



Full of Sound and Fury, Signifying Nothing:

Metaphysical and Other Irrelevant Debates about Teachers' Comparable Pay.

By John T. Wenders

While simmering in the background for years, the debate about how well public school teachers are paid relative to other “comparable” occupations has been joined again, this time between competent economists who come down on opposite sides.¹ While carried out primarily as empirical investigations into the state of the public school teachers’ market, underlying these studies is a metaphysical subtext about what is a “fair” wage.

In my view, both the empirical analyses and the metaphysical subtext are full of sound and fury, signifying nothing relevant for public policy.

What Comparable Pay Analysis Does

As an empirical exercise, all comparable pay analysis starts with an assumption about the identity of some occupations presumed to be “comparable” to teachers, and then proceeds to compare their pay and draw some conclusions about the present teachers’ market. How the comparable occupations are identified may be casual and heuristic or the result of a complex analysis based on either an assessment of comparable skills or observations about actual occupational switches.²

But no matter how the comparable occupations are identified, we are left with the nagging question: how do we know that the proper “comparables” have been chosen? Shouldn’t this initial assumption about “comparables” be subject to independent empirical testing, just

like any other assumption? What evidence will confirm or refute that the chosen occupations are indeed “comparable? As long as there is any doubt about the “comparables”, any conclusions drawn from the resulting pay comparisons will be suspect, especially if they conflict with some well-known observed facts about the teachers’ market as many do.

This suggests a converse approach: why not use some *observed* facts about the state of the teachers market to confirm or refute assumptions about what occupations are indeed “comparable” to teaching? After all, we are not completely in the dark about what is going on in the general teachers’ market, and some assumptions about comparable occupations may be more consistent with these facts than others. In fact, since we have some pretty hard and independent facts about the state of the present teachers market, it is more reasonable to use these facts to identify comparable occupations than to use some independently assumed comparable occupations to infer conclusions about the state of the market. Of course, using comparable pay analysis to find comparable occupations is pretty much an academic exercise largely irrelevant for any public policy, especially pay policy.

Metaphysical Debates About the “Just Wage”

Like it or not, empirical comparable pay analysis, no matter whether it is used to infer something about the state of the teachers market or to identify comparable occupations, and whatever the empirical outcome, will raise the moral issue of what teachers *should* be paid. If the comparable pay analysis concludes that teachers are over- or under-paid relative to independently chosen comparables, inevitably someone will conclude

John T. Wenders, Ph.D., is emeritus professor of economics at the University of Idaho and Senior Policy Analyst for Education Excellence Idaho.

that teachers *should* be paid less, or more, depending on how the numbers come out. If it turns out that teachers real comparable occupations are (what are perceived to be) low-end professionals, the argument will be made that they “deserve” higher status than that by raising their compensation. Whether intended or not, comparable pay analysis begs for an appeal to the “just” wage, and envy, as a basis for public policy, and inevitably someone will spin it that way. Usually, this spin is simply a fig leaf for naked self-interest.

Of course, there are no practical answers to such moral issues. These are metaphysical debates far beyond economics, and logic, and appeal only to emotions about what is “fair”. Comparable pay studies reinforce this non-market approach. The result has been to create an environment in which teachers’ pay is determined by politics and collective bargaining power, not economics. Arguing about comparable and “just” wages has practical relevance only where wages are set by politics, and where the power of the government can be captured and coercively brought to bear for the benefit of one party or another. Moral arguments may be effective rhetoric in these public policy debates, but they are a dead end for any rational discussion about teachers markets. It is, indeed, a debate “full of sound and fury, signifying nothing.”

The search for the “just wage” ended in the Middle Ages. As an economist, and taxpayer, my suggestion is that public policy should be to pay teachers a going market wage, which necessarily varies across regions, fields, and individuals, among other things, and comparable pay analysis is simply incapable of casting much light on that.

Comparable Occupations to Public School Teaching

When one sets out to draw conclusions about the general state of the teachers market by looking at comparable occupations, the immediate problem is to choose the comparables.

On one level, asking whether or not present teachers are paid more or less than some “comparable” occupations is a silly, tautological, debate: of course *present* teachers are being paid at or above what they, *individually*, regard as *their* alternative comparable occupations, or they would not be teaching. To conclude otherwise is to deny a fundamental precept of economics: that individuals choose the best alternative before them.

But let us play the game and look at occupational choice as it applies to teaching.

