



Preparing America for the 21st Century:
Values that Work in Promoting Education Reform

A FrameWorks Research Report

Prepared for the FrameWorks Institute

By

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INTRODUCTION

There are few social issues that elicit more public concern in the United States today than the performance of America's schools and the plight of the students enrolled in them. It is no surprise then that research undertaken by the FrameWorks Institute to understand how Americans think about the education system found great pessimism in the public discourse about the prospects for effective policy reforms.¹ This kind of public melancholy is made worse by the general perception that the problems with America's schools extend across the entire education trajectory: from unfunded (and in some cases, underfunded) preschools; to elementary and secondary schools that fail to prepare and inspire students to pursue higher education; and to the challenges colleges and universities face in successfully attracting and graduating sufficient numbers of qualified, capable entrants to the American workplace.

In spite of the almost universally morose tone of public debate and deliberation, education policy advocates have proffered a myriad of proposals to revamp, reorient, and even resize the nature, scope, and content of what American schools offer to students. As state and federal education budgets shrink in the face of contentious battles around the reauthorization of the No Child Left Behind Act² (the most sweeping federal education policy in the United States), the need for progressive education reformers to explain to the public the direction in which reform efforts ought to move becomes even more critical. That is, as education reform debates become more contentious, attempts to enroll public support for reform proposals that redirect and ultimately improve the performance of that system are especially paramount.

The attempt to enroll the public in support for progressive reforms is no small feat, and efforts to galvanize constructive public deliberations about education policy proposals have posed their own dilemmas. On the one hand, advocates have found that when they have tried to engage the public in these debates, the propensity to view the educational system myopically has greatly constrained this discussion. The public's tendency to operate from the vantage point of teachers, students and their parents -- in isolation of other institutional actors, resources, practices or policies -- has greatly undermined their agency in consideration of how to fix what's wrong. For example, very few Americans think about school leadership (from superintendents, to school boards, to federal and state education policymakers, etc.), programs and policies, pedagogy and curricula, facilities, human resource and staff management, and other aspects of the education system, when they think about education.³ Yet education reforms rely on at least an implicit understanding of the resources that these key educational actors and institutions bring to the table. Indeed, most education advocates believe that these features must become the subject of progressive

efforts at reform in order to fully improve the quality of schools and academic outcomes for students across the entire system. Consistent with this assumption, FrameWorks researchers have found that without specific attempts to “widen the lens” that the public uses to think about the efficacy of education reform proposals and how different parts of the system might function more synergistically, very little inspired public discussion emerges on its own.⁴

On the other hand, advocates are clear that they need greater public support to legitimately and successfully pursue genuine reform of the educational system. As such, they have fostered the expectation and hope that the public could be usefully involved in education policy decision-making – decision-making that could have far-reaching and direct impact on the 76 million children and adults enrolled in school at some level – from nursery school to college – in the United States today.⁵ Most advocates acknowledge that there is a need to imbue these discussions with the tone of collaboration, mutual benefit, and collective good. With the propensity of many public debates in the United States to devolve into a series of “us” versus “them” conversations about who wins and who loses – especially when the debate is about public funding – it is particularly important that education advocates develop ways to remind the public of its shared interests in improving the educational system for everybody. FrameWorks research has shown that there are many ways to help broaden the cognitive space from which the public engages social issues, but the articulation of strategically aligned values – that is, values that reorient people to align the subject matter with deeply held prescriptions for desirable outcomes – have been found to be a critical component of constructive public conversations.⁶

In this paper, we use experimental research methods to test the capacity of several different values (all of which emerged from our qualitative research on education reform) to elevate public support for progressive education reforms. Stated more formally, the research question addressed by our research is: *Are there particular values that can be shown to elevate public support for a progressive educational policy agenda, thereby improving prospects for a more productive and optimistic public conversation about education reform efforts?*

This report details the results from an experimental survey of 1,852 registered voters in the United States and is the first of two such reports that assess the extent to which strategically aligned values elevate public support for a wide range of progressive education reforms. More generally, this study is a part of a much larger effort supported by the Lumina Foundation for Education and the Nellie Mae Education Foundation to improve communications about reform of America’s educational system. In this report, we discuss the role that values play in orienting people toward social issues, why values are likely to be

particularly useful on the issue of education reform, and then detail the results of our efforts to empirically test their performance in elevating public support for education reforms.

THE “VALUE” OF ARTICULATING VALUES IN PROMOTING EDUCATION REFORM

A decade of FrameWorks research confirms a growing body of scholarship from the social and cognitive sciences which strongly suggests that how social issues are framed has a significant impact on how the public understands cause and effect; what role they attribute to public and private actors; and what effective solutions might entail.⁷ To extend the practical application of this work to communications practice, FrameWorks has done a substantial amount research and writing to provide advocates with a useful taxonomy for understanding the key elements of issue frames and how to use those elements to reshape discourse around social issues.⁸ In that taxonomy, one of the most important elements of the frame is the articulation of a strategically aligned value.⁹

By “value,” we mean the big ideas like freedom, justice, and individual responsibility that serve to structure how people reason about social issues. In fact, because these types of broad ideas tend to powerfully shape the contours of policy thinking, the role of values is akin to a gatekeeper – inviting people through a particular doorway to connect with an issue and then inviting them to think more broadly about opportunities to develop public strategies that address it. In addition to having the public reason about social issues from the vantage point of a values perspective, values also have the added benefit of helping the public understand the far-reaching consequences of failing to address the issue as a “public” issue. The latter has been shown in prior FrameWorks research to improve public receptivity to policy proposals across a wide variety of issue areas.

