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HOW MUCH ARE YOU PAYING TO TEACH?

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E.C.R.S.B. 81-7

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Those of us who have the good fortune to be married to a member of the teaching profession share a common bond; the depressing, from the educator's viewpoint, state of teacher salaries is a frequent topic of conversation in our homes. These discussions usually begin with our mate bemoaning the fact that his or her income lags far behind this or that other occupation. We then respond in order to soothe the ego, and perhaps if the discussion occurs at the dinner table, to move the conversation to a more palatable subject that the hours are short, the vacations long, and the nonpecuniary rewards of the profession are without equal. Often as not, if the students have been manageable that day, this answer will suffice.

As an economist, married to an educator employed by the Virginia public school system, the proper response to this familiar dissatisfaction with salaries is a more vexing problem. Initially the above arguments appear to have merit. The relatively brief time spent on the job should be of some value to those who hold teaching positions and the wage paid, although seemingly low, appropriately accounts for the value that one places on increased leisure time. But to this argument the spouse replies, "What leisure time?", and enumerates the additional duties such as conferences, grading, outside organizations, and lesson plans which stretch the work day beyond school hours. The second rejoinder is then applied and it too appears economically sound. Despite the difficulties, the satisfaction received from educating the youth of the community is of immeasurable value and the salary paid reflects the fact that educators are not in their chosen profession for monetary rewards alone, but also because of their

concern for the pupil. "Fine" the spouse responds, but "How much do you pay to enjoy your work?" she asks and continues, "Just how much is it costing me to enjoy the rewards of teaching and is the price too high?" To these questions I had no reply and therein lies the difficulty. An economist should have knowledge of these matters. Enlisting the aid of a colleague we decided to investigate.

A cursory examination of the literature leaves one impressed with the ubiquity of the aforementioned arguments. The first, offered as a major defense of the wage currently paid, and familiar to every individual in the profession, is a result of the popular perception of teachers enjoying a one hundred and eighty day, six hour a day work year. The profession, in rebuttal, busies itself with compiling facts and figures, via teacher interviews and questionnaires, that demonstrate otherwise. [ The objectivity of this method is, to an impartial observer, suspect. One does not anticipate those individuals seeking a higher wage, on the basis of time spent on the job, to minimize their estimate of actual time at work. The upward bias of such estimates need not be of concern, however, as the enumeration of hours worked beyond the regular school day may be an unnecessary response to those who would hold salaries at their present level. ]

Specifically, we may find Virginia's educators need not work one moment beyond the terms of their contract to justify a higher wage.

The second popular argument, this offered by those educators desirous of a wage increase, involves a comparison of teacher salaries, appropriately adjusted for inflation, with those in other professions requiring a Bachelor's Degree. The results of such comparisons are

clear and pronounced; engineering, accounting, marketing, and a host of other occupations in the private and the public sector are more lucrative than a career in education. Such comparisons are invalid. An educator is not a qualified chemist, accountant or engineer. The training and skills of each of these professions are not identical, and no matter how great the frustration to the educator, society has placed a higher monetary value on the expertise of many other professionals. A Ph.D. economist earns less than a Ph.D. physicist, yet an appeal for equal pay can only be made on the grounds of egalitarianism. All those who hold the Doctorate are not rewarded equally nor are all those who hold the Bachelor's Degree. An argument as to which professions should be viewed as equal in value and, therefore, deserving of equal incomes is circular, but such an argument need not concern us. Even if those who hold a Bachelor of Arts in education can qualify for no other occupation which requires an undergraduate degree, an assumption which the authors find improbable at best, increased salaries may be required to attract individuals into the profession and increased salaries may be required to prevent individuals from leaving the profession.

We might emphasize, before continuing, the impact of our statements. The two central arguments for increased teacher salaries have been rejected as unnecessary. We will evaluate the merits of salary proposals without resort to the standard issues. To those who question the objectivity of estimates of hours worked, the reply has been, "We will not use them." To those who doubt the validity of

comparisons between occupations which require a similar degree, the reply has been, "We will not make them."

What is there that remains? The obvious and inescapable observation that teachers, irrespective of their hours at work or the other opportunities available to them, must demonstrate that they possess certain skills which are not required in many other professions. These skills must be acquired before one can enter the profession and a certification of their possession is mandatory in Virginia. This certification can only be granted to those who have studied for four years in an accredited institution of higher learning and who have received an appropriate degree. It constitutes a barrier to entry into the profession and is one which does not exist for many occupations. It also represents a relevant cost to those who would teach and unless compensated for this cost, in the form of a wage above that which could be earned without such extensive training, any individual who chooses an occupation on the basis of income earned would be foolish to enter the teaching profession. Specifically, an expected lifetime income in education must exceed an expected lifetime income in those professions which do not require a degree by the cost of a college education. If it did not, the spouse's lament that she is paying for the opportunity to teach is an accurate one.

This calculation, however, is not easily made. One might sum the lifetime of annual wages in education and then subtract the cost of education. If this difference is less than the lifetime

earnings in a profession which does not require a degree, educators are paying to teach. If the difference exceeds a lifetime of income in those professions which do not require a degree, teachers are receiving a monetary reward for entering their profession. This calculation and the coincident conclusions are, in fact, erroneous.

The receipt of future income must compensate the educator not only for the cost of a college education, but also for the four year delay in receiving income in their chosen profession. A teacher who anticipates a twenty-five year career should receive an income stream which is equal to that received over a twenty-nine year career in a nondegree profession. This is an important reason why college graduates usually receive a higher starting wage than those individuals without degrees.

A second concern when calculating future income is the rate of growth in one's annual wage. A teacher may enjoy a starting salary above that of an individual without a degree only to see this difference eroded away as wage increases in other professions surpass those in education. The four year delay for college coupled with relatively small annual increases may prevent the educator's income from equalling that in a nondegree profession.

We can establish how much teachers must be paid to insure their income is equal to those in nondegree professions by converting the respective income streams to present or today's value. The technique of discounting future income to present value allows us to compare professions using today's dollars. In this manner we can account for the four year loss due to college and any disparity in wage increases.

Table I compares the average annual increase in the wage paid to personnel who have not received a degree with the average annual increase received by Virginia's educators. The comparisons, when made for the past decade, are unanimously unfavorable to education. All of the nondegree professions fared better than education in terms of percentage increases in salary. The results for the past five years, a period of teacher activism, are mixed. Many nondegree personnel continued to enjoy relatively larger percentage increases while others fell behind the education profession.

(Table I here)

Table II compares the total income of twenty-five years in teaching with twenty-five years in a nondegree profession. The third column indicates how much more or less teachers can expect to receive, in today's dollars, than those individuals who enter a profession without first obtaining a degree. A positive difference implies teachers are paying to teach and the amount of the difference is the amount they are paying. To the spouse's question, "How much am I paying to teach?", the answer is, "If you possess the skills required of a secretary, \$93,716." To the question, "Is this too much?", the reply is, "Only if you do not enjoy teaching \$93,000 more than you would enjoy being a secretary."

(Table II here)

All of this demonstrates that some professions, despite the fact that they do not require a college degree, pay more than education.



TABLE I

Salaries of Virginia's educators have not grown at a pace equal to that in many nondegree professions. Below are the average annual percentage increases in professions which do not require a degree as compared to the annual increases in education.

## Average Annual Increase in Salaries

	<u>Over the Past Ten Years</u>	<u>Over the Past Five Years</u>
Teachers	5.1%	6.8%
Payroll Clerk	8.4%	10.7%
General Stenographer	8.4%	9.9%
Secretary	8.0%	6.4%
Key Punch Operator	6.5%	4.1%
Typist	8.4%	6.9%
Switchboard Operator	7.5%	5.3%
Accounting Clerk	6.2%	3.4%
Order Clerk	7.1%	9.6%
Order Filler	6.4%	6.8%
Truck Driver	8.4%	9.5%
Guard	8.6%	6.5%
Warehouseman	8.9%	5.2%

TABLE II

Teachers in Virginia earn less during their careers than many individuals in professions which do not require a degree. Below is a comparison, in today's dollars, of the expected income in education and nondegree professions over the next twenty-five years.

<u>Profession and Income</u>	<u>Income in Education</u>	<u>Teachers Pay This Amount to Teach</u>
Payroll Clerk            \$295,923	\$188,493	\$107,430
Secretary                282,209	188,493	93,716
Key Punch Operator     193,359	188,493	4,866
Typist                    274,060	188,493	85,567
File Clerk                146,815	188,493	-41,678
Switchboard Operator   203,241	188,493	14,748
Accounting Clerk        214,203	188,493	25,710
Order Clerk              203,881	188,493	15,388
Order Filler             193,127	188,493	4,634
Truck Driver             287,342	188,493	98,849
Guard                    299,212	188,493	110,719
Warehouseman            293,965	188,493	105,472
General Stenographer   280,834	188,493	92,341

There is, however, an important omission in the discussion. Teachers do not work for twelve months of the year and this may be one reason they accept a lower wage. Surveys regarding hours worked do not dispute the fact that during the summer months teachers are free to pursue other interests. To the spouse's question, "Is it costing too much to teach?", we might have replied, "not if a lifetime of summer vacations is worth \$93,716". But what of our earlier statement that teachers who work to the contract may still justify an increase in salary.

We will support or reject this statement by making the appropriate comparison. How does the income earned from a career in education compare with the income earned in nondegree professions if we only require the personnel in nondegree professions to work for ten months of the year? Table III is our answer to this question. The positive amounts in column three indicate the cost to enter the teaching profession after deducting the benefit of the summer vacation. A negative number is the monetary reward for choosing education over a profession which requires no degree. For example, an individual who chooses education as opposed to a ten month work year as a key punch operator is awarded over a twenty-five year career in the amount of \$28,016. Should the spouse now inquire, "Even if I could have the summer months off, how much does it cost me to remain in my profession?", the reply is, "\$45,712 if you have the skills to become a secretary".

(Table III here)

TABLE III

Many professions which do not require a degree, when reduced to a ten month work year, continue to be more lucrative than a career in teaching. Below is a comparison between a ten month income in non-degree professions and education over a period of twenty-five years.

<u>Profession and Income</u>	<u>Income in Education</u>	<u>Teachers Pay This Amount to Teach</u>
Payroll Clerk           \$220,178	\$188,493	\$ 31,685
General Stenographer 208,945	188,493	20,452
Secretary               234,214	188,493	45,721
Key Punch Operator   160,477	188,493	-28,016
Typist                   203,913	188,493	15,420
File Clerk               121,849	188,493	-66,644
Switchboard Operator 168,672	188,493	-19,821
Accounting Clerk       177,784	188,493	-10,709
Order Clerk             169,219	188,493	-19,724
Order Filler            160,281	188,493	-28,212
Truck Driver            238,461	188,493	49,968
Guard                   248,331	188,493	59,838
Warehouseman          235,677	188,493	47,184

The spouse, who has a considerable number of years in the profession, realizes that the income lost during these years cannot be recaptured, and although despondent at this point now inquires, "What if I were starting all over today? What should my starting salary be, if I wanted to teach for the next twenty-five years and I wished to insure I would earn the same income over that period that an individual without a degree who works ten months a year could enjoy?" To answer we produce Table IV and reply, "In order to insure an income stream equal to that of a secretary, you would have to begin at \$15,435 provided the secretary only worked ten months a year."

(Table IV here)

These statistics are evidence of a state of affairs which comes as no surprise to the educator. Based solely upon pecuniary income, teaching is not an attractive career. What is surprising to the authors, is the fact that after accounting for the summer vacation, educators do not receive an income equal to those individuals who do not possess a degree.

The economist's task is to present these facts as accurately and objectively as possible. The method of the profession usually prohibits the researcher from substituting his or her own value system for that of the reader. Accordingly, the statistics presented above may or may not be considered as a mandate to increase teacher salaries. Our own recommendation must await a later article. For the present, we might advise the spouse to evaluate her position relative to those individuals without degrees. If she has good typing skills and the

TABLE IV

The starting salary in education and the percentage increases which have been obtained over the past five years would not allow teachers to earn the same income enjoyed in ten months of work in a nondegree profession. Below are the starting salaries required in education which would insure teachers earn the same income as individuals in nondegree professions over a twenty five year career. Most of the required salaries exceed the average of \$10,524 paid to teachers with no experience and a collegiate professional certificate.

<u>Profession</u>	<u>Starting Salary Required in Education to Insure an Income Equal to Ten Months Work a Year</u>
Payroll Clerk	\$14,643
General Stenographer	13,926
Secretary	15,435
Key Punch Operator	10,521
Typist	13,604
File Clerk	8,120
Switchboard Operator	11,192
Accounting Clerk	11,542
Order Clerk	11,158
Order Filler	10,495
Truck Driver	15,810
Guard	16,490
Warehouseman	17,964

teaching profession is not \$93,000 more attractive than that of a secretary, it may be time to consider a career change.