Teaching has non-monetary rewards that are valued by people in many different ways. Thus different people will trade off monetary and non-monetary rewards in different ways too. Some will accept lower salaries for what they regard as favorable working conditions, while others may not value these same working conditions as highly, and therefore not trade a lower salary for them. Different strokes for different folks. On balance the non-monetary rewards for teaching seem to be high for a large number of people.

At the risk of being called a sexist, I make the factual observation that about 75 percent of all teachers are women and the proportion is higher in elementary teaching. From this we can reasonably conclude that teaching is a job that women, on balance, find appealing, and are apparently good at, especially elementary teaching. One of the reasons for this is the close complementarity between teaching and a parent’s children’s school attendance schedules, which greatly aids competent child rearing during a child’s school years. This makes teaching an attractive profession for parents with school-age children.³

For many, additional non-monetary benefits are job security (tenure) and three month summer vacations. Given these unique non-monetary benefits from teaching, which are difficult to find elsewhere, one would expect alternative “comparable” occupations to be rather remote, with a rather low cross elasticity of supply between them and teaching. Then again, maybe “parent-at-home” in the household production function is the closest comparable occupation, a conclusion that is reinforced by widespread and growing home education. To my knowledge no one has ever included “parent-at-home” in any list of “comparables”.

Potential teachers, individually, must decide what kind of mix of monetary and non-monetary benefits they value. This is a highly subjective individual decision that critically depends on the preferences and alternatives faced by each individual. What occupations these individuals regard as close substitutes would seem to be very difficult to determine from the outside without actually analyzing exactly what occupations among which teachers move. And school boards and administrators similarly must decide what kind of a package of compensation and working conditions to offer teachers to get the teachers they want.

Further, all the information about the alternatives faced by those on both sides of this market is found only way down at the school and teacher level, not higher up in the education establishment pyramid. The higher in the education pyramid the terms of teacher employment are set, the more likely they will be at odds with the real alternatives at the bottom. As we shall see, homogeneity across disparate markets, and pay compression, are two of the consequences of district-wide, top down education administration and collective bargaining.

Finally, there is a wide differential in talent and skills among teachers. A kindergarten teacher has a much different set of skills than a secondary math, English, or science teacher, so what is a comparable occupation to the former is undoubtedly quite different than what is comparable to one of the latter. Any comparable pay analysis that chooses a *single* set of comparable occupations for “teachers” in general is bound to be problematic at best.⁴

Thus, the outcome of any comparable pay analysis will depend critically on one’s choice of comparable occupations. Because one can only crudely determine what individual teachers regard their comparable occupational alternatives to be, drawing conclusions about how well teachers are paid relative to others becomes problematic at best and, even if well done, as explained below, such comparisons will be irrelevant for public policy purposes.

The Perfect Comparable Occupation.

Since the focus is on public school teachers pay, I have always been puzzled about why the most obvious comparable occupation is often not chosen for detailed analysis: private school teaching.⁵ Private and public school teachers are almost perfect substitutes, and thus almost perfectly comparable, but their respective pay is determined in two quite different ways: the former are usually not unionized and relatively unfettered by artificial barriers to entry such as certification and licensing requirements, and the latter are heavily unionized and regulated.

For the former, pay is usually specified in year-to-year contracts at the school level, and for the latter it is determined by district wide collective bargaining across a number of disparate schools. For private schools, the retail market for students is very competitive, and public school districts

clearly have monopoly power that can be, and is, captured by teachers unions. Public schools also have a pipeline into the public treasury. One would expect the outcomes to be quite different in each.

And so they are. Without belaboring the obvious and well-known, the evidence is that *average* private school pay is about 60-70% of that in public schools, but that across comparable individuals, secular private schools pay 80-85% of comparable (suburban) public school teachers pay. There is also a good deal of evidence that private school teachers are superior, since they more often possess characteristics known to produce better student performance.⁶ Public school *average* pay is so much higher than in private schools partly because they employ a more expensive mix of teachers, with many more packed at the top of their steeper salary grids. It is not so much that comparable individual public school teachers are paid more, but private schools manage their mix of teachers in a less costly way.

Given this information, it is clear that public school teachers are paid more than those in this most comparable occupation, and this evidence flies in the face of studies that show teachers paid less than other “comparables”.

