

# What gets students motivated to work harder? Not money

by Matthew G. Springer

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Rewarding teachers financially for student achievement is an increasingly common practice, despite mixed evidence as to whether it improves results. Some scholars have instead suggested paying students.

But giving kids cash for grades and scores hasn't proved straightforward either. So maybe the answer isn't monetary.

Could students be better motivated by something as simple as a little formal recognition?

While I was serving as director of the National Center on Performance Incentives at Peabody College of Vanderbilt University, my colleagues and I sought answers in the decisions of various actors in American public schools. The results may surprise you.

## Which incentives encourage positive behavior?

Much of public policy can be characterized as attempts to influence individual behavior and decision-making in organizations.

Those who design and evaluate incentives typically operate under the crude assumption that the "target" is a rational actor (processing all available information and quickly identifying the behavior most likely to be the best one for his or her well-being).

So, policymakers end up offering seemingly beneficial public services at little or no cost. But they still meet with disappointment.

Our recent study attempted to better understand the response to a different kind of incentive – for one of the more imperfectly rational segments of our population: early adolescents.

We explored how incentives – monetary and nonmonetary – might encourage behaviors that lead to increased student learning, such as daily attendance and

after-school tutoring services (free but chronically underutilized).

We found that adolescents do not respond to incentives in ways that can be easily predicted by economic theory. But the right kinds of incentives could well lead adolescents to engage in behaviors likely to enhance their learning.

## Money makes no difference

Here's how we did our study. We selected 300 fifth to eighth grade students in a large southern urban school district who were eligible for free after-school tutoring services.

Prior research had shown that these particular tutoring services were relatively high quality and had, in fact, increased students' test score performance. We then randomly assigned these students to one of three groups:

- a reward of \$100 (given via an online platform) for good attendance
- certificates of recognition, signed by the school's district superintendent, mailed to the student's home, again for consistent attendance
- a control group<sup>1</sup>, which received no experimental incentives

We found that the students who were offered up to \$100 for regular attendance were no more likely to attend sessions than if they were offered nothing at all.

In other words, money made no difference.

Alternatively, when students received a certificate of recognition for attending tutoring sessions regularly, the differences were dramatic. The students in the certificate group attended 42.5% more of their allotted tutoring

hours than those assigned to the control group.

Gender also played a role. Girls were significantly more responsive to the certificate of recognition than their male counterparts.

On average, girls in the control group attended only 11% of the tutoring hours assigned to them. However, girls receiving the certificate attended 67% of their allocated hours, representing a six-fold increase.

What's more, the boys who received certificates attended more than two times as many of



1. **control group** – the group in an experiment or study that does not receive any influence from the researchers and is then used as a baseline to measure how the other tested subjects perform

their allocated tutoring sessions in comparison to the male control-group students. But the girls in the group that received the certificates attended nearly twice as many of their allocated tutoring sessions than the boys who were eligible for certificates of recognition.

Overall, sending certificates directly to the parents seemed to have

been effective. One reason for this could be that parents were more likely to reinforce the child's extra effort when the certificate was received at home.

Often in school settings, parents are not hearing positive news when they are contacted by their child's school – and this might be especially true of these students who qualified for tutoring services.

This is one time where the parent heard, "Way to go, keep it up." And they heard it directly from the district superintendent.

In addition, a student's effort was not necessarily observable to peers, which could have helped facilitate the positive response.

Prior research suggests that the promise of certificates and trophies presented in a class or at a school assembly in front of peers might not necessarily act as a positive incentive. Academic achievement can often result in diminished social status among peers, especially for minority students.

## Human behavior and education policy

Indeed, a recent study of a performance leaderboard<sup>2</sup> system that publicly ranked students in a computer-based high school course in Los Angeles Unified School District was associated with a 24% performance decline.

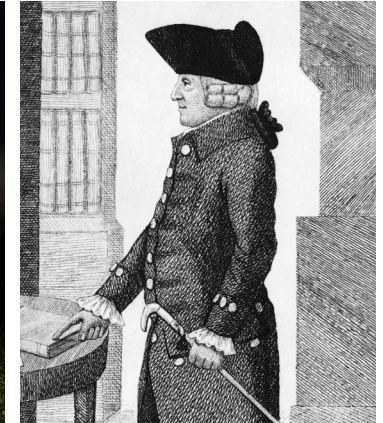
The authors attributed this to students trying to avoid social penalties by

conforming to prevailing norms.