Our task in this research has been to use our qualitative work on how Americans think about education and how the public discourse is shaped by cultural patterns of discussion to identify, refine, and empirically test the ability of a set of values to extend the public’s receptivity to progressive education reform proposals. This process is a central component of Strategic Frame Analysis™ – a methodological approach developed by the FrameWorks Institute – and it is integral to our ability to empirically test messaging recommendations. More specifically,

Strategic frame analysis adopts the position, now current in several academic disciplines, that people reason on the basis of deeply-held moral values, more than on the basis of self-interest or “pocket-book” appeals. When we approach people as citizens, parents and stewards of their communities, we tap into powerful models that guide their thinking about themselves and their political

responsibilities.¹⁰

On this issue, as discussed in more detail in the methods section of this report, we selected a set of candidate values that emerged from our qualitative work and were considered to be values that could address the cognitive mistakes typically made by the public in thinking about education. We then used the qualitative research to do some initial experimentation with those values and then, subsequently, identified a small set to take into the full quantitative experimental survey research. The findings detailed in this report allow us to measure the power of employing strategically aligned values on public deliberations around education reform.

SUMMARY OF THE FINDINGS

- At the most basic level, the findings discussed in this report reconfirm what we have found in the balance of our experimental research – getting any value in the communications message is better than getting no value if you wish to lift support for reform policies. As such, we find that all of the four values tested (Future Preparation, Common Good, Fairness Between Places, and Ingenuity) moved public support above the control group. Only one value however – Future Preparation – proved to be statistically significant on three of the four types of policy batteries we used.
- Our findings provide strong confirmation that communications about education reform that incorporate Future Preparation as a value are likely to elevate education policy support. As iterated in the survey, the Future Preparation message relied heavily on the idea that “pursuing policies that add new skills to the traditional curriculum to provide excellent schools, adequate educational resources, and quality educational experiences for our children” is an important societal goal worthy of policymakers’ attention.
- In the experiment, we tested policy support across four types of policy batteries (policy support, policy inoculation, policy tradeoffs, and policy priorities) and found the strongest support for progressive education policies on the policy tradeoffs battery where survey respondents were asked to choose between different policy directions. Survey respondents were asked to make a series of six policy tradeoffs that included, for example, refocusing educational curricula on “the basics” (or skills like reading, writing and arithmetic) versus teaching the basics plus 21st century skills (general skills like teamwork that can help students prepare for the challenges of the 21st century). We found that when survey respondents were given a choice between two opposing policy directions and asked to indicate their support for one over the other, they were more likely to choose progressive education reforms – especially after exposure to Future

Preparation. Our findings suggest that providing a broader context for the reform (in this case juxtaposing it to an alternative) may work well with values to further broaden the lens through which people see the importance of the solutions presented.

- The experiments reported herein also provide greater confirmation about the strategic role that values play in an issue frame. Of the four types of policy batteries used in the survey, the only one in which Future Preparation failed to reach statistical significance was the policy inoculation battery – a battery which tested the facility with which the value made respondents less likely to support anti-progressive policies. In general, the values tested in our experiments did not serve this task very well, and this finding supports prior FrameWorks experimental work that has underscored the important role of simplifying models¹¹ (metaphors that explain an important mechanism on an issue) in performing this task. As such, values (as one element of the issue frame) are effective in helping to elevate public support for progressive educational reforms, but they have not been shown to have the capacity to help the public understand why anti-progressive reforms are problematic. Education advocates will need to use the simplifying models developed for education to do the latter.
- In terms of the policy priorities, Future Preparation was the most successful value we tested to determine which best influenced policy salience. It is interesting to note that the most dramatic increase in salience across the values treatments occurred around the issue of funding for poor schools – for which several values including Future Preparation produced statistically significant increases in policy support. On this equity issue, the value Fairness Between Places actually proved most successful in shifting public support, followed closely by Future Preparation. Thus, we find that in discussions of equity issues, either value (Future Preparation or Fairness Between Places) is likely to be useful in moving public support in the right direction.
- We also examined the extent to which the values led respondents to increase support for the notion of broad social responsibility in addressing the problems in the educational system. We find that Future Preparation was the only value of those tested to demonstrate a statically significant positive impact on how the public sees the role of government and other institutional actors (like churches, schools, public/private partnerships).
- We find that variation in policy support across gender, race/ethnicity, party affiliation, educational background and the presence of school-aged children at home after exposure

to the value of Future Preparation is relatively minor. That is, the reaction to Future Preparation was uniformly positive and productive across a wide variety of social groups.

- Finally, when we looked specifically at policies geared toward different levels of the educational system, we found that Future Preparation performed well in terms of its ability to shift support for K-12 and higher education policies but did not do well on policies at the pre-school level. At the preschool level, only the value Ingenuity was shown to elevate public support in a statistically significant way. As a result, we conclude that advocates will need to be careful as they create communications about education reform for different parts of the education system – values that work to advance policies at the K-12 and higher education levels are not consistent with those that elevate policies at the preschool level. This is partially due to the fact that early education is not viewed as “belonging” to the domain of education in the same way that K-12 does and thus, different patterns of default reasoning are observed and different reframing strategies required.

RESEARCH METHODS

The findings in this paper are drawn from an experimental study conducted in June of 2009. The study included a nationally representative sample of 1,852 registered voters (weighted on the basis of gender, age, race, education and party identification¹²) and was drawn from a national online panel.¹³ More than 500 respondents were assigned at random to the control group (517), while the remainder was assigned to one of four experimental conditions.

The theory of random assignment in evaluation research design suggests that any variation between the control and the treatment groups not stemming from exposure to the stimuli of the treatments should be negligible or nonexistent. To test this proposition more specifically in our research, we conducted a series of overall F-tests to determine if there were any systematic differences in the race, gender, education and party affiliation between the treatment and control groups. We found no differences significant at the $p > .10$ level. Even so, as an additional precaution against selection bias caused by prior disposition or other observed characteristics, we also used statistical methods to control for the impact of a discrete set of demographic and political variables available to us. Whenever such methods are used to control for these factors, we note that in the text.