When one looks for more remote comparables to teaching for comparison, the analyst faces a much more daunting task. What he is trying to do is find what occupations have high supply substitutability with teaching, so that these occupations can be said to be in the same “relevant market”. Defining the relevant market is always a somewhat arbitrary procedure based on perceptions, and possibly some empirical evidence, about the cross elasticity of supply, and it is crucial for drawing any conclusions about such a market.

For years, defining the relevant market has been a lucrative exercise for anti-trust economists, as the outcome of any “rule of reason” antitrust case is largely the result of what relevant market is adopted at the outset. While in antitrust cases one can look at evidence about how individual firms have moved from one market to another, I have seen no comparable evidence about how teachers so move among specific occupations.⁷ In this world, choosing “comparable” occupations becomes a much more arbitrary and problematic exercise that often depends on judgments about comparable training and attitudes. On this score,

Milanowski's (2003) techniques are the most detailed and objective.

The Teachers Market

The alternative to starting one's analysis with comparable occupations and then making inferences about the teachers market is to start with observations about the teachers market and then use that to make inferences about comparable occupations. At the very least, this approach offers a technique for eliminating those proposed "comparable" occupations that are qualitatively inconsistent with what is observed in the teachers' market. To my knowledge, no one has intentionally done this, but it might be an interesting academic exercise, albeit one not likely to have any public policy implications.

Economists have, over the years developed some rules of thumb that are useful, empirically, to describe how markets behave. In a sense, of course, "markets" are somewhat arbitrary collections of individual exchanges. They are abstractions or universals—in the language of the philosopher—that exist only in the mind of the beholding economist. (In human terms, both the positive and normative reality is way down at the level of the individual voluntary exchange.) As indicated above, defining the relevant market for analysis is always a somewhat arbitrary and slippery procedure, and it is crucial for drawing any conclusions about such a market. But, that said, if one believes that market analysis—supply and demand—can be useful, as I do, there does exist some evidence as to whether, *in general*, "going" teacher pay is "too high" or "too low" to be market clearing.

One of these measures is whether or not there is a general "surplus" or "shortage" in the market, with the former indicating that pay is "too high" and the latter indicating that pay is "too low" relative to the market clearing wage. Granted these concepts are a little slippery to define, almost as slippery as defining the relevant market, but I think the evidence is clear that there is a general excess supply of potential teachers of current quality. The colleges of education regularly churn out about twice as many certified teachers as can find employment, and the stock of college of education graduates greatly exceeds the number employed in teaching positions.

the publicity given to teacher shortages, teacher labor markets typically exhibit excess supply".⁸ On top of this is the simple fact that the stock of potential teachers, and hence the surplus, would be much larger if it was not artificially restricted by irrelevant certification, licensing, and professional development regulations.

This conclusion, of course, does not deny the fact that there are "shortages", some temporary and others of more duration, in particular fields and geographic areas. But spot "shortages" are a very normal feature of any dynamic and changing market and should not be mistaken for a general shortage caused by the "going" wage being "too low". Other, more durable, "shortages" are simply artificial because they result from artificial and irrelevant entry regulations into teaching and/or the ubiquitous rigid salary grids that do not recognize any teacher characteristics other than years-in-service and seat-time in graduate courses and in-service workshops. As we shall see, due to the wage compression common in collective bargaining agreements, high teacher aptitude is one of those characteristics not well recognized by current teacher pay or practice, and there is certainly a real shortage there.⁹ More on this later.

The idea that there is a general surplus of public school teachers is supported by the above evidence on private school teacher's pay. In the absence of unions, collective bargaining, and top-down homogeneous wage and working conditions determination, private schools simply pay the "going" market wage under the umbrella held up by the public schools. As we have seen this turns out to be considerably less than what public school teachers are paid.

Another, complementary, observable measure of whether wages are "too high" or "too low" in a market is the nature of employee turnover or attrition in an occupation. If "going" pay is generally "too low", employee turnover rises as employees find *their* other alternatives attractive and leave for greener pastures either in or out of the "market" in question. Average employee time-on-the-job declines over time.

However, just the opposite is observed in the general teachers market, indicating that the pay in teaching, broadly conceived, is on the "too high" side, compared to the relevant comparable alternatives.

