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# Framing Issues in Education: From a Domestic and International Perspective

Melissa Henrichs

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FRAMING ISSUES IN EDUCATION: FROM A DOMESTIC AND INTERNATIONAL PER-  
SPECTIVE

By

MELISSA HENRICHS

Under the Direction of Toby Bolsen

ABSTRACT

The importance of education creates a need to better frame education issues for the public and policymakers. This thesis builds on framing theory to examine whether framing educational issues domestically or internationally affects support for increased educational spending. It tests straightforward hypotheses about one-sided frame exposure in a survey experiment conducted via Amazon's Mechanical Turk. The findings have implications for approaches that may be effective for generating support for education funding in the U.S.. By determining the best frame to use to motivate educational support, policymakers can better tailor their strategies and platforms in the media and communication with the public.

INDEX WORDS: International frame, Domestic frame, Education spending, Framing, Public policy

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Masters in Fine Arts

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## 1 INTRODUCTION

Education is an essential part of a society. One question that has long been part of the debate on education spending in the U.S. is whether spending makes a difference. The answer is yes: the amount of spending on education has a significant impact on its outcomes nationwide (Baker, 2012).

If education spending affects the quality and learning outcomes of students in the United States, the methods of garnering support for additional spending come into question. Often different frames are applied to media stories and political rhetoric regarding the state of education, most predominately “domestic” and “international” frames. Domestic frames refer to those that portray education as an internal, dysfunctional (or functional) system that is having negative (or positive) results within the country. This would include highlighting dimensions associated with education outcomes like changing college entrance exam scores, school closures, and teacher quality. The international frames used by politicians and media frame education outcomes in terms of how they compare to other nations worldwide. This would include a comparison of the U.S.’s ranking in things like basic skills compared to leading countries like China and many European Union countries. But do these frames actually have a significant effect on obtaining support for educational funding? This question is essential in understanding how best to approach campaigns for education spending.

### *1.1 Purpose of the Study*

The purpose of this study is to determine whether current techniques of framing education by media and policy makers are effective. With the American education system facing a continual decline in quality and funding, it is necessary to question whether current frames ap-

plied to this important issue are working to help maintain or increase support for funding. The study will test through survey methods whether individuals are motivated by the frames most often used in presenting education spending issues: domestic frames and international frames.

With so many media stories repeating the same information, such as declining or stagnant test scores, school closings and poor teacher performance due to funding shortfalls, and a falling rank internationally in terms of basic skills of American students, one must question whether this information is now falling on deaf ears. If these frames are no longer effective, alternative methods for increasing support must be researched and evaluated.

## 2 THEORETICAL FRAMEWORK

A common question in political research is how to gain support for legislation and government action for a given issue. When an important issue requires action, public support can be a significant factor in how it is handled. But how do government or interest groups motivate this support? Framing is an important part of achieving this goal, and the education sector often uses framing strategies in an attempt to gain support.

Education spending and the availability of funds for public education has long been a controversial issue in the United States. Policymakers have long sought to motivate support for education funding from the local level to the national level through a variety of means. However, funding continues to be on a pattern of decline in America, and one must question whether the methods of framing used to promote support for education funding may not be effective (Mortenson, 2012).

Investment in education is down, and schools that desperately need funds are closing because they cannot afford to even hire enough teachers or provide books. According to the American Council on Education, educational funding has been in a “race to the bottom,” as states have drastically reduced spending over the last two decades and continue to do so (Mortenson, 2012). Though there are occasional stories discussing the downward trend of primary and secondary educational quality in schools in the United States, it is not enough to keep funding from being cut time and time again (Mortenson, 2012). Americans seem to be aware that schools need to improve in some areas, since approximately half of those surveyed in a recent poll think that quality should be improved (Bushaw & Lopez, 2012). However, half do not see a

problem in school quality, which is troublesome given the evidence. Current frames that are applied to education focus on this as a domestic issue or on how America's education system will affect America's future on an international scale. Because of globalization and increasing transnational movements, the focus must be redirected to educational reforms that allow the United States to compete globally in the long term.

Because of the lack of success current framing has had in preventing budget and spending cuts, there must be more effective methods for influencing the attitudes of the public and congress members to garner more support for education funding and improvement initiatives. Framing has been a method used by those in power to influence political behavior and public opinion. A *framing effect* occurs when a speaker's focus on a subset of potentially relevant considerations causes a receiver to increase the weight given to that subset of considerations in the opinion formation process (Druckman 2001; 2011). Individuals look to elites to guide them and deliver information to them. This helps them form beliefs and opinions, especially if from a trusted source (Druckman, 2001). This creates an infinite number of opportunities for elites to "frame" the message to the audience in the hopes of influencing the recipient's attitude and beliefs about an issue.

Given the continual decline of funding and difficulty bolstering increased funding for schools as quality continues to go down, one must question whether frames used to discuss the state of education are effective any more. The domestic and international frames used often by the media to present issues in education funding (or the lack of funding and its implications in declining quality) may be used so frequently that they are no longer effective in garnering support from the public.

## 2.1 *Does education funding matter?*

First off, why do citizens agree that there should be a publicly funded education system? There are many reasons for this - to have a skilled workforce, public good, altruism, etc., but what motivates people to support funding given the impact on personal finance? Do stories of quality have a significant impact through framing that override these distinct reasons for support? Soares (2003) argues that self-interests are the primary reason for education funding because of the return they are able to provide over time. Framing can emphasize these benefits, such as showing the positive impact on the economy or competition with other states. It has been argued that both the amount of education spending matters and that it does not matter in terms of the quality of educational outcomes. However, several more recent studies show that it does in fact matter, and it matters significantly.

In 2011 New York Governor Andrew Cuomo said, “Not only do we spend too much, but we get too little in return. We spend more money on education than any state in the nation and we are number 34 in terms of results” (Baker, 2012, p. 1). However, this doesn’t provide any evidence that the money is being properly allocated or that if used properly and applied properly it would not have massive benefits. This type of belief is often why it is difficult to gain more support for increased funding. These types of comments lead to constant budget cuts because the idea is framed as though the money is not mattering. Baker states that it is “not just what you spend but how you spend it – however, before you can decide how to spend it, the funding must be available!”

Baker (2012) discusses at length how assertions that education spending does not matter to educational outcomes have been used to make massive cuts to funding in education systems in recent years. He argues that, “on average, aggregate measures of per-pupil spending are posi-

tively associated with improved or higher student outcomes” (p. iv). Though he notes that there are other factors that influence the outcomes given that they do in fact vary (even from one student group to the next), funding remains an integral part of the success of education systems in the United States. Furthermore, he discusses the positive impact on outcomes that school finance reforms have, noting “sustained improvements to the level and distribution of funding across local public school districts can lead to improvements in the level and distribution of student outcomes” (p. v). Resources matter as well, such as smaller classes and teacher salaries, as these are all associated with better student outcomes. However, without increased funding, increased resources cannot be obtained. Baker criticizes the belief in politics that quality and funding are not related, or that money does not matter – this is based on trends showing increased per-pupil spending along with stagnated test scores and a falling rank internationally of US schools, but the conclusion that money therefore doesn’t matter is false.

## *2.2 Sources of education funding*

General determinants of education funding include income, property values, number of school-aged children, etc. These can vary drastically from one district to the next because of demographic distributions. However, the willingness to contribute and support of increased funding can rise and fall on average depending on media presentation of the issue. The news and media are often the main framers of issues in education to the public, so how they frame issues heavily affects the opinions of those receiving the messages (Druckman & Parkin, 2005). Because most funding comes from local and state sources, individual voting for increased funding can heavily impact the broader base of support in local districts (Nord, 1983).

Public perception of education funding and the public’s willingness to support funding are important because they come from state and local tax bases; local citizens often vote on these

taxes and their subsequent cuts or raises (PBS). With approximately 93 percent of education funding coming from state and local levels, much of the revenue collected for education comes from property, income, and sales taxes. Traditionally, education funding is often perceived as a tax based formula; districts that collect more money have more ability to fund the local education system. Better performing schools, under acts such as No Child Left Behind, receive increased funding over those that perform worse.

Certainly the amount of money available will inherently affect the amount provided to education systems, though legislation continues to cut funding by presuming that money does not necessarily matter to outcomes. Individual contributions in a district can vary widely by tax bases, which can change based on market conditions, forcing districts to have to continually re-evaluate the needs of a particular district.

### 2.3 *Frames*

A common question in political research is how to gain support for legislation and government action for a given issue. When an important issue requires action, public support can be a significant factor in how it is handled. But how do government or interest groups motivate this support? Framing is an important part of achieving this goal, and proponents often use framing strategies in an attempt to gain support. Druckman and Leeper (2012) note that Public opinion is important because “it serves as the foundation on which democratic governmental action is based” (p. 50). So, influencing that opinion becomes essential to obtain particular results. That is where framing becomes an important part of political campaigns. According to Chong and Druckman (2010), “Public opinion formation *always* involves the selective acceptance and rejection of competing frames containing information about candidates and issues. Discussion and debate over the appropriate frames for conceptualizing an issue leads to common (albeit often

competing) perceptions and judgments about the consequences of a policy” (p. 319). Framing is defined by Chong and Druckman (2007) as “the process by which people develop a particular conceptualization of an issue or reorient their thinking about an issue” (p. 104). They argue that the general framing procedures include: identifying the issue, isolating a specific attitude, identifying an initial set of frames to create a coding scheme, and selecting sources for content analysis (i.e. mass media sources like newspapers or tv).

Chong and Druckman (2007) argue that the majority of the public does not hold a firm opinion on issues, but rather ones that are weak and therefore malleable. Individuals obtain cues and information through frames provided by elites on particular issues. Druckman (2001) defines a “frame” as “a word, symbol or other communication highlights a sub-set of the potentially relevant considerations toward an issue.” Similarly, Iyengar (1991) defines framing as “subtle alterations in the statement or presentation of judgment and choice problems” (p. 227). He also discusses the importance of using “specific words or phrases which have the ability to elicit core value systems,” arguing that the specific way frames are constructed can have significant impact if targeted at the audience the right way (Iyengar, 2005, p. 1). As mentioned before, a *framing effect* occurs when a speaker’s focus on a subset of potentially relevant considerations causes a receiver to increase the weight given to that subset of considerations in the opinion formation process (Druckman 2001; 2011). He shows that media is the main filter that frames issues for the public, as they often use rhetoric to convey political messages to the individual; most individuals do not hear or read the full source, such as a speech, so it matters more how the media frames something than how the originator attempted to portray a frame. Politicians create frames, which are reported by media (Klar, Robison, & Druckman, 2013). Voters get most of their information from the media on issues, so editorial slant plays a large role in influencing be-



liefs on particular issues, and the source quality is also an important aspect (Druckman & Parkin, 2005).

Scholars have developed literature outlining a number of different types of framing, such as equivalency framing and emphasis framing, which are highlighted by Druckman. Equivalency framing uses rationally similar statements that are interpreted and evaluated differently by the receiver; for example, Tversky and Kahneman (1984) performed a popular experiment that changed language regarding a hypothetical disease outbreak policy; the first discussed the effects of the policy possibly saving 200 of 600 lives, while the second discussed a 1/3 probability of saving everyone and a 2/3 probability of saving no one. Despite these two being equivalent, respondents mostly chose the first option because it sounded better. Emphasis framing, however, does not offer identical information. It emphasizes important (but different) aspects of a given issue in order to influence opinion. Each is valid and useful in framing techniques, depending on the desired outcome of those manipulating the message. Emphasis framing effects have received the most focus in political science (Druckman, 2011; 2012) and that is what will be focused on in the study described below.

Arceneaux (2009, p.1) discusses frame strength, noting that frames that can spur biases are more often considered strong versus those that would be weak. He argues that “frames that highlight averting losses or outgroup threats resonate to a greater extent than do other, ostensibly analogous arguments” (Druckman, 2011, p. 274). By applying treatments that stimulate the respondents to view the state of education as a threat to the community in different ways, the hope is to determine if these are strong enough to actually have an effect. Frame strength “increases in frames that highlight specific emotions, invoke threat against one’s own group interests, include multiple, frequently appearing, arguments, and/or have been used in the

past” (Klar, et al, p. 185). More research is needed regarding frame strength, however, and whether the strength can lose effectiveness over time through repeated use. Furthermore, additional research is needed on framing durability – are the effects long-lasting or do they wear off immediately after exposure? How does this relate to frames used in education funding?

Chong and Druckman (2013) describe the decaying effect on frames. Essentially, framing effects do decay over time, according to their research. This may apply directly to the frames used in education funding, as they have been used for many decades without much variation, possibly making them less effective in garnering support for increased funding from the public. They note that the declining effect of old frames opens the door for new frames to be highly effective.

Druckman (2001) discusses the use of frames extensively, noting that they emphasize “a subset of potentially relevant considerations [and] can lead individuals to focus on these considerations when constructing their opinions” (p. 230). This particular type of framing is referred to by Druckman as emphasis framing, which influences “overall opinion by causing an individual to alter the considerations on which his or her opinion is based” (p. 231). He also refers to it as “highlighting a particular subset of potentially relevant considerations” (Druckman, 2001). By framing an issue in a particular manner, it may be possible to bring certain considerations to the forefront of thought when an individual is evaluating a concept through language usage and information. Iyengar (2005) goes further to discuss how media tends to focus on a detrimental type of framing in media in America – episodic framing – which attains more viewer attention but often for negative stories that promote limited government and programs because of problems. Druckman does note that there are limitations to framing, specifically predispositions, source credibility, citizen deliberation, political information, and competition. For instance, ex-

isting biases may conflict with information provided in a frame, causing an individual to reject the frame. However, they still can be highly successful. This study seeks to utilize emphasis framing by testing its success on the opinions regarding funding for education in the United States.

Frames in communication are often made by politicians and the media to emphasize specific dimensions of an issue to a group or individual (Druckman, 2011). Druckman uses the example of the media “framing” a hate group’s rally: it can invoke a “free speech” frame (emphasis frame), which the viewer may be impacted by (Nelson, Clawson, and Oxley, 1997). Rather than criticizing the rally based on beliefs about the group itself and what it is saying, the viewer may be more likely to accept the event based on the rights of free speech. Alternatively, the frame presented may focus on public safety, causing a viewer to see this as an important issue. This impact is known as a “framing effect.” The strength of these impacts, or framing effects, is known as “framing potency.” The goal of this study is to determine whether an international frame is more potent in encouraging increased support for education funding over a domestic frame.

In terms of how framing effects are measured, the conventional expectancy model is used to evaluate quantitatively these effects (Chong & Druckman, 2011). Essentially, “an attitude toward an object is the weighted sum of a series of evaluative beliefs about that object.” Attitude is  $\sum v_i * w_i$ , where  $v_i$  is the evaluation of the object on attribute  $i$ , and  $w_i$  is the salience weight ( $\sum w_i = 1$ ) associated with that attribute. The weighted values are used to determine what effect different frames have on a particular belief. A person’s overall attitude is equal to the person’s value placed on the issue, both positive and negative and the weight given to each value. For example, a tax for education may have positive and negative values, such as the extra expense

(v1) and the benefit to the community (v2), and each will have a different importance, or weight, to the individual (w1 and w2). Chong and Druckman note that though it is hard to quantify beliefs, this is still a strong way to measure the effects of a frame, which they refer to as “frame in thought.”

#### *2.4 Frames used in education funding campaigns*

Following the 2012 elections, funding for education fell in more than half the states (“Education Funding,” 2012). Many taxes aimed at increasing revenue for education failed, such as a tax on cigarettes in Missouri. A similar tax proposed in other states failed, and other attempts to raise revenue failed in many areas when proposed to voters. So, when so many stories are used with frames to promote educational support in the media, why are they not being effective? Are traditional frames (as referred to herein as “domestic” and “international” frames) no longer effective?

One frame used frequently in education funding can be referred to as an international frame. This includes media coverage and policy framing in terms of America’s outcomes compared to other nations. China is a nation that is often compared to the United States in terms of quality and achievement, as it leads in basic skills against all nations.

During the Cold War, America experienced a significant increase in education funding in response to Soviet advances in space technology, along with increased student achievement. Some even credit the success of the Cold War to the significant achievements in education during this period (Yankelovich, 1984). Chomsky (1997) discusses the significant effects of a more closely tied federal government and education system, as well as the increase in funding directed at math and science that was an immediate result of this relationship during the Cold War. If competition was a successful motivator for governments and the public then, it may very well be

the same today. With such alarming trends in today's schools and the skills of students in the United States declining, public attention must be diverted to supporting education. If the mass public can be influenced through framing, it is imperative that elites utilize this to shape the attitudes and beliefs about education as much as possible so that future generations can flourish.

Framing with education is often presented through either the domestic or international frames. This is evident in multiple stories in various news outlets. For example, the New York Times recently discussed the failing skill levels of American students compared to other countries based on the most recent OECD data (Beard, 2013). US News reports Americans testing below average based on OECD results as well, arguing that "younger Americans have lost their competitive edge in the international market" (Beard, 2013).

A second NYT article discusses how many schools have required supplemental tutoring in the U.S. because students have been doing so poorly (Smith, 2013). Americans ranked weak to low in all areas tested. Other media reports discuss the problem of teachers teaching to standardized tests rather than building skills because of pressure to show positive results (O'Brien, 2013). This view is depicted in articles with titles like "N.J. Schools aren't failing us, we're failing them," showing criticism about how schools are managed in the U.S. (Smith, G., 2013). Often these articles cite budget and funding shortfalls as explanations for their "failing" (EAST ATL ARTICLE). Chong and Druckman (2011) note that the frequency of frames is important. However, repetitive frames appear to be less effective on those who are less knowledgeable on a given subject (Chong & Druckman, 2007). For this study, does the overuse of generalized frames regarding the state of education make them less effective? Are traditional frames still effective?

## 2.5 *Do frames in education funding matter?*

This is the main question this study seeks to answer, as funding continues to be cut time and again despite the use of the same frames in the media and by policymakers. Are the frames being used losing their effectiveness because they are heard to frequently and become so common? According to Arceneaux (2008), “Citizens not only are minimally informed, as nearly all scholars agree, but they are also prone to bias and error in using the limited information they receive. As a result, they will sometimes send distorted signals to policymakers, which in turn can exert perverse influences on public policy.” Based on this, the public’s misunderstanding of funding in education can apply pressure to politicians to change funding when inappropriate; they also can misunderstand the value of increased funding because of mixed messages about its effectiveness. Waite, Moos, Sugrue, and Cungang (2007) argue that “education has become more of a commodity – to be bought, sold, traded, and affected by all other market forces” (p. 18). Because of this, the public is becoming less effective as a tool for change. Former US Department of Commerce Douglas Baker argues that the U.S. must “create the conditions for international competition in education services with minimal government interference,” but critics say that this is not a good method because it removes public accountability by replacing it with private sector influence (p. 18). The public must be an active participant in shaping education and how it is funded. Waite et al. goes on to say that “political support for public schools, in the USA at least, is being undermined” and “budgetary constraints are forcing many schools to cut programs and services” (p. 19). It seems that an important aspect of education funding is to keep the public involved and to use frames that are effective in gaining their support for increased funding, as this is shown to increase positive results.

*Hypotheses:*

1. *The treatment of the domestic frame and the international frame will result in respondents being more likely to support increased funding for education than the control group.*
2. *The frames will result in respondents being more willing to pay a higher amount of taxes to support education spending compared to the control group.*
3. *When asked about education being essential to America's ability to compete in the global market, respondents exposed to the frames will have a higher score (on a 1-7 scale, 7 being the most essential) than the control group.*

If the above hypotheses are found to be valid, this would point to the traditional frames still being effective despite repeated use. However, if there is no effect by the frames, this would point to these frames no longer being effective. Further research would be needed to determine if one is more effective than the other and what new frames could be substituted to obtain increased support of funding.

### 3 METHODOLOGY

A survey experiment was presented to determine if public attitudes were affected based on an international frame or a domestic frame. The primary methodology for this study is exposing (or not exposing) individuals to frames regarding education funding and subsequent outcomes in the United States. A sample of 300 individuals was used to conduct a survey testing the hypotheses through Amazon Turk. Emphasis framing was utilized in the experiment to highlight education as a domestic problem versus highlighting education as an internationally competitive issue and comparing these results with a control group. One group received no frame and only a survey. One group received a domestically framed prompt on education funding and outcomes in the United States, and a final group received an internationally framed prompt on education funding and outcomes in the United States compared to other nations. The survey included three main dependent variables to test the level of effectiveness of the frames (see appendix A). The first two questions focus on willingness to support funding on a 7-point scale, while the third question asks respondents to determine how much they would be willing to increase their personal tax payments per year towards public education expenditures. The frames are shown below:



Table 3.1 Frames 1

	Wording
Domestic Frame	<i>Schools all across the United States are failing. Investment in education is down. Schools that desperately need funds are closing because they cannot afford to hire enough teachers or provide books in many areas. SAT scores are at a 40-year low, and 30% of college freshman must take remedial classes. It is crucial that education receive more support from the local, state, and federal levels, as well as the public. It is imperative that education improves so that students can be prepared for college and an increasingly competitive job market.</i>
International Frame	<i>This year, American students fell to 17<sup>th</sup> place in science, 23<sup>rd</sup>, in reading, and 31<sup>st</sup> in math. Countries that are major economic rivals, like China, are far surpassing American students in basic skills. It is crucial that American students be able to compete internationally, as globalization is increasing competition the political, social, and economic spheres. If students in America are not pushed and education is not given immediate attention, future generations will not be equipped to maintain the nation's position of power in the international community.</i>

The responses have been evaluated to compare the effectiveness of the frames to the control group based on average response for each frame, as well as an evaluation of the effects of demographic information on responses. Emphasis framing was utilized in the experiment to determine if commonly used frames have a substantial effect on attitudes towards education funding. Randomization of participants in each group controlled for most unobservable variables. The results were evaluated to determine any effects of the framing used in the survey, and these results will be compared to the control group using Stata.

## 4 RESULTS

The study sought to determine if traditional frames in education funding are still valid and effective. The control group was not given a frame and simply given the survey related to opinions about education funding in the United States. The second group was given a short prompt regarding domestic issues in education funding, including issues about school closings and the relationship to poor performance due to low funding. The third group was given a short prompt regarding international issues related to education in the U.S. and its ability to compete with other countries.

The dependent variables are the responses to three individual questions asked of all respondents of each of the three treatment groups. The first question asks, “To what extent do you support or oppose increasing funding for education in America?” The responses are on a 7-point scale from ‘extremely oppose’ to ‘strongly support’. The second question reads, “Do you believe that education is an important part of America’s ability to compete politically and economically in the global market?” A 7-point scale is also used to measure responses, with one being extremely unimportant and seven being extremely important. The third question asks, “How much are you willing to increase your individual tax contributions by per year?” The responses range along a 7-point scale with increments of \$0-50, 51-100, 101-200, 201-400, 401-700, 701-1000, and 1001+.

The demographic information for the respondents varied widely (See appendix B for full demographic information). The average age was 30, with ages ranging from 18 to 72. Seventy percent of the respondents voted in the 2012 election, as well. The average household income for respondents was \$40,000-49,999, though income was well dispersed among categories ranging from zero to \$100,000+. Regarding party, 13 percent reported being republican, 41 percent

democrat, and 27 percent independent. The variable for party was coded as a dummy variable for either “republican” or “not republican.” These variables were selected from the data in an effort to identify particular influences they could have on the results. Income was controlled for below in the model to ensure it was not a significant predictor of response for the questions, as was class, political participation, whether a respondent voted in the most recent national election, and party. The results of these are discussed below in Table 4.2.

Table 4.1 shows the conditions to which respondents were randomly assigned. The independent variables are listed on the left. The dependent variables include willingness to pay, funding support, and educational importance. Willingness to pay asks the amount a respondent is willing to pay in increased taxes him or herself. Funding support asks the degree to which a respondent supports (or does not support) increasing education funding in the U.S. Finally, educational importance refers to how important the respondent views education as an integral part of the nation’s future ability to compete in the global market.

Table 4.1 Summary of Variables 1

	Willingness to Pay	Funding Support	Edu. Importance
Control Group	Mean: 2.38 (Std. Dev. 1.56) N: 99	Mean: 5.79 (Std. Dev. 1.51) N: 100	Mean: 6.08 (Std. Dev. 1.34) N: 100
Domestic Frame	Mean: 2.19 (Std. Dev. 1.45) N: 100 <i>p value: .1856</i>	Mean: 5.83 (Std. Dev. 1.37) N: 100 <i>p value: .7711</i>	Mean: 6.28 (Std. Dev. 1.05) N: 100 <i>p value: .0000**</i>
Internat’l Frame	Mean: 2.41 (Std. Dev. 1.65) N: 100 <i>p value: .8740</i>	Mean: 6.12 (Std. Dev. 1.30) N: 100 <i>p value: .0125**</i>	Mean: 6.38 (Std. Dev. 0.98) N: 100 <i>p value: .0000**</i>

*Note: The scores for questions 2 and 3 above are mean responses on a 7-point scale with higher scores indicating increased support/effectiveness; the standard deviation and N for each question is in parentheses. The scores for question 1 are of the following ranges: 0-50, 51-100, 101-200, 201-400, 401-700, 701-1000, and 1001+. The averages all lie between 2 and 3, meaning the average respondent was willing to increase individual contributions of between \$51 and \$100. Noted are p-values from the difference of means tests where below .10 shows \*; \*\* for  $p < .05$*

There was found to be balance among the experimental conditions after testing covariates in a randomization check. Therefore, randomization was successful in controlling for differences in covariates like age and income. The conditions variables were not significant during the randomization check, showing that the experimental condition is balanced for these covariates. T-tests were performed for each independent variable as well.

T-tests were performed to compare the means of the independent variables. For funding support, the t-test was not significant for the domestic treatment but was within the 95% confidence interval for the international treatment. For willingness to pay, neither treatment was significant in the results. Finally, for educational importance, neither was significant but international was much stronger than domestic.

When the results are tested using regression analysis on the independent variables, controlling for income and age results in much stronger outcomes. Willingness to pay becomes significant within the 90% confidence interval with the international treatment once these two variables are controlled within the experiment. Table 4.2 shows the results of the independent variables.

Table 4.2 Ordered Probit Coefficients 1

Ind. Var	WTP		Funding Support		Edu Importance	
	<i>Coeff</i>	<i>SE</i>	<i>Coeff</i>	<i>SE</i>	<i>Coeff</i>	<i>SE</i>
<b>Domestic</b>	-.20	.23	-.04	.158	.211	.166
<b>International</b>	-.08	.23	.30*	.164	.309*	.171
<b>Income</b>	.05	.04	.01	.026	-.015	.028
<b>Participation</b>	.08	.07	-.02	.048	.071	.050
<b>Class</b>	.09	.17	-.01	.080	-.026	.085
<b>Party</b>	.01	.06	-.02	.041	-.020	.043
<b>Vote2012</b>	-.14	.22	-.32	.151	-.194	.159

The columns contain ordered probit coefficient estimates predicting experimental treatment effects relative to the control (baseline) condition. \*\*\*  $p \leq .01$ ; \*\*  $p \leq .05$ ; \*  $p \leq .10$  (one-tailed tests).

According to Table 4.1, the mean for the respondents' willingness to increase payment each year increased only marginally with the international frame to 2.41 from 2.38 and decreased with the domestic frame to 2.19, which shows that most individuals were not enticed to pay out of pocket more each year for education based on the frames. In terms of funding support where respondents were asked if they support increased governmental funding for education, the international frame was significant with a p-value of 0.0125, as the mean increased from a baseline of 5.79 to 6.12. The domestic frame was not found to be significant, however, only increasing the baseline to 5.83. The mean for educational importance, where respondents were asked to determine how important they think education in the United States is to its ability to compete in a global market, increased both with the domestic frame and the international frame to 6.28 and 6.38, respectively, from a baseline of 6.08.

The variables included in the model are shown in table 4.2. The only variable shown to have a significant effect within the 90 percent confidence interval is the international frame. Income, party affiliation, political participation (frequency of voting and the level at which respondents vote), whether respondents voted in the 2012 election, and class were controlled for in the model. None of these was significant, though the international frame was significant with p-

values below the 0.10 threshold for funding support and educational importance. No variables were significant in willingness to pay, showing that individuals were more willing to support government spending on education but not if it increases their personal contributions in taxes each year. Individuals were also more likely to agree that education is important to the United States's ability to compete in a global market with the international frame than the control or the domestic frame.

Hypothesis 1 is supported by this data. Both the domestic frame and the international frame showed an effect on funding support, with the international frame being significant within a 90% confidence interval. Hypothesis 2, however, is not supported by the data, showing only a marginal difference between the treatments and control group, with domestic showing a decreased response rate and international showing only a small increase that is not significant. The final hypothesis asserted that the frames would be significant for educational importance. The international frame was significant within a 90% confidence interval, but the domestic frame was not found to be significant over the control. In sum, there is evidence to support an effect of the international frame on the dependent variables for educational support, but little to no support through the domestic frame. However, the support is positive in showing that individuals from the control and both treatments are in support of greater educational funding and agree that it is necessary to support education given growing globalization.

## 5 CONCLUSION

If spending on education matters for outcomes, then surely the methods of gaining support for education matter as well. The determinants of spending have been discussed and contribute to the amount of spending, but frames applied by media and policymakers certainly have an effect as well. However, as this study shows, some frames are not effective but continue to be used frequently. Effective frames should be the focus if they are to have an impact on their audience.

Further research could indicate which frame, domestic or international, is more effective in increasing support. Interestingly, there were significant results with the international frame but not with the domestic frame in many instances. Results from this study indicate that the international frame was more successful in obtaining support than the domestic frame, which could mean that the domestic frame has become weak after repeated use by politicians and media. The reason for this could certainly be explored in more detail, as this could point to more effective strategies for increasing the effect of frames in education. This would allow policymakers to better focus their campaigns for support in a way that would maximize results. The reasons for such a difference would also be important to understand, as it would be interesting to look at why one frame or the other better motivates Americans to be willing to provide greater funding support for education spending.

Theoretically, the international frame may have had a stronger influence on respondents than the domestic frame for a number of reasons. It may be, though this is only speculative until further research is applied, that when looking internally, Americans see problems within the edu-

cation system but feel it is quality as a whole and may not see the need for additional funding to solve its problems. When compared to international competitors (especially economic competitors), it may become a more important and pressing issue because it shows the success and failure of the system in comparison to other systems around the world. Perhaps the ideology of Americans contains a strong competitive aspect that may generate the desire to outperform others, leading to a stronger support for education than when it is viewed primarily as an internal problem. These issues would be interesting to explore in further research and testing in the future. It would be important for policy makers to understand which frames are effective and which are not so that they are able to maximize their efforts when attempting to garner greater support for education funding in the future, as evidence shows some commonly used frames regarding education funding are no longer effective.



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## APPENDICES

### Appendix A

#### *Appendix A.1 Treatments*

**[control]** No text.

**Treatment 1: [Domestic Frame]** Schools all across the United States are failing. Investment in education is down. Schools that desperately need funds are closing because they cannot afford to hire enough teachers or provide books in many areas. SAT scores are at a 40-year low, and 30% of college freshman must take remedial classes. It is crucial that education receive more support from the local, state, and federal levels, as well as the public. It is imperative that education improves so that students can be prepared for college and an increasingly competitive job market.

**Treatment 2: [International Frame]** This year, American students fell to 17<sup>th</sup> place in science, 23<sup>rd</sup>, in reading, and 31<sup>st</sup> in math. Countries that are major economic rivals, like China, are far surpassing American students in basic skills. It is crucial that American students be able to compete internationally, as globalization is increasing competition in the political, social, and economic spheres. If students in America are not pushed and education is not given immediate attention, future generations will not be equipped to maintain the nation's position of power in the international community.

*Appendix A.2 Survey Questionnaire*

1. To what extent do you support or oppose increasing funding for education in America?

Extremely oppose in- creased funding	Moderately oppose in- creased funding	Slightly oppose in- creased funding	Neither increase or decrease	Slightly support increased funding	Moderately support in- creased funding	Strongly support increased funding
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2. Do you believe that education is an important part of America's ability to compete politically and economically in the global market? (1=extremely unimportant, 7=extremely important)

1	2	3	4	5	6	7
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3. How much are you willing to increase your individual tax contributions by per year?

\$0-50	\$51-100	\$101-200	\$201-400	\$401-700	\$701-1000	\$1001+
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4. What is your age? \_\_\_\_

5. DO you identify as:

- a. Working class
- b. Lower middle class
- c. Middle class
- d. Upper middle class
- e. Upper class

6. What is your estimated household income?

- a. No income
- b. 1-9,999
- c. 10,000-19,999
- d. 20,000-29,999
- e. 30,000-39,999
- f. 40,000-49,999
- g. 50,000-59,999
- h. 60,000-69,999
- i. 70,000-79,999
- j. 80,000-89,999
- k. 90,000-99,999
- l. 100,000+
- m. Decline to answer

7. Which best represents your political affiliation?

- a. Republican
- b. Democrat
- c. Independent

- d. Green Party
  - e. Tea Party
  - f. I do not identify with any party
  - g. Other \_\_\_\_\_
8. How strong would you rate your participation in politics?
- a. Very strong
  - b. Strong
  - c. Somewhat strong
  - d. Average
  - e. Somewhat weak
  - f. Weak
  - g. Very weak
9. Did you vote in the last election?
- a. Yes
  - b. No

***Appendix A.3 Demographic information***

Characteristic	<i>n</i>	%
Age		
18-28	160	55
29-38	91	31
39-48	27	9
49-58	10	3
59+	5	2
Party		
Democrat	123	13
Republican	38	41
Independent	81	27
Green	4	1
Tea	2	1
None	43	14
Other	9	3
Class		
Working Class	78	26
Lower Middle Class	72	24
Middle Class	123	41
Upper Middle Class	23	8
Upper Class	2	1
Income		
\$0-9,999	7	2
10,000-19,999	19	7
20,000-29,999	36	13
30,000-39,999	34	12
40,000-49,999	39	14
50,000-59,999	31	11
60,000-69,999	29	10

70,000-79,999	21	7
80,000-89,999	29	10
90,000-99,000	14	5
100,000+	10	3
Did you vote in the 2012 election?		
Yes	209	70
No	90	30
Level of Political Participation		
Very Strong	20	7
Strong	42	14
Somewhat Strong	56	19
Average	89	30
Somewhat Weak	59	20
Weak	18	6
Very Weak	15	5

\*Percentages are rounded to the nearest percent.