An Analysis of Gender Based Wage Differential among Teachers in the United States

Kendal Glen Cehanowicz[i]

Abstract:

Do teachers with similar experience and age but different genders earn the same income? This study investigates the income of teachers relative to their age, education, experience, race and gender. Studies have shown that inequality in the gender wage gap is a trend which closed for almost two decades, but has recently widened again. This study identifies a specific line of work where injustice can be seen and aims to bring this knowledge to light. The Current Population Survey (CPS) data set from 2005-2009 will be used for this study. This study finds empirical evidence that gender differences do in fact have a significant impact on income in the teaching profession, reflecting inequalities in the workplace. This study also finds that the gender based wage gap grows for the postsecondary teaching level, and narrows for preschool and kindergarten teachers.

Keywords: Gender Wage Gap, Income Inequality, CPS
JEL Classification: J16, J31, J71

Bryant University, 1150 Douglas Pike, Smithfield, RI 02917. Phone: (401) 829-2442. Email: kcehano1@bryant.edu

[ii] The author thanks the CPS for providing data and gratefully acknowledges the help/guidance from Ramesh Mohan & Jongsung Kim.

1.0 INTRODUCTION

Consider the following situation. Two people, one male, and one female are teachers in a local high school. Each of them has achieved the educational requirements to teach, and received degrees of equal standing. They are also of equal ability and skill level. Upon being hired at the same time, they were given equal yearly salaries for their work, and nothing was out of the ordinary. Twenty years later the picture is not so bright. As they have both performed well above expectations and each earned subsequent increases in pay and responsibility, their wages should reflect their applicable education, experience, and workplace abilities. What one finds however, is that over the years, their pay has separated. The two individuals, who offer the same characteristics to the school, have been unequally compensated. Both individuals have been promoted, but the male makes much more than the female and she finds it hard to seek out further opportunity in the school. This "Glass Ceiling" effect, where the male's earnings will continue to grow but the females earnings are halted, is not an isolated incident; it is a huge problem which is occurring in various occupations all across the United States. Teachers at all levels, from pre-school and kindergarden to the university level are effected by these inequalities and will continue to be if more evidence is not brought to light.

The globalized world today is thought to be a much improved version of the past, with higher standards of living, more opportunity, and in the United States, a better chance to seek profits. Unfortunately, some fundamental rights have been left behind in this transition to the modern world, and as the United States keeps moving forward, there are still some lingering problems. One of these lingering inequalities happens to be income rates among individuals with the same occupations, however different genders. It is simple to claim that typically men make more than women for similar work, however in order to solve the problem, the question needs to be more specific. Thus this study will focus on the teaching profession.

Studies have concluded mixed results over this topic, referencing many different theories on the true determinate of income between the genders. This study aims to focus on the income differential between male and female teachers and enhance the understanding of how each gender is compensated today.

From a social perspective, this analysis is very important because many inequalities in the workplace that society as a whole believes are gone, may still remain, and thus in order to fix such inequalities, they need to be reported on. Many studies already focus on overall wage differential, however this study applies those theories to a specific occupation in the United States, which makes it more applicable and increases comprehension of the study. Measuring the wage differential of teachers is very relevant in today's society, as most agree that those who do equal work deserve equal pay.

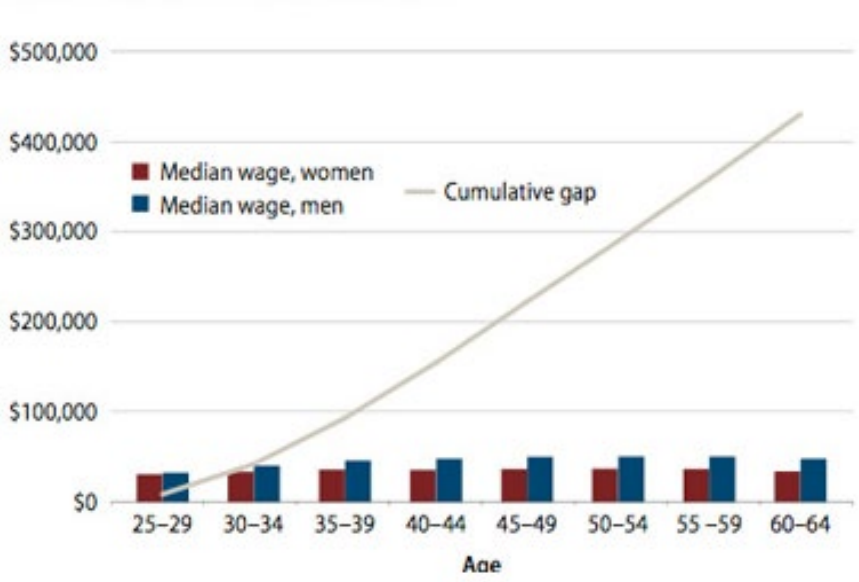
This paper was guided by the research efforts of a combination of previous studies, and subsequently adapted to be unique to its specification. It differs from previous research in that its data encompasses the United States as a whole, based on the 2005-2009 Current Population Survey (CPS). Secondly, it is still a macroeconomic study; however it focuses on the teaching profession. By limiting the CPS to only the six category codes of teachers, it allows this study to be specific enough that a conclusion will bare tangible weight and not be overly broad. Thirdly, this study takes into account the experience of the teachers observed in the CPS. This variable, experience, was created to more accurately reflect the difference in earnings as more experience is obtained by the subject.

The remainder of this paper is organized as follows: Section 2 will provide an overview of the trends relating to this topic. Section 3 gives a brief literature review on past studies relating to this topic. Section 4 outlines the data and empirical model that was used in this study. Section 5 describes and discusses the results obtained in this study. Section 6 provides a conclusion to this paper and finally, section 7 provides a bibliography.

2.0 TRENDS

The many studies that have been done on the wage gap topic for the United States have brought the problems to light, but now the goal is to solve the problem one step at a time. More specific studies such as Miller (2008) have helped to identify specific sectors and industries in which the wage gap persists. It is most important now for the smaller instances to be addressed piece by piece so the bigger problem may be solved as soon as possible.

Figure 1: The Career Gender Pay Gap



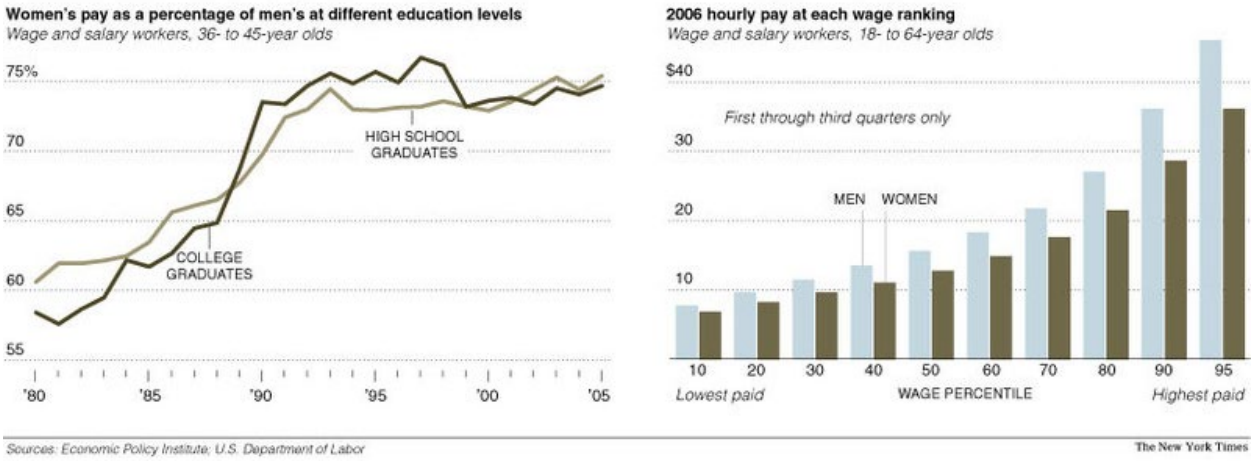
Source: Center for American Progress

As can be seen in Figure 1, one of the largest problems is the glass ceiling effect, which can be found in workplaces all across the country. Wages upon entry into a job or career may be more closely mirrored for men and women, however as the employees age, the gap between men and women grows. Men in the workplace gain experience, and as their time as employees grows, so does their pay. Women will experience this until a certain threshold is met, where their experience may grow, but their wages do not. This may be attributable, as Turnbull and Williams (1974) recommend, to the fact that women take leave to have children, and focus large amounts of time on housework. Because of this, Hansberry (2004) concludes that a growing trend is for women to be present in clerical and service oriented jobs, which may not be as demanding, and adequate replacements are abundant.

For the two decades of the 1980's and 1990's, the gender wage gap between men and women shrunk, but more recently, this trend has been reversed. Female pay as a percentage of men's has remained relatively stagnant since the late 1990's, up until which is had rapidly been catching up. As it stands, both women who are college graduates and women who are high school graduates are making about 75% of what a male would make. Meaning, women make

$.75 for every $1.00 a male makes. This is without a doubt a disturbing trend which needs to be addressed.