In teaching, relative to other occupations,

overall turnover and attrition are very low. Between 90 and 95% of teachers stay in the teaching occupation from one year to the next.¹⁰ Even in the early years of employment, when job market entrants explore job features in all occupations and attrition is generally higher, teacher attrition is at or below that in other occupations.¹¹ It is well-known that on average, the age and experience of the teaching work force have been increasing for decades, packing teachers at the top of their pay grids.¹²

This evidence about teacher surpluses and high retention is well-known, and, together with the evidence about private school teachers' pay, it all points to the conclusion that, generally, present public school teachers are paid above "going" market wages. This, again, flies in the face of those comparable pay studies that conclude existing teachers are "under-paid", something that is an oxymoron.

In this light, what do we make of those studies that find teachers paid less than that in "comparable" occupations? Clearly, it is wrong to conclude that these studies imply that present teachers are paid less than a market wage: that flies in the face of both logic and the empirical evidence we have on the state of the teachers' market—a market that is in a state of perpetual over-supply and very low turnover. Instead of looking at the pay in "comparable" occupations as an indicator of present teachers relative pay, what these studies should have done is accept the market evidence that teachers pay is at or above the "going" wage, and then tried to find a set of occupations that produced pay consistent with this observation. When these studies find that teachers are paid less than their chosen "comparable" occupations, all this shows is that either the analysis used or the chosen "comparable" occupations were wrong.

On this score, Milanowski's (2003) techniques for finding comparable occupations for teaching in general are credible. He cautiously finds that "While it would be inappropriate to regard these comparisons as in any way definitive, the comparisons made . . . do suggest that the average K-12 teacher pay level is not too far from the average of the occupations in the comparison groups."

In fact, even by conservatively annualizing teachers' pay, his results show that teachers in general are paid about a 12.5% premium over the average of even his most expanded comparable occupations. As far as this conclusion relates to pub-

lic school teachers, this premium is biased downward because the teachers pay used for comparison also includes private school teachers, who are paid far less than public school teachers.

Other sensible methods of annualizing teachers pay, and excluding his methods that include such non-comparable occupations as lawyers and anesthesiologists, show this premium to be 18.0 to 30.7%. The latter premiums are consistent with the above evidence that private teachers are paid about 80-85% of comparable public school teachers.

Changing the Subject: Teacher Quality

One common response to such analysis is to concede, albeit reluctantly, and often implicitly, that pay may be too high for present, low-quality, teachers, but then immediately change the subject by claiming that what we need are higher quality teachers, and higher pay is needed to get them from the chosen "comparables". This view is apparently reinforced by the clear evidence that teachers with higher cognitive ability produce better student performance and that teacher quality now is generally low and has been declining for decades.¹³ Few with any knowledge about education would deny the latter facts.

But it is a *non sequitur* to argue that to attract higher quality teachers we should raise the pay of *present* teachers. But those in the present work force are not on the quality margin of the market. Paying more to the existing work force merely adds more rents there, something that is very expensive and counter-productive. Yet paying existing teachers more is exactly what is usually implied, nay, begged, by studies showing teacher pay to be low compared to some other "comparable" occupations. Even appropriately qualified comparable pay studies are spun to argue for higher pay for present teachers even when the authors do not.

Such across-the-board teacher raises have not only been tried, at enormous taxpayer expense, but there is no evidence that present public education choice mechanisms hired higher quality teachers when given the financial ability to do so. In the past, all across-the-board pay raises have done is further reward and entrench the existing low-quality teachers, produce higher teacher surpluses and lower attrition, resulting in an aging, top heavy, and ossified work force.¹⁴

The task for those who argue for higher *average*

pay is to spell out exactly why the existing public choice mechanisms in public education produced a pay structure that produced a low-quality teacher labor force. Specifically, they must show that it was the lower *average* pay in teaching that caused many actual or potential higher aptitude teachers to move to the chosen “comparable” occupations.

To justify higher *average* teacher pay as a way of solving the teaching brain drain requires a showing that the natural cross-elasticities of supply, based on *average* teacher pay, are large enough between these occupations to stop and reverse the alleged brain drain from teaching. However, as a recent important article by Caroline Hoxby and Andrew Leigh¹⁵ shows, it is *not relative average pay* that is responsible for about eighty percent of the decline in teacher quality over the past few decades but *the salary compression resulting from ubiquitous collective bargaining in public education*.