For these reasons, working with the family to encourage and reward academic behaviors may hold more



A community's adulation of football players was documented in H.G. Bissinger's best-selling non-fiction book, *Friday Night Lights*. The book was turned into a 2004 film and, later, a television show. Image credit: Pixabay, Public domain



Adam Smith, author of *The Wealth of Nations*, is often referred to as the Father of Economics. Image credit: John Kay, Library of Congress, Wikimedia Commons, Public domain

promise, compared to working directly through school settings where peer pressures and norms play an important role.

Policymakers and philanthropists<sup>3</sup> in New York and Memphis are currently trying to interrupt a cycle of generational poverty through the Family Rewards Program. It is providing cash rewards to families who improve their short-term health care, education, and labor market participation and outcomes.

The impact results of this program are still awaited. This program doesn't test other forms of incentives such as certificates.

But there are important implications for education policy discussions and whether cash should be the primary driver of human behavior, particularly for adolescents.

The results of our study show that children's learning behaviors to incentives change in unpredictable ways. And these behaviors aren't easily accounted for by models of individuals as rational decision-makers.

Our study provides evidence that for policies to influence adolescent behavior, they may need to draw from research and theory beyond classical economics or behavioral psychology, including what we are learning about the teenage brain and its sociocultural<sup>4</sup> environment.

In short, we need to look at policies that are less Adam Smith and a little more *Friday Night Lights*.

2. **leaderboard** – a scoreboard showing the names and current scores of the leading competitors

3. **philanthropists** – people who seek to promote the welfare of others, especially by the generous donation of money to good causes

4. **sociocultural** – combining social and cultural factors

## Deconstruct the Argument

On a separate sheet of paper, answer the following questions. To receive credit, you must write complete, thoughtful sentences.

1. Early in the piece, Matthew Springer uses a **rhetorical question** when he asks, "Could students be better motivated by something as simple as a little formal recognition?" What effect is this technique intended to have on the reader?

2. What is the writer's purpose? In other words, what has motivated Springer to write this piece?

3. **Ethos** is a writer's ability to build credibility, establish himself as an expert, and/or convince the readers that he has their best interests at heart. How does Springer build ethos?

4. **Pathos** is an appeal to emotions (everything from humor to horror) in order to sway a reader, while **logos** is the use of data/evidence to prove one's case. Does Springer rely more on pathos or logos to bolster his argument? Which do you find more effective? Why?

5. Look over the section where Springer recounts the results of his team's study. Write the single statistic that does the best job supporting his position

that certificates are more effective than cash payments in motivating students to attend their tutoring sessions.

6. In your own words, describe the system used by the Los Angeles Unified School District. Why did it fail?

7. If you could ask Springer a question about his information or position, what would you ask?

8. What argument could someone who disagrees with Springer's stance make?

9. In the last paragraph, Springer uses the rhetorical device of **juxtaposition**, placing two items close together or side by side for comparison or contrast. What two items does he juxtapose? What effect is this designed to create for the reader?

### SCHOOL REPORT CARD

Student:

Polly Pupil

Teacher:

Tina Teacher

Subject	Grade	Comments
Language Arts	\$25	Great job!
Science	\$14	Average work

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# What gets students motivated to work harder? Not money

1. Early in the piece, Matthew Springer uses a **rhetorical question** when he asks, "Could students be better motivated by something as simple as a little formal recognition?" What effect is this technique intended to have on the reader? He uses this rhetorical question to pose his thesis/position. He is arguing that "a little formal recognition" does more to motivate students than cash rewards. The use of the question here is designed to engage the reader, build a pleasant, conversational tone in the piece, and serve as an anchor for his argument.

2. What is the writer's purpose? In other words, what has motivated Springer to write this piece? Springer's purpose is to share the results of his team's study and encourage policy-makers to rethink the way they try to incentivize student behavior. He's calling into question the practice of offering cash rewards and, instead, showing that a simpler system built on meaningful accolades might be more effective.

3. **Ethos** is a writer's ability to build credibility, establish himself as an expert, and/or convince the readers that he has their best interests at heart. How does Springer build ethos? Springer is an assistant professor at Vanderbilt, a reputable university. He was also the director of the center that led the study, giving him credibility with most readers. Some students may also say that Springer builds ethos by presenting details of his study and by the mere fact that his work is about something honorable – trying to motivate poor-performing students.

4. **Pathos** is an appeal to emotions (everything from humor to horror) in order to sway a reader, while **logos** is the use of data/evidence to prove one's case. Does Springer rely more on pathos or logos to bolster his argument? Which do you find more effective? Why? Springer's argument tilts toward logos, as evidenced by the extended passage recounting the data from his study. He does, though, offer a bit of pathos, particularly when discussing the parents' reaction to hearing good news about their children who likely haven't had much success at school. Students' answers will vary in terms of which rhetorical tool they prefer. I give credit for any reasonable answer.

