817.

Attachments:
"1999 Statewide Educator Supply & Demand Report State of Alaska", ATP-UAF, 2000
"Retaining Quality Teachers for Alaska", ISER-UAA, 2002
(www.iser.uaa.alaska.edu/Publications/FINAL%20Teacher%20S-D%2012_18.pdf)
"State Government Retiree Health Benefits: Current Status and Potential Impact of New Accounting Standards", Workplace Economics, 2004
(www.nasra.org/resources/medical/AARP%20State%20Health%20Benefits%20and%20OPEB.pdf)
"Update on Choice in the Florida Retirement System", State Board of Administration of Florida, 2005 (www.sbafla.com/pdf/news/Update%20on%20Choice%20605.pdf)

cc: Melanie Millhorn, Director, Retirement and Benefits