While it may be “increasingly difficult. . . to attract the very best candidates into the teaching profession”,¹⁶ this has been caused *not* by the pull of higher *average* salaries in hypothetical comparable occupations, but by the push of union-mandated pay compression that truncated pay dispersion and disproportionately hit high-aptitude teachers in public education. The alleged high cross elasticity of supply between public school teachers and comparable occupations was an artificial one, created primarily—almost ten to one—by the compressed structure of salaries in the latter, not the higher average pay in the former. Average comparable pay is irrelevant, contrary to what is suggested by many comparable pay analyses.

In other words, the same, or lower, *average pay* in public education, but with higher rewards to high-aptitude teachers, would have prevented the observed teacher brain-drain, and as a consequence produced higher student achievement. This implies that the well-known plunge in SAT and other test scores during the 60s and 70s, when teacher unionization rose rapidly, could have been avoided by continuation of the sensible pre-1960s ban on public employee unionization and collective bargaining that prevented public sector unions from capturing the power of the government to get higher, albeit more compressed, wages.

In this context, any debate about public school

teacher pay relative to other “comparable” occupations is, also, “full of sound and fury, signifying nothing” relevant for public policy. The relevant conclusion is that the structure, not the level, of public school teacher pay is what matters, and that is repairable, at least conceptually, by public policy, and without massive new funding for teacher pay. Finding a public choice mechanism to do so will be the daunting task.

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End Notes.

1. The most recent protagonists are Podgursky (2003) and Vedder (2003), who argue that teachers are well-paid relative to comparable occupations, and Allegretto, et al, (2004) who conclude the opposite. See also Hess (2004), who generally comes down on the side of Podgursky and Vedder.
2. Podgursky (2003) discusses the advantages of the teaching occupation to parenting.
3. Goldhaber and Player (2003) find that elementary, secondary-technical, and secondary-non-technical teachers move to very different broad occupations when they leave teaching for other employment. This suggests that these different kind of teachers have widely different comparable occupations.
4. Ballou and Podgursky (1997), Podgursky (2003) and Vedder (2003) all mention private school pay, although Podgursky and Vedder also use other comparables to support their argument that teachers are well-paid. Those who find teachers paid well below their chosen comparables, seldom mention private school pay.
5. For example, see Ballou and Podgursky (1997) Table 6.1, p. 131, McLaughlin and Broughman (1997) Table 3.12, p. 93, Podgursky (2003) Figure 3, and NCES *Digest* Table 76 (2001, 2002).
6. Goldhaber and Player (2003) analyze where those teachers who leave K-12 teaching go, but their occupational categories are too broad—sales, post-secondary teaching, administrative and managerial, etc. to be of any use for comparing pay. There is a great deal of difference in pay between, for example, a community college English,

Industrial Arts, or Education teacher and a university Professor of Computer Science. It is worth noting that, in principle, looking at the pay in occupations entered by teachers who leave K-12 education necessarily over-estimates the comparable pay of those who do not leave. Research has found that it is the higher aptitude teachers who tend to leave public school teaching. See Hoxby and Leigh (2004).

7. Milanowski (2003) does a careful analysis of teacher comparable occupations by analyzing specific and detailed occupational characteristics. He concludes that, in general, "K-12 teachers tend to cluster consistently with three types of occupations: 1) other teachers [including postsecondary]; 2) counselors, psychologists and social workers; and 3) health care occupations." He specifically finds that "While it would be inappropriate to regard these comparisons as in any way definitive, the comparisons made . . . do suggest that the average K-12 teacher pay level is not too far from the average of the occupations in the comparison groups." Further, he concludes: "These results also suggest that it may not be of as much relevance to compare salaries for K-12 teachers as a group with occupations like engineering, accounting, or information technology, which are not found in the comparison groups."

8. Ballou and Podgursky (1997), p. 56. See also Barro (1992).

9. I cannot resist the recent observation of DiLorenzo (2004), which fits the situation in the public school teachers market perfectly: "One consequence of exclusive representation laws is that the more productive workers within a unionized workplace are usually made worse off by being legally prohibited from being paid higher than the general union scale. Indeed, the effects of unions has been to reduce the dispersion of wages, or to reduce the wages paid to the higher productivity workers while increasing the wages of the less productive ones. In other words, union bargaining causes the best workers to be penalized, and the least productive ones are enriched." There are a number of instances where school boards paid bonuses to individual teachers of high skill or in short supply and then were sued by the teachers' union

for breaking the collective bargaining agreement. It is ironic for unions to object to paying some of their members more, but that is the result of union internal politics that favors the mediocre majority.