5. Look over the section where Springer recounts the results of his team's study. Write the single statistic that does the best job supporting his position that certificates are more effective than cash payments in motivating students to attend their tutoring sessions. The section about the girls' performance is especially telling: "On average, girls in the control group attended only 11% of the tutoring

hours assigned to them. However, girls receiving the certificate attended 67% of their allocated hours, representing a six-fold increase."

6. In your own words, describe the system used by the Los Angeles Unified School District. Why did it fail? The school district tried to increase student performance in a computer class with a "leaderboard," meaning students' names and rankings in the class were publicly announced. This method resulted in a 24% decline in student performance. This likely failed because students at the top of the list were mocked or harassed by their peers, the author seems to suggest. There was a social price they were unwilling to pay for academic success.

7. If you could ask Springer a question about his information or position, what would you ask? Students' answers will vary and credit should be given to any reasonable question. I would want to know why he suspects the girls were more motivated by the certificates than the boys? Does this mean that girls care more about making their parents proud? Boys are busier after school? What's up with the gender difference?

8. What argument could someone who disagrees with Springer's stance make? Students' answers will vary, but a likely counter-argument could be that his study size was relatively small and more data/proof is needed. Also, evidence from a successful pay-for-performance student rewards program would hurt Springer's thesis. As always, credit should be given to any reasonable answer.

9. In the last paragraph, Springer uses the rhetorical device of **juxtaposition**, placing two items close together or side by side for comparison or contrast. What two items does he juxtapose? What effect is this designed to create for the reader? Springer intentionally contrasts Adam Smith, the classic economist that all academics in his world have closely studied, with *Friday Night Lights*, a popular book/film/TV series about high school football. Traditionally, we would think the classical theorist would be of more value to this academic debate, but Springer suggests that the pop culture's narrative about the power of the people is a greater force. Money is important, but social standing and group acceptance may be more important. His choice to end with a pop culture reference rather than a heavy academic quote serves to satisfy the common reader. This article was built for the general public; it was not published in an obscure academic journal. Springer knows his audience and acknowledges the validity of their experience, a move designed to help sway the reader to his side.

## Deconstruct the Argument – Writing Assignment

Consider how Matthew Springer uses:

- evidence, such as facts or examples, to support claims.
- reasoning to develop ideas and to connect claims and evidence.
- stylistic or persuasive elements, such as word choice or appeals to emotion, to add power to the ideas expressed.

Write an essay in which you explain how Springer builds his argument to persuade the reader that formal recognition is more effective in motivating student behavior than financial rewards. In your essay, analyze how Springer uses one or more of the features listed above (or features of your own choice) to strengthen the logic and persuasiveness of his argument. Be sure that your analysis focuses on the most relevant features of the passage. Your essay should not explain whether you agree with Springer's claims, but rather explain how he builds an argument to persuade his audience.