The Treatments

In this study we test the effectiveness of several values in lifting support for policies related to education system reforms in the United States. The treatments consist of text-based stimuli to which the subjects in the study are exposed. Four text-based treatments were developed to present each of the values as the primary reason why society should make substantial reforms to the educational system. The four values we tested in this research (*Future Preparation*, *Common Good*, *Fairness Between Places*, and *Ingenuity*) all emerged from several iterations of qualitative work (including interviews, media analyses, and peer discourse sessions) on the issue of education reform.¹⁴ Each of the treatments convey the idea behind a particular value and the overall setup of each treatment was kept parallel with the other treatments in order to increase the validity of the results. That is, the specific wording in the setup of the treatments as well as the policy examples used in each of the treatments remained relatively uniform despite the fact that they were meant to convey very different ideas. In fact, the number of words in each treatment was about 110, and this varied by no more than five words across all of the treatments. Finally, the text of the treatments were evaluated for their readability and show that the average reading level was about 10th grade.¹⁵ The specific text of each of the treatments can be found in Appendix A.

Data Collection

In this study, subjects were first asked to respond to a brief series of introductory questions where they rated their level of concern about a set of unrelated political issues. To avoid contamination of testing effects, the series of political issues offered to subjects was rotated each time the survey was administered and was quite broad in subject matter. Immediately following this series of questions, subjects were assigned to either a treatment condition and their treatments were shown on the screen, or they were assigned to the control condition (in which case they received no stimulus). Subsequently, all subjects were then asked to answer questions related to their support for a range of policies and their preferences with regard to how social problems, in general, should be addressed by policymakers. Questions within each of these outcome areas were rotated to mitigate against order effects.

Measuring Policy Support and Attitudes of Social Responsibility

Subjects participating in the survey were asked a series of questions that allowed us to measure their educational policy preferences and the stability of these preferences on three different types of cognitive tests. We also evaluated the extent to which subjects viewed

responsibility for improving the educational outcomes of America's children at the individual or societal/systems level. That is, as part of this study we developed two sets of measures with which we could essentially test whether exposure to the values treatments (outlined above) improved support for education reform policies and collective problem solutions.

Policy Preference Measures

To capture subjects' policy preferences, we developed several different policy questions (referred to here as policy batteries) to tap the approval/disapproval dichotomy of a series of progressive education policy proposals. First, we collected a list of policy proposals being debated and discussed among education policy advocates. Those proposals were then used to devise a series of questions posed to subjects that helped us to measure the performance of the values, ensure the validity of our findings, and test their sensitivity across different kinds of cognitive tests. More specifically, we asked three different types of questions meant to engage subjects in three different kinds of cognitive tests – making direct policy choices, comparing policy alternatives (or tradeoffs), and ranking policy priorities.

In the first set of “tests,” we measured subjects' ability to make policy choices in a fairly straightforward way – asking whether respondents strongly favored, favored, opposed, or strongly opposed a list of progressive policies – and examined the extent to which exposure to any of the value treatments made subjects more likely to support progressive policies. Findings from this test are represented in the *policy support battery*. To increase the validity of this test, we developed a short battery of questions that favored anti-progressive education reforms and essentially “reversed” the direction of policies. Our task here was to test the “inoculation” power of the values (that is, the extent to which subjects would reject policies that were relatively anti-progressive and somewhat antithetical to the collectivist nature of the value treatments to which they were exposed). From these questions, we derived an additional battery under the general heading of policy support – the *policy inoculation battery*.

A second set of questions asked respondents to make explicit tradeoffs between two opposing policy directions. These questions were developed to test the effect of the values treatments on the ability of subjects to choose progressive policy options in the face of other equally appealing, but polar opposite policy directions. We constructed this battery to examine the impact on thinking when respondents are specifically tasked with making an explicit policy tradeoff. In the paper, the findings related to this set of questions can be found under the header, *policy tradeoff battery*.

Finally, the third “test” examined the ability of the values treatments to shift policy priorities

in favor of progressive education priorities. Here we simply asked respondents to rank their policy priorities using a list of educational reforms presented to them. We wanted to see the extent to which any of the values treatments directed respondents to see progressive reforms as more salient. The findings related to these issue rankings are found under the heading, *policy priorities battery*.

Attribution of Responsibility Measures

In addition to the batteries that evaluate respondents' policy preferences, we also wanted to capture the extent to which our respondents attributed responsibility for policy change to societal rather than individual level efforts. To do so, we incorporated a separate set of evaluative measures into the survey and asked subjects to locate themselves along a continuum of support for several potential actors as problem-solvers. These measures asked respondents specifically about the role of government, government funding, public private partnerships, charitable and community-based organizations in helping to improve the educational outcomes for America's children. In this report, these measures are referred to as the attribution of *social responsibility battery*.

To prepare the policy and attribution questions for analysis, we first pre-tested them with a small pilot sample. Once the pilot suggested that the inter-item correlations between the questions within each battery were reliable, we continued to field the study until all 1,852 cases had been collected for each study. With the full survey in hand, we subsequently performed a factor analysis to confirm that the batteries were, in fact, distinct and made modifications where necessary. We then performed a Cronbach's Alpha test for the fidelity of the scales in the battery to gauge its general reliability. All tests demonstrated that the respective scales displayed coefficients well above the range of acceptability – reliability scores for all of the batteries were greater than .85. Assured of the reliability of the batteries as independent scales, we collapsed the questions into index variables that were subsequently used as outcome measures in the statistical analyses that follow. In addition, for ease of interpretation, these variables were rescaled to range from 0 to 1 and are reported in these increments. The complete list of questions used to evaluate policy preferences can be found in Appendix B and the questions used to measure attribution of responsibility can be found in Appendix C.