10. Barro (1992) has a detailed discussion of teacher attrition and turnover.

11. Henke, et al. (2001)

12. Over the past few decades, teacher median age and longevity have increased between one-third and one-half: from age 33 in 1976 to 44 in 1996, and from 8 years experience to about 15 over the same period. (NCES. 2002, Table 70)

13. Many studies show that teacher general cognitive ability is the *only* teacher characteristic that consistently improves student performance. See Walsh (2001) for a summary of the evidence. On the declining quality of teachers, see Corcoran, et al (2002. 2004). Hoxby and Leigh (2004) found "[From 1963 to 2000] the share of highest aptitude female college graduates who became teachers fell from 20 to 4 percent. . . . [T]he share of all teachers who came from the lowest aptitude group rose from 16 to 36 percent. . . ."

14. Ballou and Podgursky (1997), Chapter Three.

15. Hoxby and Leigh (2004)

16. Allegretto, et al. (2004)

References

- Allegretto, Sylvia, Sean Corcoran, and Lawrence Mishel. 2004. "How Does Teacher Pay Compare?: Methodological Challenges and Answers." Washington, D.C.: Economic Policy Institute.
- Ballou, Dale, and Michael Podgursky. 1997. *Teacher Pay and Teacher Quality*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Barro, Stephen M. 1992. "Models for Projecting Teacher Supply, Demand, and Quality: An Assessment of the State of the Art." In *Teacher Supply, Demand, and Quality*, Erling E. Boe and Dorothy M. Gifford, eds. Washington, DC: National Academy Press.
- Corcoran, Sean; Evans, William and Robert Schwab. 2002. "Changing Labor Market Opportunities for Women and the Quality of Teachers 1957-1992." National Bureau of Economic Research Working Paper No. 9180. See also their related paper, "Changing Labor-Market Opportunities for Women and the Quality of Teachers, 1957-2000" *American Economic Review*, May 2004.
- Cubberley, Ellwood P. 1922. *Public School Administration*. Cambridge, Mass: The Riverside Press, Riverside Textbooks in Education, Houghton Mifflin Company, Revised Edition.
- DiLorenzo, Thomas J. 2004. "Do Capitalists have Superior Bargaining Power?" September 6, 2004 <<http://www.mises.org/fullstory.aspx?control=1602>>
- Goldhaber, D. and Player, D. 2003. "What Different Benchmarks Suggest About How Financially Attractive it is to Teach in Public Schools." Unpublished manuscript commissioned for Consortium for Policy Research in Education at the University of Wisconsin-Madison.
- Henke, Robin R., Lisa Zahn, and C. Dennis Carroll. 2001. *Attrition of New Teachers Among Recent College Graduates*. National Center for Education Statistics, NCES 2001-189.
- Hess, Frederick M. 2004. "Teacher Quality, Teacher Pay" *Policy Review*, No. 124 (April-May). <http://www.policyreview.org/apr04/hess_print.html>
- Hoxby, Caroline and Andrew Leigh. 2004. "Pulled Away or Pushed Out? Explaining the Decline of Teacher Aptitude in the United States" *American Economic Review*, May 2004. <http://post.economics.harvard.edu/faculty/hoxby/papers/hoxbyleigh_pulledaway.pdf>
- McLaughlin, Donald H. and Stephen Broughman. 1997. *Private Schools in the United States: A Statistical Profile*. National Center for Education Statistics: Working Paper NCES 97-459.
- Milanowski, Anthony. 2003. "Using Occupational Characteristics Information from O*NET to Identify Occupations for Compensation Comparisons with K-12 Teachers" Consortium for Policy Research in Education at University of Wisconsin-Madison, CPRE-UW Working Paper Series TC-03-0
- National Center for Education Statistics (NCES), *Digest of Education Statistics*, 2001, 2002.
- Podgursky, Michael J. 2003. "Fringe Benefits" *Education Next*. Vol. 3, No. 3 (Summer) <<http://www.educationnext.org/20033/71.html>>
- Vedder, Richard. 2003. "Comparable Worth" *Education Next*, Vol. 3, No. 3 (Summer) <<http://www.educationnext.org/20033/14.html>>
- Walsh, Kate. 2001. *Teacher Certification Reconsidered: Stumbling for Quality*. Baltimore, MD: The Abell Foundation. <www.abell.org>