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	READING	ANALYSIS	WRITING
ADVANCED	<ul style="list-style-type: none"> <li>demonstrates thorough comprehension of the text.</li> <li>shows an understanding of the text's central idea/s and of most important details and how they connect.</li> <li>is free of errors of fact or interpretation of the text.</li> <li>makes skillful use of textual evidence (quotations, paraphrases, or both) to show a complete understanding of the text.</li> </ul> 4	<ul style="list-style-type: none"> <li>offers an insightful analysis of the text and demonstrates a sophisticated understanding of the analytical task.</li> <li>offers a thorough, well-considered evaluation of the author's use of evidence, reasoning, and/or stylistic and persuasive elements, and/or features of the student's own choosing.</li> <li>contains relevant, sufficient, and strategically chosen support for claims or points made.</li> <li>focuses consistently on those features of the text that are most relevant to addressing the task.</li> </ul> 4	<ul style="list-style-type: none"> <li>is cohesive and demonstrates a highly effective command of language.</li> <li>includes a precise central claim.</li> <li>includes a skillful introduction and conclusion. The response demonstrates a deliberate and highly effective progression of ideas both within paragraphs and throughout the essay.</li> <li>has a wide variety in sentence structures. The response demonstrates a consistent use of precise word choice. The response maintains a formal style and objective tone.</li> <li>shows a strong command of the conventions of standard written English and is free or virtually free of errors.</li> </ul> 4
PROFICIENT	<ul style="list-style-type: none"> <li>demonstrates effective comprehension of the text.</li> <li>shows an understanding of the text's central idea/s and important details.</li> <li>is free of substantive errors of fact and interpretation of text.</li> <li>makes appropriate use of textual evidence (quotations, paraphrases, or both) to show an understanding of the source text.</li> </ul> 3	<ul style="list-style-type: none"> <li>offers an effective analysis of the source text and demonstrates an understanding of the analytical task.</li> <li>competently evaluates the author's use of evidence, reasoning, and/or stylistic and persuasive elements, and/or features of the student's own choosing.</li> <li>contains relevant and sufficient support for claims or points made.</li> <li>focuses primarily on those features of the text that are most relevant to addressing the task.</li> </ul> 3	<ul style="list-style-type: none"> <li>is mostly cohesive and demonstrates effective use and control of language.</li> <li>includes a central claim or implicit controlling idea.</li> <li>includes an effective introduction and conclusion. The response demonstrates a clear progression of ideas both within paragraphs and throughout the essay.</li> <li>has variety in sentence structures. The response demonstrates some precise word choice. The response maintains a formal style and objective tone.</li> <li>shows a good control of the conventions of standard written English and is free of significant errors that detract from the quality of writing.</li> </ul> 3
PARTIAL	<ul style="list-style-type: none"> <li>demonstrates some comprehension of the text.</li> <li>shows an understanding of the text's central idea/s but not of important details.</li> <li>may contain errors of fact and/or interpretation of the text.</li> <li>makes limited and/or haphazard use of textual evidence (quotations, paraphrases, or both), showing only some understanding of the text.</li> </ul> 2	<ul style="list-style-type: none"> <li>offers limited analysis of the source text and demonstrates only partial understanding of the analytical task.</li> <li>identifies and attempts to describe the author's use of evidence, reasoning, and/or stylistic and persuasive elements, and/or features of the student's own choosing, but merely asserts rather than explains their importance, or one or more aspects of the response's analysis are unwarranted based on the text.</li> <li>contains little or no support for claims or points made.</li> <li>may lack a clear focus on those features of the text that are most relevant to addressing the task.</li> </ul> 2	<ul style="list-style-type: none"> <li>demonstrates little or no cohesion and limited skill in the use and control of language.</li> <li>may lack a clear central claim or controlling idea or may deviate from the claim or idea over the course of the response.</li> <li>may include an ineffective introduction and/or conclusion. The response may demonstrate some progression of ideas within paragraphs but not throughout the response.</li> <li>has limited variety in sentence structures; sentence structures may be repetitive. The response demonstrates general or vague word choice; word choice may be repetitive. The response may deviate noticeably from a formal style and objective tone.</li> <li>shows a limited control of the conventions of standard written English and contains errors that detract from the quality of writing and may impede understanding.</li> </ul> 2
INADEQUATE	<ul style="list-style-type: none"> <li>demonstrates little or no comprehension of the text.</li> <li>fails to show an understanding of the text's central idea/s, and may include only details without reference to central idea/s.</li> <li>may contain numerous errors of fact and/or interpretation of the text.</li> <li>makes little or no use of textual evidence (quotations, paraphrases, or both), showing little or no understanding of the text.</li> </ul> 1	<ul style="list-style-type: none"> <li>offers ineffective analysis of the source text and demonstrates little or no understanding of the analytic task.</li> <li>identifies without explanation some aspects of the author's use of evidence, reasoning, and/or stylistic and persuasive elements, and/or features of the student's choosing, or numerous aspects of the response's analysis are unwarranted based on the text.</li> <li>contains little or no support for claims or points made, or support is largely irrelevant.</li> <li>may not focus on features of the text that are relevant to addressing the task.</li> <li>offers no discernible analysis (e.g., is largely or exclusively summary).</li> </ul> 1	<ul style="list-style-type: none"> <li>demonstrates little or no cohesion and inadequate skill in the use and control of language.</li> <li>may lack a clear central claim or controlling idea.</li> <li>lacks a recognizable introduction and conclusion. The response does not have a discernible progression of ideas.</li> <li>lacks variety in sentence structures; sentence structures may be repetitive. The response demonstrates general and vague word choice; word choice may be poor or inaccurate. The response may lack a formal style and objective tone.</li> <li>shows a weak control of the conventions of standard written English and may contain numerous errors that undermine the quality of writing.</li> </ul> 1

## S.A.T. Essay Rubric

On an actual S.A.T. essay, students receive three separate scores, one each for Reading, Analysis, and Writing. A score, for example, might be 4-3-3, which would show Advanced Reading, Proficient Analysis, and Proficient Writing. Two readers evaluate each essay and their scores are added together, creating the final score which is reported as a number between 2-8 for each of the three categories.

This paper's score is: