A Suggested Solution to The Boys' and STEM Crisis

The boys' and STEM crisis in America is now damaging our economy, business, lives of women and children, even national defense. We have a shortfall of at least 20 million smart boys without a 4-year college degree in the last two decades. New research and data presented here suggest a different solution for society.

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I. The Problem

The problem addressed here is simple. We do not have enough 4-year male college graduates for a prosperous economy and quality of life for everyone in society for the 21st century.

This fact has been covered repeatedly by the nation's media as a problem.

Males in the U.S. are a minority of college students, and graduates. American males have been a minority for more than 40 years, and have been steadily falling from 49% in 1981 to 40% (or less) in 2024. (1)

Colleges also fail to retain male students in greater numbers than female students. (2)

Males are as intelligent overall as females. No serious study says otherwise.

Boys and young men test equally overall with girls and young women. Starting in elementary school, continuing in high school, and in other exit tests in education and work, thousands of test scores with millions of students show males learn and know as much, overall, as females. (3)

For economic prosperity, the family structure, and the quality of life for everyone in society, the data would indicate we should have our smartest half of females and our smartest half of males with a 4-year college degree. We do not.

Every year, we have 2 million smart boys (4) who test at, or above, the level of college students and graduates, missing from college. Since 2000, we have around 20 million smart young men without a degree.

The Need for More College Graduates

The need for more college graduates has been firmly established by the research. See "Is College Worth It? Clearly, New Data Say," writes David Leonhardt, *The New York Times*. (5)

People with a four year degree have higher career earnings.

One study cites 70% higher earnings, while another says that amounts to $1 million over a career. They have lower poverty rates. (6) They have better marital prospects, and better health. They also pay more in taxes and require fewer social services.

College graduates determine economic prosperity.

In this century of post-industrial society, Enrico Moretti of the University of California Berkely, in his classic book compiles research to show that the percentage of college graduates in a locality determines the economic prosperity of that locality.(7) The book was named the best business book of the year by Forbes. (8) The Census Quick Facts confirm this, with few exceptions, for every city, county, and state in the country. (9)

The wages of high school graduates increase as well.

The economic benefit is not just for college graduates. It extends to those with less than a college degree. Moretti shows when people with a high school degree work and live in a locality with more college graduates, their wages and quality of life also increase. Nobel Prize winning economist Robert Lucas from the University of Chicago also documented the relationship with his work on knowledge dispersion. (10)

Additional local jobs are created by college grads.

College grads, many or most of whom are Knowledge Workers, create 4-5 additional jobs in the local economy. We are now in a post-industrial society that management guru Peter Drucker predicted and named The Knowledge Society. (11) Like the factory age of the 20th century, knowledge workers produce goods sold over a wide geographic region, bringing in outside income to the community. Knowledge workers create largely intangible goods. As a result, knowledge workers create additional local jobs.

Industrial employment continues to decline.

Manufacturing employment is in perpetual decline. (12) Topping out at 35%-50% of workers in the last century, that percentage is now down to 16% and still declining. When the industrial age replaced the agrarian age of farms, farm produce greatly increased but with fewer and fewer farmers. So too factory production and factories may increase, but with fewer and fewer factory workers.

We have a shortage of college educated STEM workers.

The biggest need for more college educated males comes from the Science, Technology, Engineering and Math (STEM) sector. The Georgetown Center for Education and Workforce Development, in a study titled "Falling Behind," projects a shortage of 5 million STEM workers by 2032, some 4.5 million of them requiring a college degree.(13) Other evidence and warnings abound. (14)

An overwhelming majority of STEM workers are males.(15) The scientific evidence on the biological reasons for this gender distinction is overwhelming and has not been disproven. (16)

Other advanced nations are increasing their tertiary (college educated) graduates.

Other post-industrial nations as well as developing nations are increasing their numbers and percentages of citizens with a college degree. (17) Several organizations say this has serious competitive implications for the United States.

II. The Consequences

The consequences of having too few men with a college degree are many. New likely consequences are being reported every year. It is no longer just a problem for boys and young men. It is now a problem for women and children. It is now a problem for national security, economic prosperity, education, the family, children's well being, and everyone's mental health.

In addition to economic prosperity and a shortage of STEM workers, other consequences not graduating enough males with a 4-year college degree include the following.

1. **One college closing every week**.
At least one college in America is closing every week. (18)

2. **Companies setting up shop in India.**
Some 1,800 American companies, one a week on average, are setting up shop in India so they can hire the number of engineers they need. So in addition to not hiring U.S. born STEM workers, this situation also means that the STEM workers in India are creating additional jobs in India, not the U.S.

3. **Some 1,000 young men dying every week.**
The CDC has named this increase in deaths "Death by Despair" and provides statistics on the dramatic rise since 2000. (19)

4. National security threat described.
Several national defense publications and organizations have said that there is a shortage of STEM workers for defense contractors in the U.S. (20)

5. **Over reliance on immigrant STEM workers.**
The United States is relying to a concerning extent on immigrant STEM workers with H-1B visa skilled workers. These workers, the majority of which are males from India, may send money back to their home country or even later return to their home country, again depriving the U.S. of additional jobs and permanent job creators. (21)

6. **Negative marital prospects and the family.**
The decline in the marriage rate, especially among 30-40 year olds, is increasingly attributed to a shortage of "economically eligible" men, men with a stable job and good income. A majority of women have traditionally aspired to marrying a man with a college degree, and the income that comes with it.

It is no longer just a problem for boys and young men. It now affects everyone in society and damages our economy.

7. **Children of single mothers harmed financially.**
Research confirms that welfare benefits generally do not make up for the loss of a second income. Thus, children of single mothers are less well off, both with financial care and the accompanied stress and lost time with the mother. (22)

8. **Shortages in other professions.**
In addition to the crisis with STEM workers, recent reports have emerged on shortages in other professions, especially in rural areas. The shortage of large or food animal veterinarians has been cited for two decades. Now a shortage of judges, attorneys, public defenders, and doctors is being reported, especially in rural areas.

9. **Government support and costs.**
Other concerns may be directly, or indirectly linked to the shortage of college graduates, including:
Costs for the economic imbalance between the college 'haves' and the college have-nots;
-*Less tax support* for essential and widely supported government services, such as roads, public lands, water and schools; and
-*Increased costs* to society for mental health, welfare, food stamps, healthcare, and other government costs for those with less than a 4-year degree.

III. Possible Causes

Over 25 years of research by numerous sources have determined the cause. The reason for a lack of male college graduates is that males are being given worse GPAs than their learning and knowledge documents. New data by the authors provides additional confirmation. Other possible causes lack sufficient and universal evidence across populations, schools and colleges.

No Major Problem with Male Graduates

For economic prosperity, family support, and standard of life for everyone in society- - the concerns of this research- - there is no major problem with men with a 4-year college degree.

"Well-educated men have been able to adapt more easily to the new world, and indeed have benefited on many fronts," writes Richard Reeves of the Brookings Institution. "They have more educated, higher-earning wives, which reduces some of the pressure to be a sole breadwinner—as well as boosting household income…. Meanwhile, men with fewer skills have lost status on both the home and work front." (23) Numerous studies confirm Reeves' conclusion.

Of course, since males are given worse grades than females in higher education, even male college graduates were given worse grades than they deserve. That impacts graduate degrees, especially in STEM.

Boys' Reading Level

The reading or language levels of males is not the cause. Females have had, and continue to have, superior language skills regardless of historical era, culture, nation, age or any other criteria. Females are neurologically wired in the brain to have superior language skills. This is true for 80% of females, meaning that 20% of males do have the language skills of most females. The authors found that ACT test scores as far back as 1968 revealed this gender inferiority of male students. This has been known for at least fifty years by brain scientists. In education, one room school teachers over a hundred years ago observed this difference. (24)

Yet, even if a select group of boys do achieve good reading levels compared to girls, a study in the American Educational Research Journal reports the boys still get worse grades.(25)

Motivation

Boys are often labeled as being unmotivated, even lazy. This accusation only applies to school. Boys are not unmotivated in the workplace, even though there is only an hour between school and work. Boys are not unmotivated in the military. Even though, when they finish their service they once again are called unmotivated in education. Motivation is both not measured, and not an objective. Since boys learn and know as much as girls, whether someone is subjectively judged by another person to be motivated or not appears unrelated to achievement on any level. Motivation is not the cause. No other possible cause has the measurable evidence across all school districts, colleges, and universities.

Grading on Behavior is The Cause

Admission to college in the United States, and to a lesser but significant degree, completion and graduation from college, is primarily if not exclusively determined by Grade Point Average (GPA).

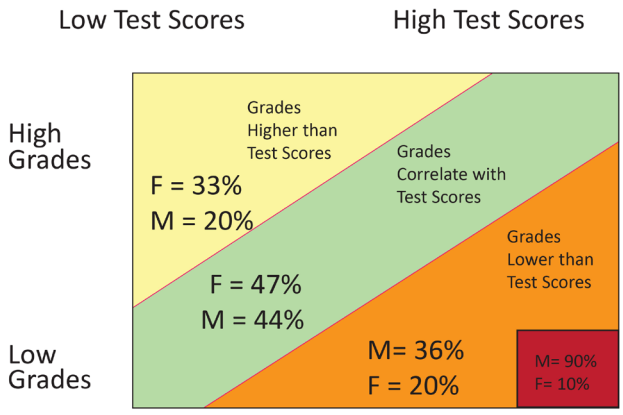
Every report of GPA between girls and boys shows that boys are given significantly worse grades than girls, even though they test overall at the same levels. Our children are given grades based, in large part, on behavior, not learning and knowledge.

The term "academic achievement" used by educators is simply GPA. Academic achievement does not refer to learning and knowledge as demonstrated by test scores.

There are two significant differences in testing between males and females. The differences are in language skills and testing involving spatial skills. But overall males test at the same level as females, according to ACT and SAT, the two testing agencies used by almost all higher education for college admission.

In what is called "the classic study," the disconnect between grades and knowledge has been thoroughly documented when Nancy S. Cole was President of the Educational Testing Service. She and Warren Willingham co-authored a study of millions of students taking thousands of tests. (26)

The resulting book, *Gender and Fair Assessment*, reported some 36% of male students were given significantly worse grades than their test scores warrant. At the highest levels on tests and the lowest grades, it is boys 90% and girls 10%.



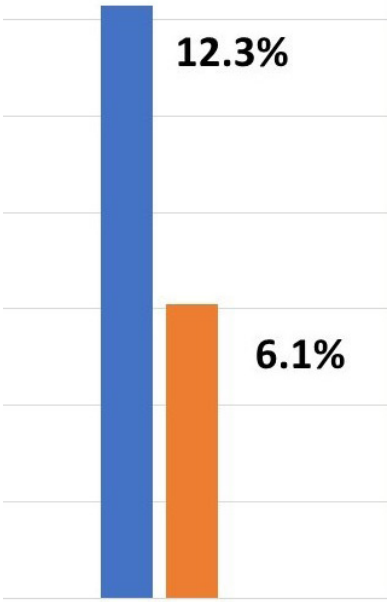
The chart was designed from the data in Gender and Fair Assessment.

Other studies, such as this more recent one, (27) confirm the Cole and Willingham findings.

At the School District Level

In another study confirming the Cole and Willingham national findings, the authors drilled down to the local level. With the help of an attorney and the state's Open Records Law, we were able to get and analyze high school grades in 18 representative, often large, school districts in Wisconsin. (28)

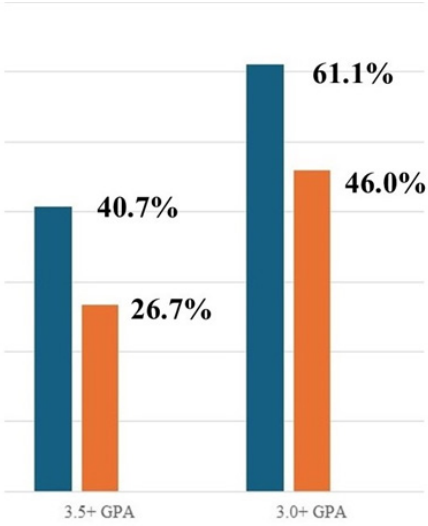
Despite male and female students testing equally well, only half as many boys as girls are given a 3.9 GPA or higher, a traditional measure for gaining entry into the most selective colleges and universities.



Percentage of females (blue) and males (orange) who received a 3.9+ GPA. Data as a percentage of the total number of high school students in 18 Wisconsin school districts, with the data provided by each of the school district superintendents in 2023.

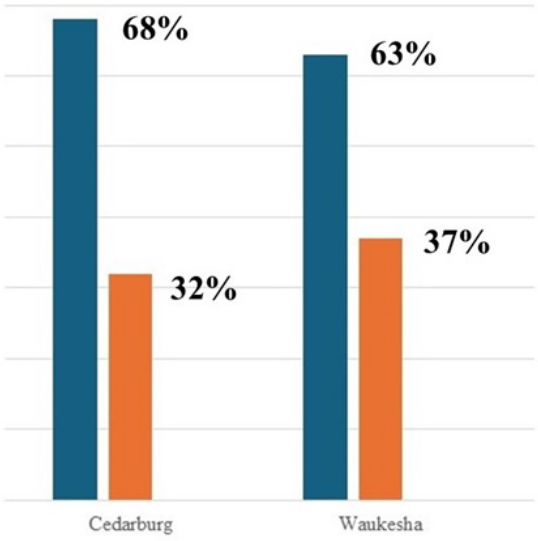
One and a half times as many girls as boys are given a 3.5 GPA, the recommended GPA for research universities.

At 3.0 GPA, the minimum generally needed for any university, fewer than half of boys have a 3.0 or better, while almost two-thirds of girls qualify.



Percentage of females (dark blue) and males (orange) who received a 3.5+%+ GPA (left chart) and 3.0%+ (right chart). Data as a percentage of the total number of high school students in 18 Wisconsin school districts, with the data provided by each of the school district superintendents in 2023.

Other factors, such as income level, parents' educational level, poverty, racial and ethnic mix, do not appear to affect the results. For example, in the Waukesha and Cedarburg school districts, communities that are homogenous in race, well above state average for income, high educational attainment, and low poverty rates, boys are still given significantly worse grades than girls while testing overall even with girls.



Of students who received a 3.9+ GPA, the percentage of females (dark blue) and males (orange) in Cedarburg school district (left chart) and Waukesha school district (right chart). Data provided by each of the school district superintendents in 2023.

Demographic	Race = White	BA+	Median Income	Poverty Rate
Wisconsin	86%	33%	$75,000	10.3%
Cedarburg	96%	53%	$127,000	2.8%
Waukesha	91%	48%	$104,000	5.5%

This chart illustrates that such factors as racial make up, parents' educational level, income level, or poverty do not affect the difference in GPA between boys and girls. None of the 15,000 public school districts or 3,000+ higher education institutions in the country have reported gender parity in GPA between males and females.

The Behavior Being Penalized

The primary male behaviors being punished in the classroom are 1) turning work in late, (29) 2)doing less work, 3)not doing assignments, and 4)being absent from or late to class.

But the list goes on, (30) and includes challenging the teacher, speaking out of turn, looking out the window, not talking enough, even staring. (31)

Added to this list lowering boys' grades are disciplinary actions. We know twice as many boys as girls are suspended from school. (32) More boys are expelled than girls. More boys are in juvenile detention centers than girls. Disciplinary action is needed and is neither being argued against or even discussed here. Nevertheless, disciplinary action is unrelated to learning and knowledge.

The Today Show on NBC News found boys' gender-based classroom behavior negatively affects their grades. (33) Boys are being penalized for that gender-based behavior. (34)

Gender differences in male and female neurology explain these boy behaviors.

For example, boys spend 30% less time (35) on schoolwork than girls, but they learn as much. Boys are significantly more likely to be bored by their schoolwork. (36) It is actually physically painful for smart boys to do easy work.

On the other hand, male gender behavior, such as taking risks, failing, tackling harder work, challenging, competing, and completing a task in less time, all are rewarded in the workplace. But they are penalized in the classroom. SciTech Daily reported in the last few years that boys being unfairly penalized has "wide and lasting consequences." (37)

Behavior-based GPA Discredited

While behavior-based GPA remains the primary criterion for college entrance in the U.S., it has been discredited. (38)

-Teachers give fewer than half of their students a grade appropriate to their learning and knowledge, says yet another source. (39)

-Employers increasingly disregard GPA as a metric by which they evaluate new hires. (40)

-Colleges and universities in the United States do not use behavior-based GPA or any other behavior criteria for admitting students to either undergraduate or graduate study from India, the source of most STEM foreign students in the U.S., and some other countries.

The cause is grading that includes gender-based behavior- - behavior irrelevant to learning, knowledge and future work performance. No other possible cause is present in every school district, college and university in the United States.

IV. Other Proposed Solutions

Other interventions proposed are all beneficial, positive and helpful to both boys and girls. But they are costly, take decades to put into place, and most importantly, do not work. Here are a few of those other interventions failing to be an answer.

1. More male teachers.

Studies show boys do not receive more accurate and better grades with male teachers. Boys learn and know just as much as girls with female teachers than male teachers. The problem is not about learning and knowledge, as evidenced by test scores. In graduate schools of engineering, where male professors are around 80% of the faculty, male students still receive worse grades than the female students.

2. Red-shirting boys.

We know that the male brain matures closer to age 30, while the female brain matures in their mid-20s. But boys do not test behind the girls at any age, even in elementary school. Red-shirting boys for a year may be good for the boy in many ways. But the older they are, the less the chance of males graduating from college. There is no study showing that red-shirting boys increases graduation rates.

3. Mentorship.

Mentoring boys as well as girls, if done adequately, always enhances the young person's life. But there is no data showing mentoring increases a male graduation rates. Mentorship is not an integral part of a boy's education in countries like Germany, Japan and India, where males are on parity with female graduates.

For example, in Cedarburg and Waukesha, Wisconsin, the majority of boys are from two parent families, have mentoring experiences informally and formally with scouting, clubs, sports and other activities. Children, census and state citizens agree, have every advantage in Waukesha. But only half as many boys get a 3.9 GPA, while testing at the same level as Waukesha girls.

Mentorship is costly, takes decades, is not being done on a massive scale, has never been done on a massive scale in any society, and there is no data that mentored boys get better grades than non-mentored boys. Mentorship is not a solution to an inherent grading system based on behavior.

4. Teaching differently.

Teaching differently in the classroom has been suggested as an answer. Indeed, boys and girls learn differently, as Michael Gurian has shown. More boy friendly teaching would help boys learn more, just as existing and other girl friendly teaching would help girls learn more. But boys already learn and know as much as girls. Studies on single sex schools, and single sex classrooms, are mixed in conclusions as to whether that enhances learning or college graduation rates for boys.

5. Expand vocational and career training.

Expanding vocational and career training is not a response to the lack of male college graduates. It is instead a denial of the facts of economic prosperity for both males and their families, and for the community and society as a whole. There is no study that shows that males with less than a college degree create jobs, determine higher levels of income than college graduates, fill the shortage of STEM jobs, or are a driving force in local and national economic prosperity. The authors provide a few of the many references that show that expanding vocational and career training is no solution for individuals or society.

6. Better parenting.

There are many subjective opinions on a variety of real or imagined problems with boys and men in society, most of which are diversions or entirely different unresolved issues from the problem being addressed here. There is a theory that the nature of fathers, including psychological factors and immeasurable issues, are the cause, and that better parenting is the solution.

Other proposed solutions do not work. There is no significant and valid data that shows another proposed solution works.

The issue of men in American society is another issue. We can say there are no quantifiable studies determining the characteristics of fathers in countries with gender equity in education and fathers in the United States. There are no quantifiable studies determining the characteristics of fathers of sons who are college graduates versus the fathers of sons who are not. Given the clear positive advancement that daughters have made, there is no convincing evidence that fathers or mothers discriminate against their sons in raising their children. We know that in communities with strong families, family values, and fathers more involved in parenting, there is no improvement in their sons' grades. Ultimately, the intervention of fathers, while always beneficial in a boy's life, is not a remedy with concrete remedial actions or prospects for results anywhere in the next few decades.

V. The Suggested Solution

The solution is simple, no-cost and can see results within a few years. The solution is to grade solely on learning and knowledge. And that higher education institutions admit students solely based on learning and knowledge, most commonly the ACT and SAT tests students already take.

The solution does not take more money for education or teacher time to implement. It does not affect disciplinary actions. It helps teachers grade students more accurately and reinstates the credibility of the GPA in America.

The solution is essential and sufficient to solve the problem. Other inventions, without a ban on grading based on behavior, are insufficient. A ban on grading based on behavior, without any other intervention, is sufficient.

As they have done before with major education legislation, state legislation and/or national legislation can ban the use of behavior in grading and calculating GPA. State legislation and/or national legislation can require public higher education institutions to admit students based on their learning and knowledge, not on student behavior.

VI. The Historical Parallel

This happened before. Once again, the solution is no-cost and immediate.

The last time boys were perceived as being really bad was 100 years ago.

Around 1900, boys wanted to be in school so much that they marched with Mother Jones to the summer home of President Theodore Roosevelt to ask if, after 50 hours of work, they could spend 10 hours in school. The President said no.

In 1910, boys were universally being labeled as bad. The Music Man, a popular musical set in this time period, had as its story Professor Harold Hill, who would travel to small towns, declare what everyone knew - - that the boys were bad, and offer the solution: a boys band. (41) He would collect the money for the band and skip town. But a boys band was also a bogus solution.

At the same time, underage children in larger cities were dropping out of school by the millions and going to work in the factories. Over two-thirds were boys. As the authors discovered, a nationally known suffragette, Helen M. Todd, was also a factory inspector in Chicago. She wanted to know, if the children's families did not need the money, whether they would choose the factory or school.

Helen M. Todd

She asked 500 children and the choice was overwhelming: the factory. Why, she asked.

Because they said, they hit us in school, and in the factory we don't get hit. As one boy summarized it, "They hits you if ye don't learn, and they hits you if yer whisper, and they hits you if ye have string in yer pocket, and they hits you if yer seat squeaks, and they hits you if he scrape yer feet, and they hits you if ye don't stand up in time, and they hits you if yer late, and they hits you if ye forget the page." Her article appeared in a major magazine at the time, (42)

By 1924, society had realized that a high school education was necessary to work in the burgeoning factories of the Industrial Age.

And so to explain why the boys were not in school, Helen M. Todd was invited to testify before a Congressional Committee. She did so in January of 1924. (43) And just three months later Congress and then state legislatures took action. Legislation eliminated underage children working in factories. States began to require universal high school attendance. And the states began to outlaw hitting of students in schools. The boys returned to school. The factories rolled on. And the United States became the most prosperous nation in the world.

VII. Teacher Objections

Educators almost always give two reasons for penalizing students for late work, and for refusing to grade students solely on learning and knowledge. Interestingly, wherever we go, the two objections are commonly raised by educators using the same words:

-"We're teaching responsibility here."

-"We're preparing students for the workplace."

Both of these beliefs are not grounded in fact. These beliefs come from the value and belief system of the last century, the century of factories and the factory model of the school. The evidence disproves these two objections.

"We're teaching responsibility here."
There is no evidence to support this claim.

First, values and habits are formed early in life.

When high school and college teachers claim to be teaching responsibility, as they do, (44) we need to understand that values and habits such as responsibility are learned much earlier in life, by age 10, 11 or as early as age 8. (45) Even driving habits are learned by this age, even though the child does not taking driving lessons until a teenager.

Second, the GPA gap never closes.

If teachers were indeed teaching responsibility, then the GPA gender gap between boys and girls would close over a period of time. Some 84% of teachers say boys are more likely to turn their work in late than girls, which is also supported by looking at students' grades.(46) But the gender GPA gap never closes. That is, the so-called "responsibility" is never gained.

There is a gender GPA gap starting as early as sixth grade, and the gender GPA gap never closes, not even for seniors in college, where male students (the most responsible of all males) still get worse grades than female seniors.

So penalizing students for late work never has the intended consequence of teaching them "responsibility."

"We're preparing students for the workplace."
There is no evidence to support this claim either.
While workers do have to turn work in on time in the workplace, there is no gender problem in the workplace with regard to showing up on time and turning work in on time.

First, students who submit late work at school show up on time at their job.

Some 71% of students in college also hold down jobs at the same time. There is no evidence that students who turn in school work late show up late at work or turn in their work-work late. Educators have told us that boys who simultaneously are enrolled in school and have part-time jobs show up on time for work and turn in homework late. Thus, there is no problem in the workplace, only in academia.

Second, there is no male gender problem at work with responsibility.

If indeed males' turning in school work late had an impact on their performance in the workplace, then we would see employers favoring female workers over male workers. Clearly employers report that some of their employees show up late for work or complete their work late. But there is no evidence in any studies that those late workers are the same people as the students who turn in school work late.

There are no studies that young men perform more poorly than young women in the workplace. We have interviewed human resource professionals, and they indicate there is no problem. There is no perceived problem of boys in the workforce on the part of employers, workers or even educators.

There are no citations or references on the web as to males performing less well at work. We are only able to document evidence that women perform at the same level in the workplace as men, and most commentary on workplace gender issues tries to confirm that women perform up to men in the workplace.

In addition, we asked human resource executives if there is a problem of either gender showing up for work late or submitting work late. No human resource executive has documented any problem. We also interviewed staff at two human resources associations and the president of a national employment agency. (47)

Third, actually males show up more on time than females at work.

To be clear, all the evidence suggests that females perform just as well at work as males. Just as males perform academically as well as females in school. And

while employers might report that there is no difference between females and males showing up on time, studies conclude that actually males show up on time at work more than females.

The U.S. Bureau of Labor Standards, Department of Labor, conducts an annual survey. The study shows that women are more absent in the workplace than men. This discounts (takes into account) time spent on child care, health issues, and family. So even after subtracting absences due to health, child care and family, women are still more absent in the workplace than men. (48)

Fourth, for STEM jobs, "responsibility" does not appear to be an issue in hiring.

The problem is not that there are no responsible engineers or computer scientists, the problem is that there are not enough skilled (college-educated) engineers and computer scientists. There is no evidence that we have a surplus of irresponsible engineers or computer scientists or chemists.

No change in on-time work

From interviews with teachers who currently do not penalize students for late work, they report that most students still turn in homework and coursework on time (49), and that the pattern of lateness does not change regardless of whether there is a penalty or not. Thus, there is no evidence that most students will regularly turn in work late. Instead, the evidence suggests that if the work is due on Friday, the same majority of students will turn the work in by Friday.

Teachers spend too much time on student behavior

Teachers today are under the mistaken impression that gender-based behavior is totally willful. Instead much gender-based behavior is founded on one's neurology, hormonal composition, physical disability, brain development or other hard-wired and natural cause. Punishment does not help an individual to change his or her neural abilities.

And behavior is irrelevant to learning and knowledge. Teachers, schools and colleges should not measure or correlate behavior with learning and knowledge.

Way too much time and resources are spent by teachers, schools and colleges in trying to manage, change, measure, judge and punish behavior. This valuable time takes away from actually helping individuals to learn.

The National Center for Education Statistics (NCES) provides data that teachers focus on behavior way too much. According to the NCES, teachers themselves report that they feel most capable in managing behavior in the classroom. So this is the skill set that most teachers are most proud.

The desire to tie "classroom management" to grades does not produce any positive results. If behavior was changed over time, we would see the gap between boys' and girls' grades narrow over time. It never narrows.

And in terms of determining and justifying behavior for GPA, the need for classroom management does not hold up in higher education, especially Ivy League elite colleges, and graduate schools. There are no studies that classroom management, other than in isolated instances that universities currently deal with without ongoing disruption, is a problem either at Harvard or in the Graduate School of Engineering at the University of Wisconsin.

H.S. GPA as a Predictor of College GPA

Educators also say that high school GPA is a predictor of college GPA. This argument is both a tautology and false.

If one looks at colleges and universities, particularly highly selective colleges and universities, including the Ivy League schools, this is not the case. Colleges and universities admit males and females in this country with the same standards. A highly selective college or university would, and does, admit 100 males with 4.0 GPA and equally high SAT scores. And they admit 100 females, with 4.0 GPA and equally high SAT scores. However, if one examines the GPA of those 200 students with a 4.0 GPA in high school, the boys will receive a lower GPA in college. This occurs even in the first semester of college, just three months removed from the boys' 4.0 GPA performance in high school. So GPA in high school is not a predictor of GPA for males in college.

Discipline not affected

The suggested solution does not impact school discipline. It only suggests that disciplinary actions have no statistical significant impact on improving GPA, and that disciplinary actions as well as other behavior not be a factor in grading

The objections are obsolete beliefs and not grounded in fact.

The impact on girls and women

The impact on girls and women, both in school and in the workplace, will not be negatively impacted. Gender discrimination in our country has never benefitted the

other sex or genders, as Betty Friedan and others have noted.

Just as a high tide lifts all boats, girls, women and children will benefit. Gender parity in other countries in education has not been documented to be negative. Some 20% of girls are also given significantly worse grades than they deserve. Title IX will not be negatively impacted.

Teachers can, and need to, spend more time helping girls learn more. Women with a high school degree will have higher wages. The number of women with a financially eligible male partner will increase, creating more two-parent families and more family stability.

Women will benefit equally in retirement financing, child care, the increase in tax support of government services, the lower government costs of social services. (50)

VIII. Where the Solution Works

The suggested solution works and Americans approve of it. The solution works in India, the main source of U.S. foreign STEM workers, and it works in other countries. The United States economically is dependent on the suggested solution, and Americans implicitly accept and support it.

India has a high volume of male STEM students. (51) It also has gender parity in graduates, as should be the case here. (52) In India, institutions comparable to U.S. high schools and higher education do not include behavior in GPA. Admission to higher education is based solely on learning and knowledge as exemplified by exam scores. (53)

Here are examples of how the suggested solution works in the United States, and why Americans approve of the solution.

1. Congress and U.S. employers support STEM workers from India.

Congress approves regularly H-1B visas. U.S. employers urge Congress to increase H-1B visas. With 71% of the H-1B visa workers coming from India, Congress and U.S. employers implicitly accept and support grading based solely on learning and knowledge. (54)

2. U.S. universities admit students without requiring behavior measurements.

U.S. universities admit students from India, including STEM students, without requiring behavior measurements. Universities here can't require behavior measurements because they do not exist in schools or universities in India. So American universities have two different standards for admission. One admission standard for our own children includes gender-based behavior; and another one is for India and other countries that measure strictly learning and knowledge.

3. U.S. corporations are setting up shop in India.

The proof is also exemplified with U.S. corporations setting up shop in India at the rate of one company per week in order to hire STEM workers, 80% of whom are male. (55)

That answer may work for business, but it does not work for our economic prosperity and national defense.

4. Hospitals depend on surgeons from India.

Americans are just fine, including the authors, with being operated on by a surgeon who graduated from medical school in India.

Approximately 56,000 to 59,000 physicians and surgeons in the United States are immigrants from India, making them the largest group of international medical graduates in the country. These Indian-born predominantly male professionals represent over 1 in 20 (roughly 7%) of the total U.S. physician workforce.

Sources report it is highly unlikely that U.S. hospitals could function without surgeons and physicians from India.

Conclusion

As with other major advancements in education in America, the suggested solution can be implemented immediately at no-cost, and benefit everyone in society.

State legislatures and/or Congress can ban behavior from grading in public schools and higher education. Legislation can mandate that teachers, schools and colleges grade solely on learning and knowledge. Legislation can demand that public higher education admit students solely on learning and knowledge, not on GPA that includes gender-based behavior.

The suggested solution is no-cost for educational institutions or taxpayers. It will have an immediate effect. And it will have the outcomes all Americans want within just a few years.

As a result, America will have the necessary and sufficient educational solution for economic prosperity, family finances, and mental and social well being for all Americans, including women, girls and children.

References

I. The Problem

(1)National Center for Education Statistics. Degrees conferred by postsecondary institutions, by level of degree and sex of student: Selected years, 1869-70 through 2025-26. https://nces.ed.gov/programs/digest/d15/tables/dt15_318.10.asp

See also Higher Education Enrollment Trends by Gender, 1970 to 2025, March 20, 2019, Educational Policy Institute. https://educationalpolicy.org/hello-world/

The percentages of graduation rates by sex reported by NCES and all other sources, as far as the authors can tell, include international students. So the percentage of American males graduating from college is lower than that being reported, at least 2% lower.

First time, first Year Full time Foreign Students are 4% for both sexes. But math, computer science, and engineering international students are 44% of the total of international, and these STEM students are estimated to be 80% male. https://highered.collegeboard.org/recruitment-admissions/policies-research/beyond-your-campus/international-trends#:~:text=Despite%20increases%20in%20total%20first,observed%20between%202017%20and%202020.

"International students frequently pursue degrees in STEM fields, accounting for 45% of all advanced STEM degrees awarded in the U.S." International Students and Graduates in the United States**:** *5 Things to Know, May 23, 2025* https://www.fwd.us/news/international-students/

Today, 47% of U.S. women ages 25 to 34 have a bachelor's degree, compared with 37% of men.
U.S. women are outpacing men in college completion, Kiley Hurst, Pew Research Center, 2024. https://www.pewresearch.org/short-reads/2024/11/18/us-women-are-outpacing-men-in-college-completion-including-in-every-major-racial-and-ethnic-group/

(2)In terms of graduation rates, Education Data Initiative found that 67.6% of females graduate in six years, while only 61.1% of males do. https://research.com/universities-colleges/college-drop-out-rates

The National Center for Education Statistics (NCES) reported in 2024 that due to such conditions, the Organisation for Economic Co-operation and Development (OECD) ranked the U.S. 14th (out of 36 countries) in graduation rates. https://research.com/universities-colleges/college-dropout-rates

(3)When Betty Friedan wrote The Feminine Mystique in 1964, she cited that only 38% of college graduates were women. Society was rightly aghast. Her book initiated a national movement which resulted in Title IX being legislated in 1972. That led to a parity in graduates by sex in 1980. By 2025-26 male college graduates were estimated at, or only slightly above 38%, with males being 41.8% of four year graduates and 34.9% of two year associates degree graduates.

Title IX "prohibits sex-based discrimination in education programs and activities that receive federal financial assistance." https://www.ed.gov/laws-and-policy/civil-rights-laws/title-ix-and-sex-discrimination
So Title IX clearly applies to males as females being the subject of discrimination.

(4)College enrollment totaled 19.28 million undergraduate students nationwide in Fall 2024, down *8.43%* from peak enrollment in 2010 (21.0 million).

College Enrollment & Student Demographic Statistics, by Melanie Hanson, Education Data Initiative. https://educationdata.org/college-enrollment-statistics

The term "smart boys" will be used in this study to denote the smartest half of boys and young men. Since males are as smart as females, and test at the same levels, The authors define "smart boys" as those who test at, or above, the level of college students and graduates.

Of a total fall undergraduate enrollment of over 19 million in 2025, women will constitute 10.9 million undergraduates compared to 8.3 million men, a shortage of 2 million smart males. When international students are discounted, American males are even more underrepresented.

(5)Is College Worth It? Clearly, New Data Say," by David Leonhardt, The New York Times, May 27, 2014. https://www.nytimes.com/2014/05/27/upshot/is-college-worth-it-clearly-new-data-say.html

(6) The U.S. Census Bureau in 2024 reported that high school graduates have a 13.1% of living in poverty, people with some college have an 8% chance, and college graduates have a 4% chance of living in poverty. https://research.com/universities-colleges/college-drop-out-rates

(7)Enrico Moretti of the University of California Berkeley proved that the percentage of four year college graduates in a community determines the average ways and economic prosperity of that community, city or county, even state. It was published as a book, The New Geography of Jobs, by Houghton Mifflin Harcourt in 2012.

https://www.google.com/search?q=The+New+Geography+of+Jobs+book+publisher&sca_esv=d5bddc34ecb03e72&rlz=1C1CHBF_enUS982US982&sxsrf=ANbL-n7PUpDjtdkp-1250imVr6ggDfbwyg%3A1769300292845&ei=RGF1aYCnM-PM0PEPtZP2-QU&ved=0ahUKEwiA2dKbtaWSAxVjJjQIHbWJPV8Q4dUDCBE&uact=5&oq=The+New+Geography+of+Jobs+-book+publisher&gs_lp=Egxnd3Mtd2l6LXNlcnAiKFRoZSBOZXcgR2VvZ3JhcGh5IG9mIEpvYnMgYm9vayBwdWJsaXNoZXIyBRAhGKABMgUQIRigATIFECEYoAEyBRAhGKABMgUQIRigAUjaIVDIDlj7GnABeACQAQCYAYQBoAGxCKoBAzkuMrgBA8gBAPgBAZgCC6AClQjCAgoQABhHGNYEGLADwgIIEAAYFhgeGArCAggQABiABBiiBMICBRAAGO8FwgIIEAAYiQUYogTCAgUQIRirApgDAIgGAZAGApIHAzQuN6AH-iOyBwMzLje4B48IwgcFMC45LjLIBxiACAE&sclient=gws-wiz-serp

Moretti documented that people with a 4 year college degree have higher

wages and living standards. But he also showed that people with only a high school degree have higher wages and living standards when they work and live in communities with more 4 year college grads.

Economic prosperity is gender blind, of course, so having the smartest half of our female with a 4 year college degree is definitely an advantage. But there are not enough females to get to 50% for society, and having people with the least knowledge substituting for the smartest half shows no sign of remedying the situation.

Women and children also tangibly benefit from having more males with a 4 year college degree.
So increasing the percentage of males increases the economic prosperity of those with a high school degree. Directing males into the trades does not increase either their income or that of the community. Welders and truck drivers do not create engineering jobs. Engineers create welding and truck driving jobs. And welders and truck drivers working and living in communities with 40% or more adults with a 4 year degree make more and have a better quality of life than if they work and live in communities with only 20% of adults having a 4 year degree.

(8)His classic work was named the top business book of the year by Forbes Magazine (Book Review: Enrico Moretti's 'The New Geography of Jobs', John Tamny, Forbes, July 22, 2022). https://www.forbes.com/sites/johntamny/2012/07/22/book-review-enrico-morettis-the-new-geography-of-jobs

(9)Census Bureau. On this web page, you can look up any city, county or state and compare them with other cities, counties and states by a) Bachelor's Degree or Higher; and b) Median Household Income; and c) Per Capita Income. https://www.census.gov/quickfacts/fact/table/US/PST045224

(10) Lucas on Economic Development, by Nancy L. Stokey, University of Chicago Press, 2025. https://www.journals.uchicago.edu/doi/10.1086/738002

(11) In the 19th century, a six grade education was sufficient for a man and a woman to run their family farm. With a six grade education, they knew how many bushels of corn per corn crib, and the price of a hogshead of maple syrup, so that they could make a living. One room school houses were established every six miles, so that a child could walk a maximum of three miles in an hour to get to school. The U.S. prospered in the Agrarian Age.

With the invention of the automobile and mass manufacturing, society quickly transitioned from the Agrarian Age, in which 50% of people lived and worked on farms, to the Industrial Age, in which people moved to cities to work in factories. By 1920 more people lived in cities than on farms. In the Industrial Age, it was necessary to have a high school degree to gain meaningful employment in the factory or office of the 20th century. The U.S. prospered in the Industrial Age. By the end of the century, some 89% of people had obtained a high school degree.

In 1959 Peter Drucker, the acknowledged foremost management guru of the last century, predicted that the economy of the 21st century would be a Knowledge Society, and that the most important workers would be Knowledge Workers. See *Managing in the Next Society*, Truman Tally Books, 2002, page 296.

A knowledge worker, Drucker said:
-Produces something intangible, like data. That data is then essential in business decisions to manufacture a product, run a farm, build a business, run stores, operate nonprofits and government.
-Usually involves working with a computer.
-Most always requires a four year college education.

Examples of knowledge workers are accountants, data analysts, biologists, chemists, physics researchers, engineers, marketers, mathematicians, cybersecurity professionals and so on. Arguably the most valuable knowledge workers in society are those who create knowledge in science, technology, engineering and math, the STEM professions.

The invention of the World Wide Web by Tim Berners-Lee between 1989 and 1992 was the invention that led to the Knowledge Society of the 21st century and the economy of all the post-industrial nations.

The knowledge work sector is now the most significant sector for any advanced post industrial nation, like the United States, because a knowledge worker produces four additional and local jobs for other workers in society.

Because of a multiplier effect, each new high-tech job in the U.S. creates five additional jobs in the service economy, says Moretti. "The Multiplier Effect of Innovation Jobs," by Enrico Moretti, *MIT Sloan Management Review*, 2012. https://sloanreview.mit.edu/article/the-multiplier-effect-of-innovation-jobs/#:~:text=Two%2Dthirds%20of%20American%20jobs,and%20often%20serendipitous%2C%20ways.%E2%80%9D

Around the same time, another study also finds the multplier effect in job creation. "For each job created in the high-tech sector, approximately 4.3 jobs are created (multiplier effect) in other local goods and services sectors across all income groups, including lawyers, dentists, schoolteachers, cooks and retail clerks, among many others," this report finds. From "Technology Works: High-Tech Employment and Wages in the United States," by Ian Hathaway, Bay Area Council Economic Institute, San Francisco, 2012.

https://www.bayareacouncil.org/community_engagement/new-study-for-every-new-high-tech-job-four-more-created/#:~:text=Among%20the%20key%20findings:,retail%20clerks%2C%20among%20many%20others.

A more recent study by the Bay Area Council Economic Institutes revisits the data presented in 2012 and confirms the findings that the high-tech sector creates 4 additional local jobs. "Local Multipliers in the High-Technology Sector," Bay Area Council Economic Institute, 2022. https://www.bayareaeconomy.org/files/pdf/BACEI_TechMultiplier_April2022b.pdf

In the 20th century, factory jobs were the most significant sector for an industrial nation, including the United States, because a factory worker produced four additional and local jobs for other workers in the community, according to the National Chamber of Commerce. Every town tried to recruit factories, often with industrial parks, to acquire additional factory workers.

In this century, knowledge workers function in the same way prosperi-

ty-wise as factory workers, creating four additional local jobs. Sales, either directly or indirectly, of knowledge work, like factory goods, is over a wide geographic area. So a knowledge worker's salary is generated by income from over a wide geographic area. When that knowledge worker spends his or her money locally, it generates four additional local jobs, and local economic prosperity results.

As every Chamber of Commerce official knows, retail on the other hand generates no new income for a local community. When a hardware store owner buys groceries, and the grocery store owner buys hardware, no new money from outside the community is generated. Thus the local community does not grow.

(12) Manufacturing Jobs Keep Going Down, Manufacturing Dives, October 2025. https://www.manufacturingdive.com/news/us-manufacturing-job-decline-artificial-intelligence-automation/802672/#:~:text=The%20numbers%20have%20been%20going,are%20also%20implementing%20similar%20models.

(13) Falling Behind, Georgetown Center for Education and Work, 2025. https://cew.georgetown.edu/cew-reports/skills-shortages/

(14) " International students and graduates are critical to the STEM workforce and industries of the future" International Students and Graduates in the United States**:** *5 Things to Know, May 23, 2025* https://www.fwd.us/news/international-students/

(15) Diversity in the STEM Workforce, Pew Research Center, 2018. https://www.pewresearch.org/social-trends/2018/01/09/diversity-in-the-stem-workforce-varies-widely-across-jobs/

(16) Female college graduates will not fill the need for STEM workers. The biological factors are known by every scientist. See these references, among others:
-*Sex and Cognition*, Dr. Doreen Kimura. Kimura proves spatial ability is a result of testosterone.
The average male has twice as much testosterone as the average female. No one has disproved this.
-Peg Donohue, MD, of the University of Iowa, has found differences in the parietal lobe of the brain that also differ significantly between the sexes and confirms males' higher spatial ability.
-See also Susan Pinker in *The Sexual Paradox*, Scribner, New York, 2008, pages 64-65.
-Julie Coates documents more on how societal influences do not affect the fundamental biological difference in Chapter 5, "Why Women Don't Go Into STEM" in *Smart Boys, Bad Grades: Gender Inequality and STEM in Education*, Julie Coates and William A. Draves, LERN Books, 2015.

Women are superior to men in language, both verbal and written. This has been known by one-room school teachers over 100 years ago, and confirmed ever since the 1950s by science. Briefly, in the female brain the neuron connection between emotion and language is strong, while the connection in the male brain is far weaker neurologically.

These two fundamental biological differences are true for 80% of one sex and 20% of the other sex, so 20% of females have high spatial skills and 20% of males have high language skills. See *Boys and Girls Learn Differently*, by Michael Gurian.

- From a CNN report, "Now there is scientific evidence suggesting our evolutionary cousins, chimpanzees, exhibit gender-specific learning experiences." Scientists say when the same gender differences occur cross-species, that means the gender differences are biological and not attributable to culture, upraising, or other social factors." Chimp youngsters a lot like humans: Females learn much faster while males romp around," by Marsha Walton, CNN, 20024.

CNN.com - Chimp youngsters a lot like humans - Apr 21, 2004

-See also "Chimps and tools: The boys play, while the girls learn," by Eva Botkin-Kowacki, *The Christian Science Monitor*, 2015.

Chimps and tools: The boys play, while the girls learn - CSMonitor.com

(17) Other advanced nations are increasing the percentage of their population with a four year college degree. Tertiary education attainment in post-industrial nations has grown substantially, with over 47% of 25-34 year-olds in OECD countries holding a degree in 2022, up from 27% in 2000. This surge is driven by demand for high-skilled labor, with top nations like Korea and Canada exceeding 60% attainment. See OECD: Educational Attainment, 2025.

https://gpseducation.oecd.org/reviewed-ucationpolicies/#!node=41755&filter=all

No one is suggesting that everyone in the United States have a four year degree, as several commentors such as the acclaimed and award winning journalist George Will have claimed. https://www.washingtonpost.com/opinions/2025/08/27/college-students-degrees-jobs/

But just as we needed 25% of the population to have a four year degree in the 20th century, in the more complex and specialized economy of this century, economists are showing that communities and nations having 50% of its adult population with a four year degree are, and will continue to be, more economically prosperous than those nations falling behind.

The United States, with just 34% of its population with a college degree, is falling behind. Within the United States, there is a direct relationship between cities and states with 40-50% of their population college educated, and those cities and states with fewer college graduates as a percentage of the population.

II. The Consequences

(18) Colleges are now closing at a pace of one a week, by Jon Marcus, Washington Post, 2024. https://www.washingtonpost.com/education/2024/04/26/college-closures-student-impact/

In addition, for the first time, the Federal Reserve has created a model for predicting the number of colleges closing in the next year.

(19) Deaths Of Despair: Adults At High Risk, Mark Olfson, et al. Health Affairs, 2021.

(20) Leveraging America's Diverse STEM Talent, by Jordan Chase and Wilson Miles, National Defense Magazine, 2023. https://www.nationaldefensemagazine.org/articles/2023/10/27/emerging-technology-horizons-leveraging-americas-diverse-stem-talent

(21)America is Facing a STEM and Data education crisis, Elena Gerstmann and Laura Albert, The Hill, 2024. https://thehill.com/opinion/education/4443710-america-is-facing-a-stem-and-data-educa-

tion-crisis/#:~:text=We%20need%20a%20data%2Dliterate,to%20inspire%20the%20next%20generation.

(22) "The Explosive Rise of Single-Parent Families Is Not a Good Thing," by Melissa S. Kearney, *The New York Times*, 2023.

https://www.nytimes.com/2023/09/17/opinion/single-parent-families-income-inequality-college.html

III. Possible Causes

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https://www.brookings.edu/articles/boys-to-men-fathers-family-and-opportunity/#:~:text=Well%2Deducated%20men%20have%20been%20able%20to%20adapt,and%20indeed%20have%20benefited%20on%20many%20fronts.

(24) A Systematic Literature Review of Sex Differences in Childhood Language and Brain Development**,** Andrew Etchell, Aditi Adhikari, et al. National Library of Medicine, 2018. Here is an excerpt: "For decades, sex differences in language development has been a topic of interest for researchers and the general public alike. Reports of sex differences in speech and language abilities of boys and girls date back to the late 1950s. An influential paper by Anastasi et al. (1980) claimed that girls are superior to boys in language abilities from childhood; Maccoby & Jacklin, 1974). The view that girls exhibit superior language abilities has been generally accepted in both the scientific and non-scientific community."

https://pmc.ncbi.nlm.nih.gov/articles/PMC5988993/#:~:text=For%20decades%2C%20sex%20differences%20in,scientific%20and%20non%2Dscientific%20community.

(25) The study reports, "However, teachers consistently rate females higher than males in both subjects, even when cognitive assessments suggest that males have an advantage." The Development of Gender Achievement Gaps in Mathematics and Reading During Elementary and Middle School: Examining Direct Cognitive Assessments and Teacher Ratings Joseph Paul Robinson, Sarah Theule Lubienski, et al. *American Educational Research Journal*, 2011.

The Development of Gender Achievement Gaps in Mathematics and Reading During Elementary and Middle School - Joseph Paul Robinson, Sarah Theule Lubienski, 2011

(26) *Gender and Fair Assessment*, by Warren Willingham and Nancy S. Cole, Routledge Books, 1998.

https://www.routledge.com/Gender-and-Fair-Assessment/Willingham-Willingham-Cole-Willingham-Cole/p/book/9781138974944?srsltid=AfmBOookx8s4G-6_T_RGzSke6P1jvgj-DxK_HBgEAvCUGql36NrSba-K9

(27) "Educational achievement and progression by gender in Washington: 6 key takeaways," Dan Goldhaber and Stephanie Liddle. American Institute for Boys and Men, 2023.

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(35)Gender Differences in Approaches to Studying for the GCSE among High-Achieving Pupils, by Lynne Rogers and Sue Hallam, ERIC, 2006. https://eric.ed.gov/?id=EJ721789

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https://www.forbes.com/sites/brandon-busteed/2022/11/16/when-gpa-no-longer-matters/

IV. Other Possible Solutions
See references:

V.The Solution
See references:

VI. The Historical Parallel

(41)The Music Man, by Meredith Willson, music and lyrics by Meredith Willson, based on a story by Meredith Willson and Franklin Lacey, 1957.

(42) "Children Work, Why – The Children's Answer," Helen M. Todd, *McClure's Magazine*, April 1913.

(43) United States Congress, House Committee on the Judiciary, March 28, 1924. *Child Labor*, compiled by Julia E. Johnsen, HW Wilson Company, New York, 1924, page 145.

VIII. Teacher Objections

(44). When Denton, Texas, Independent School District decided not to penalize students for late work, Steve Sullivan of Denton wrote a comment to the local newspaper, saying in part, "This is lunacy. Years from now these students will enter college or the workplace with terrible habits established as a result. Who wants an employee who has learned being punctual is not important, incomplete work is not penalized or having multiple opportunities to "get it right" is expected?" From comments after the story "DISD set to change grading system ," by Britney Tabor, Denton Record-Chronicle , April 23, 2014

(45) Value formation in children. Every authority says it happens early in life. Here are just two of the references on value and habit formation in children.

Research by Sociologist Morris Massey, "During our Imprint Period ages 0 to 7 we continue to soak up everything like a sponge; we pick up and store everything that goes on in our environments and from our parents and other people and events that occur around us. It's imprinted into us."

"From Massey's research he suggests that our major values about life are picked up during this period about age 10. In addition he suggests that our values are based on where we were and what was happening in the world at that time."
http://changingminds.org/explanations/values/values_development.htm.

From *Habit Formation and Learning in Young Children*, by Dr. David Whitebread and Dr. Sue Bingham, University of Cambridge, "The habits of mind, which influence the ways children approach complex problems and decisions, including financial ones, are largely determined in the first years of life. We explain how various cognitive and metacognitive processes emerge within the young child before the age of seven years, enabling them to learn about the world and their specific environment, and to develop as learners." http://www.kansascity.com/news/business/biz-columns-blogs/kids-money/article321745/By-age-7-most-financial-habits-have-been-formed.html

(46) Coates and Draves survey of teachers.

(47) A literature search found only one reference to the difference between work turned in on time, and that citation said that girls were equal to boys in work timeliness. Interviews were also conducted by the authors with executives of an Illinois human resources association and a Wisconsin human resources association. Both executives knew of no gender related problem in the workplace with boys. According to the owner and founder of a national employment agency and *Kelly Girl* temporary help, John Willetts of Fox Point, Wisconsin, over the course of several decades of observing young men and young women in the workplace, he cites no significant difference between the punctuality and on-time performance between young men and young women.

(48) Coates has discovered research that girls, deemed responsible in school, are actually "irresponsible" in the workplace in terms of absenteeism, dealing another factual blow that "teaching responsibility" and grading based on behavior has any positive effect. The evidence discovered is from the Bureau of Labor Standards, Department of Labor, under the leadership of Secretary Hilda Solis. The 2010 government study showed that women are 2-3 times more absent in the workplace than men. This discounts (takes into account) time spent on child care, health issues, and family. So even after subtracting absences due to health, child care and family, women are still 2-3 times more absent in the workplace than men. The study can be found at http://ftp.bls.gov/pub/special.requests/lf/aat46.txt

Coates reports that two previous studies also reach the same conclusion, the earliest of which was done around 1990. All studies indicate that women perform at the same level as men in the workplace, just like boys perform academically at the same level as girls in school. For our purposes, what these workplace gender studies demonstrate is that faculty are not "teaching responsibility" and that grading based on behavior has no positive impact for either male or female students.

See Also: Absences from work of employed full-time wage and salary workers by age, sex, race, and Hispanic or Latino ethnicity. Bureau of Labor Statistics, 2021.

https://www.bls.gov/cps/aa2021/cpsaat46.htm

See also:American Time Use Survey- -2024 Results. Bureau of Labor Statistics, 2025.https://www.bls.gov/news.release/pdf/atus.pdf

(49)Teacher and blogger Tom Schimmer writes, "The flood is a myth! No, not that flood. The flood of assignments at the end of the year that you think you are going to get; it won't happen, at least that wasn't my experience. In fact, in every school I've worked in where teachers eliminated their late penalties they did not experience the flood. As I said above, most students like deadlines and not having a late penalty doesn't mean you don't set deadlines and act when they are not met; just don't distort their grade by artificially lowering it."http://tomschimmer.com/2011/02/21/enough-with-the-late-penalties/

(50)The net benefit to the public, in terms of decreased spending on social services and increased individual tax revenue, of a college degree may be as high as $600,000 over the course of an individual's lifetime. From "It's Complicated: The Relationship between Postsecondary Attainment and State

Finances," by James Dean Ward, Benjamin Weintraut, and Elizabeth Davidson Pisacreta, ITHAKA, 2021.

https://sr.ithaka.org/wp-content/uploads/2021/01/SR-Issue-Brief-Its-Complicated-Relationship-between-Post-secondary-Attainment-State-Finances-011921.pdf

VIII. Where the Solution Works

(51)Economic Survey- Higher Education Institutions Grow. The Times of India, 2025.

https://timesofindia.indiatimes.com/business/india-business/economic-survey-2024-25-higher-education-institutions-grow-by-13-8-gross-enrolment-ratio-rises-to-28-4-from-23-7/articleshow/117817185.cms

(52)Gross Enrolment to Gender Parity: The 5 Year Report Card on India HEIs, Trisha Tewari, The Times of India, 2024.

(53) Discussion with IT senior executives, also parents. This from IT specialist, parent and author (*The CHILD in Us*, 2025)Guarv Yadav: "For the technical institutes in India, behavior, classroom participation, or soft skills currently play a minimum role in admission.

1. Board Exams
Before a student can even think about an elite college, they must clear the 10+2 high school we call PUC (Pre University College) "Board Exams."

- Schools do have internal assessments where behavior, attendance, and homework count for about 20% of the grade. However, these marks are mostly used just to graduate from school.
- The 75% Attendance Rule: Schools are legally mandated to bar students from the final exams if they have less than 75% attendance. It is strictly enforced.
- In India we have a massive "Shadow Education" industry (valued at over $6 billion). In cities like Kota, which we call "Coaching Factories," hundreds of thousands of students live in hostels just to prepare for these entrance exams.

  Since 75% attendance is mandatory in regular schools, many students enroll in "Dummy Schools"—institutions that exist only on paper to mark attendance while the student spends 12 hours a day at a coaching center only studying Physics, Chemistry, Maths for entrance exam. This proves the system effectively bypasses "behavioral" evaluation entirely in favor of raw test scores.

- The 75% Marks Rule: To be eligible for the IIT entrance exam, you must score at least 75% in your final high school exams. If you get 74.9%, you are disqualified from IITs, no matter how brilliant you are.

2. The Elimination (The Entrance Exams)
Once eligible, the real battle begins. The engineering admission process is a two-tier exams:

Phase 1: JEE (Joint Entrance Exam) Main

- Applicants: Approximately 1.5 million students take this exam every year.
- The Cut-off: Out of these 1.5 million, only the top 250,000 qualify to sit for the next level.
- The Safety Net: The remaining students who don't make the cut fight for seats in Tier-2 colleges like NITs (National Institutes of Technology) or private universities.

Phase 2: JEE Advanced

- The Contenders: The top 250,000 students take this exam. It is widely considered one of the toughest physics/chemistry/math exams in the world.
- The Selection: Out of these, only about 18,000 get a seat in 23 IITs.
- The Odds: That is a success rate of roughly 1%.

National Education Policy (NEP) 2020
The government has introduced the National Education Policy (NEP) 2020, which is slowly changing the landscape to look more like the US system:

- Holistic Report Cards: Schools will soon assess students not just on marks, but on critical thinking, collaboration, and self-reflection.
- Breaking Silos: Previously, if you chose Science, you couldn't study History. NEP now allows a "mix-and-match" of subjects (e.g., Coding + Music or Physics + Psychology).
- CUET: For non-technical universities (Liberal Arts, etc.), they have introduced a new common entrance test (CUET) to standardize admissions, though it is still score-based rather than essay-based.

(54)Characteristics of H-1B Specialty Occupation Workers, Department of Homeland Security, 2023.

https://www.uscis.gov/sites/default/files/document/data/OLA_Signed_H-1B_Characteristics_Congressional_Report_FY2022.pdf

(55) US MNCs Flock to India for Outsourcing for Jobs: An abundance of motivated young professionals is luring American businesses to base their global operations in Indian cities, ABS News Service, 2025.

https://worldtradescanner.com/US%20MNCs%20Flock%20to%20India%20for%20Outsourcing%20for%20Jobs.htm#:~:text=As%20of%202024%2C%20there%20were%20about%201%2C800,-multinational%20companies%20%E2%80%94%20most%20of%20them%20American.&text=The%20model%20for%20these%20offices%20has%20been,that%20could%20work%20for%20very%20low%20wages.