Figure 2: Few Cracks in the Glass Ceiling

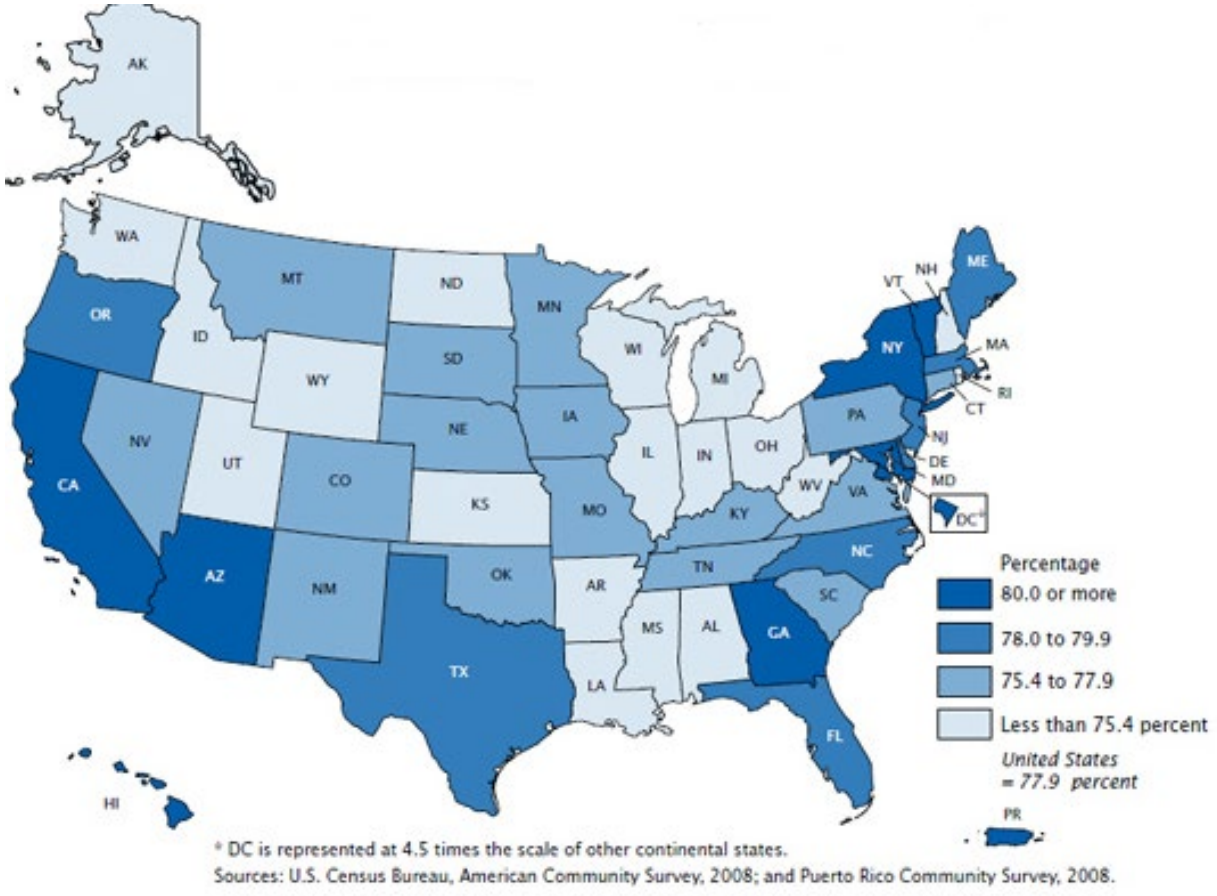


Source: The New York Times

Another interesting characteristic of gender pay right now is that, as Turnbull and Williams (1974) and Davies and Heather (1998) contend, the more highly paid the position, the larger the wage gap. As can be seen in Figure 2, wage rates in the lowest paying jobs are most equal, yet as the job becomes more highly paid, the gap widens. The subsequent result is a more equal playing field at first, but unequal reward in the future.

These studies are not just reflective of specific examples; the inequality in pay for the same work is a national problem, one which should be addressed piece by piece so that the entire problem can be more manageable. Looking at the Figure 3 chart below, it is noticeable that in the majority of U.S. states, women earn significantly less than men. More specifically, in 33 out of the 50 states, women earn 77.9% or less of what men earn. It is clear that this issue is national, as very few sates offer wages for women of above 80% of men's earnings.

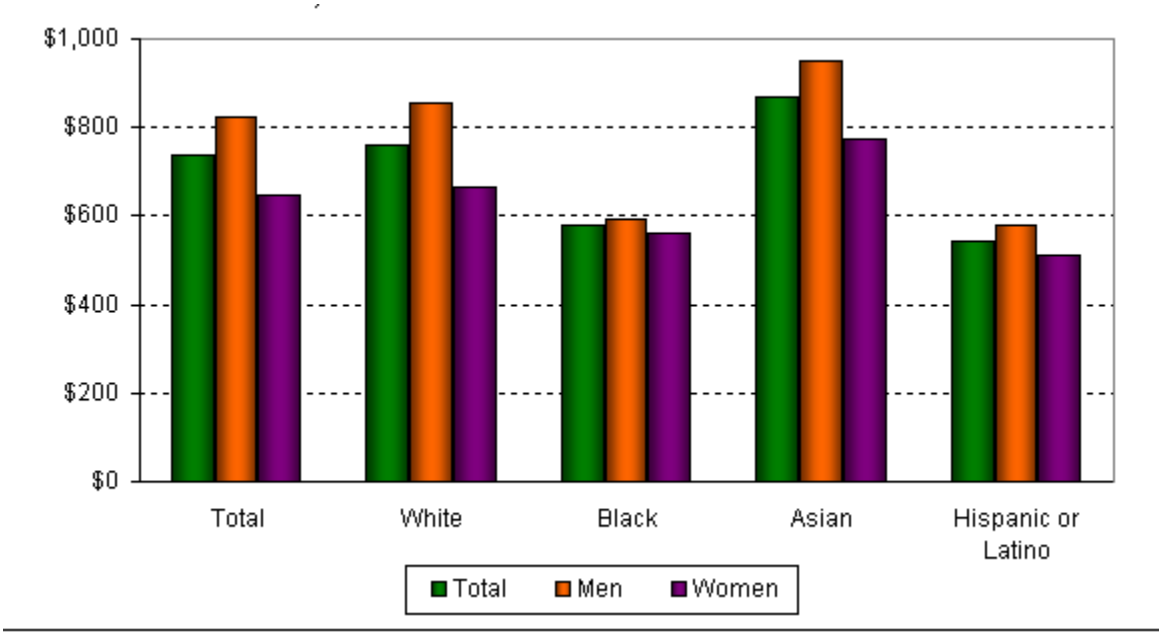
Figure 3: Women's Earnings as a Percentage of Men's Earnings in the Past 12 Months by State & Puerto Rico: 2008



Source: American Community Survey Reports

In the modern age of technology, global communications, and opportunity, everything should be more equal, but in reality, long lingering injustices still persist. According to Figure 4 and the Bureau of Labor Statistics (BLS), in a given work week, there is still a vast difference between the earnings of men and women, and between White's, Blacks, Asians, and Hispanic/Latinos. Figure 4 below shows that the median worker, who is Hispanic/Latino or Black, will earn over $200 less each week than their White or Asian counterpart. What is even more shocking is that for women in each of these categories, they will earn significantly less in wages and salary then men. For example, A Hispanic/Latino woman will earn about $500 dollars a week, while a White or Asian woman will earn from $650 - $780 per week. If this injustice is not enough, the typical White or Asian male will earn from $850 - $950 per week, which is well in excess of female earnings.

Figure 4: Median Usual Weekly Earnings of Full-Time Wage & Salary Workers, 2009



Source: Bureau of Labor Statistics

3.0 LITERATURE REVIEW

According to Turbull and Williams (1974), in secondary schools men and women with given qualifications share quite identical salaries, however they claim that men have a distinct earnings advantage in primary schools. Both these authors also set the grounds for further research on the income inequality of pregnant women, stating that they are at a severe disadvantage with respect to income. Turnbull and Williams (1974) claim that these women earn less due to their breaks in service from having their children, and their limited mobility. They claim this limited mobility may be caused by their connection to their husband, and the location of his job.

Tanner and Cocherill (1996) claim that men and women's job positions and subsequent earnings are reflective of the choices they have made in the past, and the social networks they are exposed to. They do mention however that the choices of women may be hindered and contingent upon the domestic obligations they have and child care necessities in the future. Tanner and Cocherill (1996) believe that a typical occupation will be attractive to an individual if they have distinctive school and family experiences related to the needed tasks. This suggests that women are attracted to different occupations then men, simply due to the networks they interact in, and the experiences they share. They would argue that the outcome of someone becoming an engineer

for instance is not simply a matter of personal preference, but a reflection of the social networks they have found themselves in.

A study of gender and income inequality in the UK by Davies and Heather (1998) argues that adult women were more likely to be poor than adult men, and that families headed by a female figure were much more likely to be in poverty and depend on state benefits. This may be due to the increased polarization of wages between men and women, meaning that the gap between male earnings and female earnings is widening. Like Turnbull and Williams (1974), Davies and Heather (1998) find a growing amount of evidence depicting a difference in distribution of income for women who have had children. Specifically, they recognize that the older a female gets before taking leave for pregnancy, the greater the divide.

There has also been more recent evidence of greater wage inequality being due to race, with gender serving as a catalyst to this inequality. In regards to race, McCall (2001) makes the allegation that the sources of income inequality vary across race, ethnicity, and gender. Specifically, McCall (2001) believes that industrial structure and demographic composition are the key determinants in cities of wage inequality.

By 2004, researchers have increasingly studied the issue of gender inequality in many industries and trades and have brought their findings to light. One such researcher, Cohen (2004) maintains that the single most important action that can be taken to close the inequality gap between genders is the movement of women's labour from the household to the labour market. He suggests that women take a less passive role in life, and recommends a shift from the domestic household to the labour force. Similar to previous studies, Cohen (2004) refers to the female labour cycle as a revolving door. What this means is that wage inequality may in fact be highly impacted by the necessity of females to move back to house work when they have children, and thus they can spend less time working. This cycle continues pulling women out of the workforce sometimes for good, and sometimes for shorter periods, which places women at a disadvantage in the long run.

In a more international perspective, the study of Hansberry (2004) on wage differentials in Russia breaks ground in depicting the selective industries in which men and women more

predominately work. She concludes that women tend to be clustered in clerical, professional, and service oriented jobs, while men are positioned in blue collar jobs. Hansberry (2004) compares western capitalist societies to Russian Society. She says gender earning differentials in western capitalist societies are attributed to women having less market experience and education. Female's lack in these categories due to longer hours spent on housework and child care, which limits the effort that can be applied at work. For Russia however, she suggests the "Crowding Hypothesis." This theory aims to prove that women earn lower wages on average because they are excluded from job's considered "men's work" and thus all women are funnelled to "women's work." With this ample supply of labour, the mean wages tend to decrease.

Jarrell and Stanley (2004) carried out a comprehensive study on the idea that the gender wage gap and the amount of wage discrimination is actually decreasing. Their study contends that typically the gap is measured by examining differences in endowments (skills), relative to coefficients (returns to skills), and observing the difference between genders, races, ethnicities, etc. They find in their study that there is a strong trend of gender based wage discrimination declining over time, which may be attributable to an increase in empirical evidence and the maturing of gender research in economics. A supporting study taken on by Cohen and Huffman (2007), uses Census data from 2000 to test this theory of decreasing gender based wage discrimination. They suggest that greater representation of women in management positions does in fact narrow the gender wage gap. Cohen and Huffman (2007) also point out that the existence of high-status female managers has a much larger effect on the differential. These two researches recommend promoting women into management positions to benefit all; however it is contingent upon their promotion to high-status positions.

In a unique study by Bacolod and Blum (2008), the shift from value on physical skills exhibited by workers to a higher valuation of cognitive and people skills are examined. The two researchers find that the wage returns on cognitive and people skills doubled from 1968-1990, suggesting that workers who exhibit better personal skills are valued over workers who exhibit strong motor skills and stamina. Bacolod and Blum (2008) remark that changes in the value of these skills may help to narrow the wage gap, since females tend to be involved in occupations based on cognitive and personal skills. Thus they contend that since the 1970's and 1980's, motor

skills (typically male) have become less valuable than people skills (typically female), and this has influenced the narrowing of the gender gap.

Studying the gender pay gap in the United States, Miller (2008) uses 2000 US Census data to illustrate how the gender pay gap differs by sector of employment. He argues that the private sector does not exhibit the sticky floor effect or the glass ceiling effect, yet the public sector exhibits a distinct sticky floor effect. A sticky floor effect is defined as "a situation in which the gender wage gap widens at the bottom of the wage distribution, while a glass ceiling is defined as "the phenomenon whereby women do quite well in the labor market up to a point after which there is an effective limit on their prospects. The existence of a glass ceiling would imply that women's wages fall behind men's more at the top of the wage distribution than at the middle or bottom"(Miller 2008). He finds that the government sector has a distinct sticky floor effect, where women are disadvantaged. Overall, Miller (2008) does make some interesting conclusions. He concludes that the gender pay gap is larger in the private sector, possibly due to public sector pay comparability practices and public sector collective bargaining.

In a comparative study, Wahlberg (2008) investigates the gender wage gap in the private and public sectors of Sweden. In contrast to the findings by Miller (2008) on the United States, the Swedish study shows that women experience a glass ceiling effect in both the private sector and the public sector in the Swedish labor market. This means that females in Sweden are disadvantaged across the entire wage distribution. A startling finding however is the fact that the gender wage differentials across the whole private sector distribution in Sweden are lower than in the United States and 11 European Countries.

A mass of empirical evidence has been provided on the topic of gender based wage differential and inequality, however many studies continue to need further investigation. In summation, these previous studies provide us with a simple situation, the gender based wage gap is a prevalent problem, and needs to be addressed. These studies help to set a solution to the problem in motion, and look towards future researchers to carry on their efforts. These studies, which reflect the situation both domestically and abroad, have influenced and led to the research carried out in the remainder of this paper.

4.0 DATA AND EMPIRICAL METHODOLOGY

4.1 Definition of Variables

This study, applying the ideals and model of Hansberry (2004) to the United States from 2005-2009, uses the following model:

$$\text{Log(Incwage)} = \beta 0 + \beta 1\text{Sex} + \beta 2\text{Age2} + \beta 3\text{Educ992} + \beta 4\text{Exp} + \beta 5\text{Race} + \varepsilon$$

With the dependent variable:

1) **Log (Incwage)** = Salary income on a percentage bases. The CPS variable incwage represents the salary of the subject for the years 2005-2009. The variable has been logged in order to examine the percentage effect on income with a subsequent change in gender. The data set has been limited to reflect only those subjects in the teaching profession, specifically CPS Category Codes 220, 230, 231, 232, 233 and 234. These categories represent postsecondary teachers, preschool and kindergarten teachers, elementary and middle school teachers, secondary school teachers, special education teachers, and other teachers and instructors respectively.

And Independent Variables:

1) **Sex** – Dummy variable indicating male or female. The CPS records male as a value of 1, and female as a value of 2. According to Halvorsen and Palmquist (1980) and Kennedy (1981), the percentage impact on wages/earnings given the presence of the characteristic/factor represented by the dummy variables (In this case, sex), must be measured using the formula 100*(exp(beta)-1) = 100*g. Thus to interpret this variable, we will apply the specified formula to the beta of sex and find the wage differential for gender and its effect on log(incwage).
2) **Age2** – Age squared to reflect reality. As a typical person ages, there will be a point in time when their earnings begin to decrease. Age2 reflects this occurrence. By creating the variable Age2, this will allow the regression to account for the fact that after a certain point, Incwage will start to go down. This means that Incwage increases with respect to age at a decreasing rate come a certain time in a person's life.
3) **Educ99_2** – Value pertaining to Education level of schooling, giving higher weights for higher education. In the CPS, the Educ99 variable represents the various levels of

educational achievement which have been attained by the subjects in terms of years. It includes the categories: High School Graduate or GED, Some College, No Degree, Associate Degree - Academic Program, Associate Degree - Occupational Program, Bachelor's Degree, Master's Degree, Professional Degree, and Doctorate Degree. The variable Educ99_2 will be created to add respective weights to these designations, with No Degree being the lowest, and Doctorate Degree being the highest.

4) **Exp** – Variable reflecting the experience of the individual subject based on their age, education, and years of work experience. This variable will be measured by using the following formula: Age – Educ99 – 6. This will effectively take the subjects age, subtract from it the amount of years spent in school, and then subtract 6 for the initial six years of life before schooling starts.
5) **Race** – Dummy variable reflecting white or non white.

The expected signs for each variable are provided in Table 1 below. The rationales behind these expectations are simple. The variable sex is expected to yield a negative sign because of the known wage gap between male and female workers. Age2 is expected to be negative to represent how earnings slow with age after a certain point. Educ992 should yield a positive sign, as more education should increase ones income. Experience should yield a positive sign as well, as more experience should be reflected in higher earnings. Finally race is expected to be negative, as much previous research has shown how different races suffer from earnings gaps just as different genders do.

Table 1: Independent Variables & Expected Signs

Variable	Description	Expected Sign
sex	Male or Female	Negative
age2	Reflection of Aging Earnings	Negative
educ992	Weighted Degree of Education	Positive
exp	Experience Working	Positive

race	White or Non-White	Negative

4.2 Data Used In Study

This study uses the CPS annual data from the years 2005-2009. Data were obtained from the Bureau of Labor Statistics (BLS). The data set was then filtered to reflect only the CPS category codes for teachers, specifically 220, 230, 231, 232, 233, and 234 in order to meet the specific nature of this study. Summary statistics for the data are provided in Table 2, and variable descriptions are provided in Table 3.

Table 2: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
incwage	25549	37798.87	30365.5	0	713263
sex	25549	1.716232	.4508346	1	2
age2	25549	1946.905	1097.013	225	7225
educ992	25549	14.93593	2.024897	1	18
exp	25549	21.39407	12.12429	-6	69
race	25549	145.9007	143.2326	100	830

Table 3: Variable Description & Data Source

Acronym	Description	Data Source
sex	Dummy variable indicating male or female	Current Population Survey 2005-2009
age2	Age squared to reflect reality	CPS 2005-2009
educ992	Weighted Value pertaining to Education level of schooling	CPS 2005-2009

exp	Reflects the experience of the individual subject	CPS 2005-2009
race	Dummy variable reflecting white or non white	CPS 2005-2009

5.0 EMPIRICAL RESULTS

The main purpose of this study is to determine if the gender wage gap persists between men and women in the teaching profession. In order to examine the current situation, an OLS regression was conducted on the CPS 2005-2009 data.

When the regression was processed using STATA, the results of which can be seen in See Table 4, all the signs of independent variables were as predicted. Most crucial to this study were the values for sex, educ992 and exp. Sex has a negative coefficient of -0.3096115; educ992 has a positive coefficient of 0.0897664, and exp has a positive coefficient of 0.0571604. These values confirmed the assumptions that education and experience have positive effects on income, while gender has a negative effect.

According to this study's results, an extra year of schooling will increase income by 8.97%, and an additional year of experience will cause income to rise by 5.71%. These are very strong results, as most studies do find education and experience to be beneficial to one's income. The age variable was dropped, as it was used in both age2 and exp, and thus represented a base category which is already being reflected in the regression through the exp and age2 variables.

Table 4: Regression Results

incwage	**Coefficient**	**Standard Error**
sex	-0.3096115**	0.0119894
age2	-0.0004658***	0.0000303
educ992	0.0897664***	0.0013571

exp	0.0571604***	0.0026967
race	-0.0001424***	0.0000374
constant	7.242615	0.0557866
R-square	0.2499	

Note: *** , **, and * denotes significance at the 1%, 5%, and 10% respectively.

The coefficient of the sex variable maintains that holding all other variables equal, a change from a male to a female subject will result in a 30.96115% decrease in income. However, because gender is a dummy variable, according to Halvorsen & Palmquist (1980) and Kennedy (1981), sex must be manipulated because sex is presented in a dichotomous form that cannot have its derivative taken, and thus cannot be interpreted correctly. More specifically, the coefficient of sex must be transformed to accurately reflect the impact on the gender wage gap. By using the Halvorsen and Palmquist (1980) and Kennedy (1981) equation:

$$100* g = 100*(\exp(\text{beta})-1)$$

the true effect of gender on a percentage basis of income is .24244, or 24.244%. This statistic is very important, as it reflects that a gender wage gap of $.24 on the $1.00 exists in the teaching profession. This differential reflects the findings of figure 3, as much of the overall wage differential in the United States between men and women is around the $.20 range. Miller (2008) has concluded that the public sector has a distinct glass ceiling effect, and this also seems to be the case with the teaching profession in this study. It appears from the results shown above that the wage gap between male and female teachers will widen as they grow older. On a more international comparison, a study by Wahlberg (2008) of the private and public sectors in Sweden also finds that women experience a significant glass ceiling effect in both sectors, meaning this inequality is widespread. In the United Kingdom, Davies and Heather (1998) reflect that there is a greater probability for adult women to be poor than adult men, referencing the widening of the earnings gap with age. This study supports these findings as well, as depicted by the study's results. Overall, the regression created an R^2 value of .2499. This value is not high, however reflects the uncertainty still present in this model.

This study finds the need to look further into the wage inequality gap very pressing, and therefore continues to filter the CPS data. By filtering the 2005-2009 CPS data set to only Postsecondary Teachers (Category Code 220), a more distinct observation is created in Table 5.

Table 5: Postsecondary Teacher Regression Results

incwage	Coefficient	Standard Error
sex	-0.2698291**	.0257599
age2	-0.0013906***	.0000668
educ992	0.0316307***	0.00808
exp	0.1461366***	0.0062068
race	-0.0003728***	0.0000647
constant	5.536455	0.1338972
R-square	.3632	

Note: *** , **, and * denotes significance at the 1%, 5%, and 10% respectively

Limiting the sample to the Postsecondary Teachers, and applying the aforementioned Halvorsen and Palmquist (1980) and Kennedy (1981) equation, the effect of gender on income becomes .2887 or 28.28%. What this means is that in general compared to the whole of observations, the wage gap is in fact larger in the postsecondary category. This may be attributable to the high prevalence of male teachers at the college and university level.

Another important comparison is that of Pre-School and Kindergarten Teachers, as they represent the other end of the spectrum and thus must be observed. This regression can be observed in Table 6. Typically, this level of teaching tends to be predominantly done by females, and the findings of this study support this. Once again applying the Halvorsen and Palmquist (1980) and Kennedy (1981) equation to the sex coefficient, the effect of gender on income becomes .2175, or 21.75%. This signifies the fact that the gender wage income gap for Pre-School and Kindergarten teachers is smaller than both the average gap and Postsecondary gap. This study concludes that

the earnings gap at this level is not nearly as wide, and it is possibly due to the large amount of female involvement in this level of teaching.

Table 6: Pre-School & Kindergarten Regression Results

incwage	Coefficient	Standard Error
sex	-0.3313052**	.1214707
age2	-0.000186***	.0001156
educ992	0.1398034**	0.0112146
exp	0.0254927***	0.0095674
race	-0.0002714***	0.0001403
constant	8.33094	0.2876925
R-square	.1245	

Note: *** , **, and * denotes significance at the 1%, 5%, and 10% respectively

It is important however, in any study, to account for any bias or uncertainty in the data and regressions used to form a conclusion. A fundamental tool to begin such an analysis involved examining the correlations between variables used in the regressions. As can be seen in Table 7 below, there is not too much cause for alarm. An expected high correlation of 98.64% between age2 and age is reflected, as these variables are similar to one another. Another high correlation coefficient exists between age and exp. This correlation was also expected, as the requirement of age to create the exp variable is used. For this reason, the age variable was dropped from the regression.

Table 7: Correlation Coefficients

```
. cor  incwage sex age age2 educ992 exp race
(obs=25290)

             |  incwage      sex      age     age2  educ992      exp     race
-------------+------------------------------------------------------------------
     Incwage |   1.0000
```

```
         sex |  -0.1939   1.0000
         age |   0.2992  -0.0534   1.0000
        age2 |   0.2714  -0.0635   0.9864   1.0000
     educ992 |   0.4276  -0.1356   0.2340   0.1988   1.0000
         exp |   0.2360  -0.0323   0.9870   0.9788   0.0744   1.0000
        race |  -0.0256  -0.0445  -0.0485  -0.0422   0.0057  -0.0507   1.0000
```

Another problem that often affects regressions is serial correlation, and this study looked to eliminate it as well. In order to check for serial correlation, a time structure was imposed on the data. Doing so generated nothing out of the ordinary, as the regression yielded a Durban-Watson statistic that was acceptable and close to 2 as can be seen in Table 8. The exact Durban-Watson Statistic yielded a value of 1.914538, an adequate level which means there is no serious serial correlation.

Table 8: Durban-Watson Serial Correlation Test

```
gen time = _n
tsset time, q

Durbin-Watson     d-statistic(      6,    25290)      =     1.914538
```

Looking towards the future, it is difficult to find a foolproof plan to solve this wage differential among teachers. Women are biologically disadvantaged simply because they must give birth, which will typically require time off from work and increased domestic responsibility, which in turn will hurt earnings and experience. Thus to make the playing field more equal, government on the state level should be actively monitoring wages in both the private and public sectors, and actively seeking out inequalities in the workplace in all professions, not just teaching. Possibly a policy of tax incentives could be implemented for institutions that openly and truly pay their teachers equal wages in a way that is transparent to the public and to others. In a similar manner, a tax penalty could be created for those institutions that do not have transparency of their wages and could be adding to the gender based wage gap. These incentives and penalties and leading by example may be contagious, and help to close this gap over time. This study provides a place to start, and the base plan to spread to other occupations and fix the problem.

6.0 CONCLUSION

With an increasing desire to sift out all the inequalities that are still present in the real world, there is a need to determine where these inequalities exist, the magnitude of them, and how they can be fixed. The chief purpose of this study was to identify the magnitude of gender based wage discrimination in the teaching profession with regards to the effects of gender on income.

The results of this study indicate that being a female teacher does in fact negatively influence a subject's income. This study proved that female teachers earn less than male teachers, and that as they grow older, they continue to earn less at an increasing rate. This study also finds that the wage gap widens as the level of teaching rises, and that it also narrows toward the preschool and kindergarten level. This study aims to explain this finding by the fact that more female teachers tend to cluster in preschool and kindergarten jobs, thus creating a more level playing field, while men tend to swarm to postsecondary education positions.

This is a scary conclusion, since most associate growing older with having more experience, stability and assurance in life and career. Ageing is characterized by settling down, finding a solid career, and maintaining a balance in life. What this study has shown is that as female teachers are looking to find a stable career with good pay, it may be a losing fight. Females may be forced to take jobs that do not compensate them with what they truly should earn, and thus their income suffers.

This study indicates a direct correlation between gender and income; however it also indicates a very important relationship between race and income when the subject is both male and female. It is important to remember however, that there is always room for error, and many other factors not included in this study could affect income, however from this study, the conclusion is plain and simple; female teachers make less than male teachers.

7.0 BIBLIOGRAPHY:

Arons, J. (2009, April 27). *An Equal Pay Day 2009 Primer on the Wage Gap*. Retrieved March 11, 2010, from Center For American Progress: http://www.americanprogress.org/issues/2009/04/equal_pay_day.html

Bacolod, M. P., & Blum, B. S. (2008). Two Sides of the Same Coin: US "Residual" Inequality and the Gender Gap. *The Joumal of Human Resources* , 198-242.

Bureau of Labor Statistics. (n.d.). Retrieved February 12, 2010, from United States Department of Labor: http://www.bls.gov/

Cocherill, R., & Tanner, J. (1996). Gender, Social Change, and the Professions: The Case of Pharmacy. *Sociological Forum, Vol. 11, No. 4* , 643-660.

Cohen, P. N. (2004). The Gender Division of Labor: "Keeping House" and Occupational Segregation in the United States. *Gender and Society, Vol. 18, No. 2* , 239-252.

Cohen, P. N., & Huffman, M. L. (2007). Working for the Woman? Female Managers and the Gender Wage Gap. *American Sociological Review, Vol. 72, No. 5* , 681-704.

Davies, H., & Joshi, H. (1998). Gender and Income Inequality in the UK 1968-1990: The Feminization of Earnings or of Poverty? *Journal of the Royal Statistical Society* , 33-61.

Few Cracks in the Glass Ceiling. (2006, December 23). *The New York Times* .

Halvorsen, R., & Palmquist, R. (1980). The Interpretation of Dummy Variables in Semilogarithmic Equations. *The American Economic Review, Vol. 70, No. 3* , 474-475.

Hansberry, R. (2004). An Analysis of Gender Wage Differentials in Russia from 1996-2002. *William Davidson Institute* .

Jarrell, S. B., & Stanley, T. (2004). Declining Bias and Gender Wage Discrimination? A Meta-Regression Analysis. *The Journal of Human Resources, Vol. 39, No. 3* , 828-838.

Kennedy, P. (1981). Estimation with Correctly Interpreted Dummy Variables in Semilogarithmic Equations. *The American Economic Review, Vol. 71, No. 4* , 801.

McCall, L. (2001). Sources of Racial Wage Inequality in Metropolitan Labor Markets: Racial, Ethnic, and Gender. *American Sociological Review, Vol. 66, No. 4* , 520-541.

Miller, P. W. (2008). The Gender Pay Gap in the US: Does Sector Make A Difference? *University of Western Australia* .

Semega, J. (2009). Men's and Women's Earnings by State: 2008 American Community Survey. *American Community Survey Reports* .

Turnbull, P., & William, G. (1974). Sex Differentials in Teachers' Pay. *Journal of the Royal Statistical Society. Vol. 137, No. 2* , 245-258.

Wahlberg, R. (2008). The Gender Wage Gap across the Wage Distribution in the Private and Public Sectors. *University of Gothenburg* .

Weekly earnings in first quarter 2009 by demographics. (2009, April 17). Retrieved March 4, 2010, from Bureau of Labor Statistics: http://www.bls.gov/opub/ted/2009/apr/wk2/art05.htm