FINDINGS

In this report, we evaluate the performance of four values for their ability to improve public support for progressive education reforms and broaden public thinking about the efficacy of

public solutions. In this section of the report, we present our findings by reporting the effects associated with exposure to the values treatments. Treatment effects are defined here in terms of differences in mean scores between the control condition and the experimental treatments. To estimate the treatment effects, we used a series of generalized linear regression models. Regression analysis is a useful technique because it measures the strength of the relationship between multiple variables of interest simultaneously. In addition, a number of control variables were added to the regression models (including race, gender, class, party affiliation, age, education, region of residency, religious affiliation and marital status) to increase the precision of the measurements. Thus, the findings presented here evaluate the performance of the treatments in light of the influence of these demographic variables.

Study I: Measuring the Strength of Values on Public Policy

Policy Support

We first evaluate the performance of the value treatments on our policy support battery. The policy support battery is a straightforward test that taps the approval/disapproval dichotomy – asking respondents if they favor or oppose a set of progressive education reforms. We combined their responses in an index and summarized the results in Table 1.

Table 1. Education Reform Policy Support	
Summary of Overall Treatment Effect	
Treatments	Control Group
All Values Treatments Combined	.010 (.010)
Summary of Discrete Treatment Effects	
Treatments	Control Group
Common Good	.005 (.014)
Fairness Between Places	.012 (.014)
Future Preparation	.024 (.014)*
Ingenuity	.000 (.013)
Note 1: Statistically Significant Differences *** $p \leq .001$; ** $p < .05$; * $p < .10$ Note 2: Standard errors are indicated in parentheses. Note 3: Several controls were included (age, race, party, marital status, religious observance, income, region of residence, and news attentiveness).	

The findings suggest that the treatment effects for all the values we tested have means that

are above the control group and appear to move public support in the right direction. We also find that one of the values, *Future Preparation*, proved to be statistically significant with a treatment effect that is twice the size of any of the other values tested. This suggests that communications around education reform that incorporate the idea of *Future Preparation* are more likely to advance public support for those reforms. The specific iteration of *Future Preparation* can be found in Appendix A, but it essentially focused on “pursuing policies that add new skills to the traditional curriculum to provide excellent schools, adequate educational resources, and quality educational experiences for our children.”

Policy Inoculation

In addition to evaluating the treatments in terms of their impact on support for progressive education policies, we also wanted to evaluate the values in terms of their ability to steer respondents clear of alternative, anti-progressive policies or to “inoculate” survey respondents against choosing policies that education advocates have deemed to be problematic. The specific questions in this battery can be found in Appendix B, and Table 2 summarizes the findings from the battery.

Table 2. Education Reform Policy Inoculation	
Summary of Overall Treatment Effect	
Treatments	Control Group
All Values Treatments Combined	.008 (.010)
Summary of Discrete Treatment Effects	
Treatments	Control Group
Common Good	.067 (.041)
Fairness Between Places	-.004 (.042)
Future Preparation	.036 (.041)
Ingenuity	.000 (.040)
<p>Note 1: Statistically Significant Differences *** p ≤ .001; **p < .05; *p < .10 Note 2: Standard errors are indicated in parentheses. Note 3: Several controls were included (age, race, party, marital status, religious observance, income, region of residence, and news attentiveness).</p>	

In general, the findings suggest that *the values do not perform the inoculation function very well*. That is, our analyses found that: (1) none of the values tested on these measures

approach statistical significance; and (2) the lack of statistical significance is likely because the standard errors (in the parentheses next to the effect) are much higher than on the policy support battery – which indicates that there was much more variation in the answers to the inoculation questions among survey respondents. The latter suggests the values treatments failed to galvanize and effectively drive down enough of the public’s support for these measures to signal a sizeable effect. So, values (as an instrument of communications in the education frame) demonstrate little effect on the extent to which respondents steered clear of, or were “inoculated” against, anti-progressive policies.

This finding confirms existing FrameWorks research and provides more evidence about the discrete role that values play within an issue frame versus what other elements of the frame do. More specifically, in several experimental studies (including our work in early child development and in identifying simplifying models for education), we found that our simplifying models were outperforming the values in terms of their ability to drive down support for anti-progressive policies. Simplifying models are metaphors that explain an important mechanism on an issue and help to clarify key components of the issue for the public. In our paper on child mental health, for example, we speculated that this was likely because the models explain important challenges around child mental health that, once illuminated and made more concrete in the public mind, open up “a whole host of related public policy options” but also make clear why other policy options are not helpful.¹⁶ As such, simplifying models seem to offer information that helps the public understand key mechanisms that undergird or exacerbate the problem and, in so doing, help to cancel out unproductive policy directions. Thus, consistent with our expectations, we find that *values are effective and essential in helping move public support for progressive educational reforms forward but are less directive in helping the public understand why anti-progressive reforms are problematic*. The latter task is much better suited for simplifying models.

Policy Tradeoffs

Although our analyses suggest that values are not particularly good at inoculating the public against bad policy choices, our findings on policy tradeoffs show that they do a much better job in helping the public make choices between discrete policy outcomes. Here we examine the results of several questions in the experiment which asked respondents to choose between educational policies that were juxtaposed to one another. For example, respondents were asked to choose between a policy direction that would focus education reforms on “teaching the basics” of reading, writing and arithmetic versus teaching these basics plus “new types of skills necessary for the 21st century.”

Table 3 outlines the findings related to the education reform policy tradeoffs. Here we find that the values in general move policy support in the affirmative direction, but consistent with our findings on the policy support battery, only one – Future Preparation – has a statistically significant effect. Moreover, of all the batteries included in our analyses, Future Preparation has the most dramatic effect (with a treatment effect of .158) on policy tradeoffs and proves to be statistically significant.

Table 3. Education Reform Policy Tradeoffs	
Summary of Overall Treatment Effect	
Treatments	Control Group
All Values Treatments Combined	.056 (.063)
Summary of Discrete Treatment Effects	
Treatments	Control Group
Common Good	.011 (.085)
Fairness Between Places	.015 (0.88)
Future Preparation	.158 (.086)*
Ingenuity	.038 (.083)
Note 1: Statistically Significant Differences *** $p \leq .001$; ** $p < .05$; * $p < .10$ Note 2: Standard errors are indicated in parentheses. Note 3: Several controls were included (age, race, party, marital status, religious observance, income, region of residence, and news attentiveness).	

More generally, we observe that the treatment effect for Future Preparation on the policy tradeoff battery is substantially higher than for the policy support battery. In fact, the treatment effects for all the values are higher on the policy tradeoff battery than on the policy support battery. This may indicate that *the effect of values on public thinking is much more dramatic when there is choice between two discrete policy directions.*

Advocates should not take this to mean that giving the public more policy information, in and of itself, is necessarily the way to build more public support for a progressive agenda.¹⁷ Indeed, we have found that on some issues this is helpful (for example, in communications about budgets and taxes¹⁸) but on other issues (like race¹⁹) giving more information, particularly policy specific information, can actually lower policy support. As a result, a word of clarification is necessary here. Our findings suggest that providing a broader context for the reform (in this case juxtaposing it to its alternative) may work well with values to further broaden the lens through which people see the importance of the solutions presented. Put simply, values may be especially useful if they are mapped onto a concrete policy and

used to distinguish it from another policy that is inherently misaligned with that value.

Policy Priorities

We also asked respondents to rank their top three policy priorities (in a list of issues given to them) in the order that policymakers should address them. That list of priorities included nine general policy directions (some progressive, others not) that ran the gamut from incorporating merit-based pay systems for teachers, to generating more standardized testing for teachers and students, to providing more funding for funding for low-income schools. Our initial task was to ascertain whether the value treatments would elevate progressive policies over others. The general conclusion from our analyses is particularly interesting and informative.

Future Preparation was most directive in elevating the salience of progressive policies but also had some impact in elevating anti-progressive ones as well. That is, Future Preparation was shown to increase the salience with which survey respondents ranked a whole range of policies – including several anti-progressive ones. Our earlier discussion of policy inoculation sheds light on this result. While values do a good job of raising public support for progressive education reforms, they have not been shown in our work to suppress support for anti-progressive policies. We suspect that effective values (in this case, Future Preparation) serve to increase the overall sense of efficacy for policy reforms but do not offer the public a mechanism with which to effectively adjudicate the benefits of progressive versus anti-progressive policies. Our experience is that simplifying models are much better at the latter task because they make more concrete those aspects of the problem that highlight how progressive policies address the issue.

Moreover we should note that *the most dramatic increase in salience across the values treatments occurred around the issue of funding for poor schools – which showed statistically significant findings for several values including Future Preparation.* Table 4 evaluates the treatment effects for this issue and finds that exposure to three of the four values tested raised the salience of this issue for survey respondents. The most dramatic impact occurs on exposure to the value of Fairness Between Places. This finding makes intuitive sense in that the substance of this value is really about building support for education system reforms based on an acknowledgement that there is inequality across the system. In any event, the values of Future Preparation and Ingenuity do a fairly good job of raising the salience of this issue as well. The take-away for communicators should be some reassurance that even values that do not appear to directly address equity issues have the effect of enhancing support for equity policies.

Table 4. Education Reform Policy Priorities – Funding Poor Schools	
Summary of Overall Treatment Effect	
Treatments	Control Group
All Values Treatments Combined	.048 (.025)**
Summary of Discrete Treatment Effects	
Treatments	Control Group
Common Good	.023 (.033)
Fairness Between Places	.074 (.034)**
Future Preparation	.057 (.033)*
Ingenuity	.044 (.032)*
Note 1: Statistically Significant Differences *** p ≤ .001; **p < .05; *p < .10 Note 2: Standard errors are indicated in parentheses. Note 3: Several controls were included (age, race, party, marital status, religious observance, income, region of residence, and news attentiveness).	

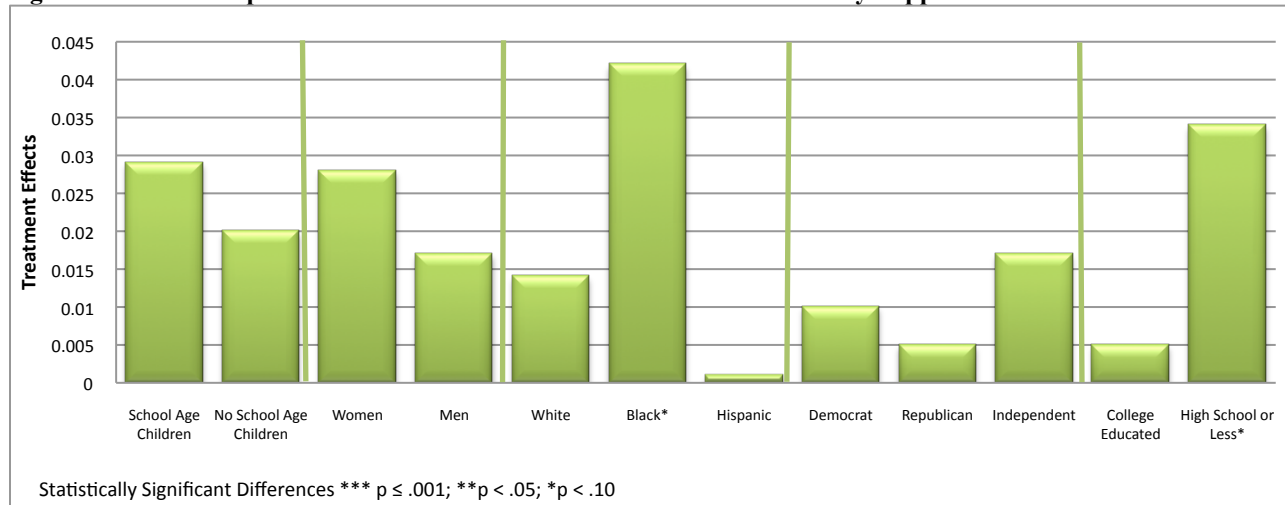
Evaluating the Moderating Impacts: Race, Gender, Educational Background, Party Affiliation, and Presence of School-Aged Children

To fully understand the effect of the values on public thinking, we conducted regression analyses to evaluate the impact of several types of moderators found in our prior research to have an impact on policy preferences – race, gender, education, and party affiliation. Because education reform may be particularly salient for respondents with school-aged children, we include this potential moderator as well. In the analyses that follow, we examine these moderators in terms of their effects on respondents exposed to the value of Future Preparation – the value shown in our analyses to have the most substantial and consistent impact on public thinking about education reform policies. We examine each moderator separately in terms of its effect on Future Preparation using the three policy batteries where statistically significant effects were found: policy support, policy tradeoffs, and policy priorities.

Figure 1 begins this analysis and presents the interaction coefficients for the policy support battery. The bars in Figure 1 (as well as in subsequent figures) represent the extent to which the group identified is statistically different from their counterparts in the control group. For example, in Figure 1, blacks who received the Future Preparation treatment were statistically more likely than blacks in the control group (who received no exposure to a value) to support education reform policies. Based on this figure, the same could be said of respondents with a

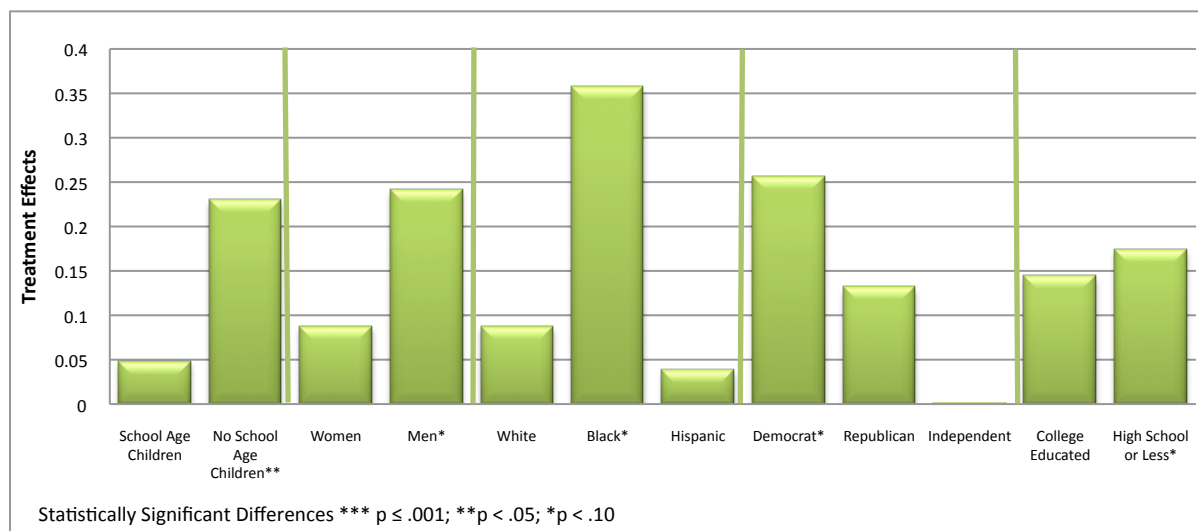
high school degree or less education – they were shown to be statistically more likely to support education reform policies than their counterparts in the control group.

Figure 1. Future Preparation Treatment and Potential Moderators – Policy Support



More generally, we find from the results in Figure 1 that the impacts of the potential moderators appear fairly minimal on respondents exposed to the value of Future Preparation. Put more simply, *irrespective of race, gender, party affiliation, educational background or the presence of school-aged children at home, study participants exposed to the Future Preparation value treatment were generally more likely than their counterparts in the control group to support education reform policies.* While not all the sub-groups outlined in Figure 1 are statistically significant, the means for these groups are all moving in the same direction so we know that there is a common experience in the overall reaction of these groups to the Future Preparation treatment.

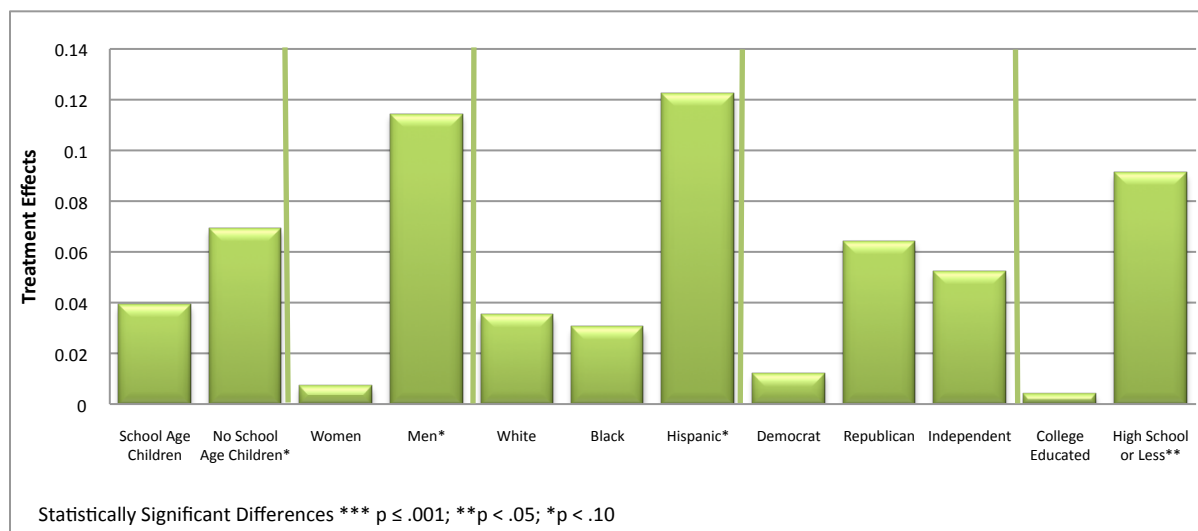
Figure 2. Future Preparation Treatment and Potential Moderators – Policy Tradeoffs



In Figure 2, we evaluate potential moderators on the policy tradeoffs. Our findings here are generally the same – that is, *the frame effects appear to be fairly consistent across the categories of race, gender, party affiliation, educational background and the presence of school-aged children in the household.* Even so, *there does appear to be a slightly more interesting pattern of support across the sub-groups on the policy tradeoffs battery.* For example, in Figure 2 it is clear that men, Blacks, Democrats, respondents with less than a college degree and those with no school-aged children were shown to have statistically significant increases in their selection of more progressive policy choices over their counterparts in the control condition.

Finally in Figure 3, we evaluate these potential moderators on the rankings of policy priorities. More specifically, we evaluate moderators of support for the policy option of providing more funding for poorly funded schools. This policy option was chosen for evaluative purposes here because it was the policy option most often chosen by survey respondents as their top priority. Not surprisingly we find many of the same sub-groups showing positive statistically significant differences when compared to their counterparts in the control: men, respondents with no school-aged children at home and respondents with less than a college education. One of the most interesting differences here is that Hispanics exposed to the Future Preparation are, for the first time in these analyses, shown to have higher levels of support for poor schools than Hispanic in the control condition.

Figure 3. Future Preparation Treatment and Potential Moderators – Policy Priorities Related to Funding Poor Schools



Study II: Measuring the Strength of Values on Perceptions of Social Responsibility

In addition to measuring support for policy, we also wanted to evaluate the extent to which exposure to values affected how respondents viewed responsibility for ameliorating the problems they ascribed to the educational system. To evaluate this issue we devised a series of attitudinal questions about the role of different actors in the educational system and asked respondents to locate themselves along an agree/disagree continuum. We aggregated their answers into a separate battery (using techniques similar to those of the policy batteries – as outlined in the methods section) and report the findings related to this battery across each of the treatments.

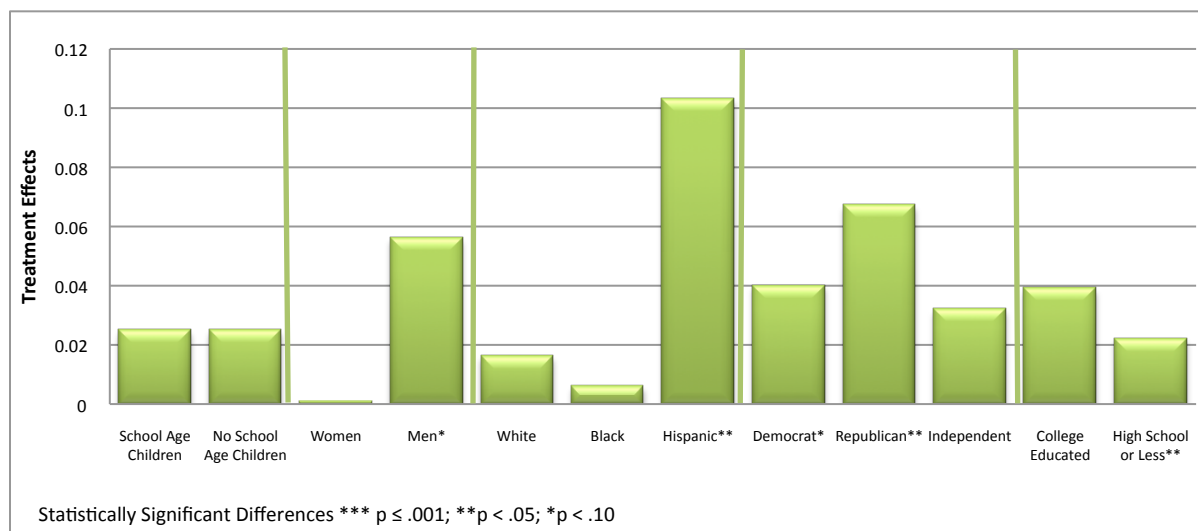
Here we first present the treatment effects related to how respondents attributed responsibility for solving the problems in our schools. Table 5 indicates that the overall treatment effects (as a group) are positive but not statistically significant (at .016). When we evaluate the treatment effects associated with each value treatment, *we find that only the Future Preparation value seems to have a statistically significant impact on how the public sees the role of government and other institutional actors (like churches, schools, public/private partnerships)*. This simply means that, in addition to advancing policy support and policy salience for education reform, Future Preparation as a value also has the impact of elevating the sense that problems in the education system require the attention of a wider range of institutional actors.

Table 5. Attribution of Social Responsibility	
Summary of Overall Treatment Effect	
Treatments	Control Group
All Values Treatments Combined	.016 (.015)
Summary of Discrete Treatment Effects	
Treatments	Control Group
Common Good	.008 (.020)
Fairness Between Places	.015 (.020)
Future Preparation	.030 (.020)*
Ingenuity	.012 (.019)
<p>Note 1: Statistically Significant Differences *** p ≤ .001; **p < .05; *p < .10 Note 2: Standard errors are indicated in parentheses. Note 3: Several controls were included (age, race, party, marital status, religious observance, income, region of residence, and news attentiveness).</p>	

Evaluating the Moderating Impacts: Race, Gender, Educational Background, Party Affiliation and Presence of School-Aged Children

To round out this analysis, we evaluate several potential moderators of the frame effects found on the attribution of social responsibility battery as well. Our results here are fairly analogous to those found on the series of policy batteries we examined. More specifically, in Figure 4, we find that *irrespective of race, gender, party affiliation, educational background or the presence of school-aged children at home, study participants exposed to the Future Preparation value treatment were generally more likely than their counterparts in the control group to attribute responsibility for improving educational outcomes to a wider range of institutional actors.* Moreover, we find that there are statistically significant differences in attribution of social responsibility following exposure to the Future Preparation value for men, Hispanics, Democrats, Republicans, and respondents with less than a college education. Here too, we find that the effects of any moderators appear to be minimal as all of the sub-groups appear to be moving in the same positive direction.

Figure 4. Future Preparation Treatment and Potential Moderators - Attribution of Social Responsibility



Study III: Measuring the Strength of Values on Policies at Different Levels of the Educational System (Preschool, K-12, and Higher Education)

Education advocates have often expressed concern that the values that serve to lift policies with respect to one part of the education system – say preschool policies – may not work to advance policies for other parts of the system – say higher education or K-12. Most of the policies in this particular experimental survey reflect a K-12 bias – we will address higher education in a future survey -- but we specifically selected out those policies that reflect policy priorities at the preschool or higher education levels for additional analyses. Table 6 reflects the frame effects we found when we assessed policies geared toward these levels of education separately.

Table 6. Frame Effects for Across Levels of Education		
Summary of Overall Treatment Effect		
Treatments	Control Group - Preschool	Control Group - Higher Education
All Values Treatments Combined	.008 (.021)	.013 (.011)
Summary of Discrete Treatment Effects		
Treatments	Control Group - Preschool	Control Group - Higher Education
Common Good	-.020 (.028)	.008 (.015)
Fairness Between Places	.004 (.029)	.017 (.015)
Future Preparation	-.009 (.028)	.030 (.015)**
Ingenuity	.054 (.027)**	.000 (.014)
Note 1: Statistically Significant Differences *** $p \leq .001$; ** $p < .05$; * $p < .10$ Note 2: Standard errors are indicated in parentheses. Note 3: Several controls were included (age, race, party, marital status, religious observance, income, region of residence, and news attentiveness).		

Generally, Table 6 gives more credence to the notion that *we need to be careful as we create messages about education at different levels*. Here we see that, at the preschool level, the value generating the most support for policy is the Ingenuity value. This is consistent with FrameWorks' previous research on early child development where we observed the value of Ingenuity working best to promote early child policies.²⁰ What is particularly striking about this analysis is that articulating Future Preparation actually lowers public support for preschool policies. The same is true of the value of Common Good, which also depresses policy support. When we evaluate support for higher education policies, we get results that are consistent with those we found for the K-12 education levels. Future Preparation is the only value of the four tested where we find statistically significant increases in policy support among respondents. Thus, *values which work to elevate policies at the K-12 and higher education levels are different from those that best serve this function at the preschool level*. FrameWorks has cautioned advocates in various reports about the advantages of aligning early child education with the domain of Development, as opposed to Education or Health²¹; this caution is reinforced by these findings.

DISCUSSION AND CONCLUSIONS

Advocates of strong progressive education reforms have looked for ways to produce a more constructive public conversation about the efficacy of policy reforms and reform efforts. The findings we present in this report suggest strong public support for progressive education

reforms once people are exposed to the societal goal of preparing for the future. More specifically, five broad implications emerge from these analyses:

- (1) generally, we find strong support for values in elevating policy preferences across many different kinds of batteries; more specifically, of the four policy batteries tested, we find consistent and robust findings for Future Preparation as an important way to elevate public policy thinking;
- (2) we also find enhanced support for the notion of broad social responsibility when respondents are exposed to Future Preparation;
- (3) we gathered more evidence that inoculation is not a task for which values are most useful, rather, this heavy lifting is best addressed by simplifying models;
- (4) the response to Future Preparation was comparable across the variety of sub-groups examined (most notably, across race, gender, party affiliation, presence of children, and level of education); and
- (5) we need to be careful as we create communications about education reform for different parts of the education system – values that work to advance policies at the K-12 and higher education levels are not necessarily consistent with those which elevate policies at the preschool level.

The success of Future Preparation may very well be in the notion that it succeeds in reminding the public that there is a larger goal to which we must contend if we are to preserve the standard of living and benefits that we currently enjoy as a nation. In this way, Future Preparation articulates a core value that helps remind the public, whether they have school-aged children or not, that public solutions toward education reform may be an essential component of the larger goal of preparing the nation for the future. In doing so, it appears to have the other advantage of directing public thinking toward reform in a way that does not activate the social cleavages that have often made public debate of this issue tenuous and tentative. If this is the case, even the most pessimistic education advocate is likely to understand this as a major accomplishment.

ABOUT THE INSTITUTE

The FrameWorks Institute is an independent nonprofit research organization founded in 1999 to advance the nonprofit sector's communications capacity by identifying, translating and modeling relevant scholarly research for framing the public discourse about social problems. It has become known for its development of Strategic Frame Analysis™, which roots communications practice in the cognitive and social sciences. FrameWorks designs, commissions, manages and publishes multi-method, multi-disciplinary communications research to prepare nonprofit organizations to expand their constituency base, to build public will, and to further public understanding of specific social issues. In addition to working closely with scientists and social policy experts familiar with the specific issue, its work is informed by communications scholars and practitioners who are convened to discuss the research problem, and to work together in outlining potential strategies for advancing public understanding of remedial policies. The Institute publishes its research and recommendations at www.frameworksinstitute.org.

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APPENDIX A: TREATMENTS

1. Control Group

2. Common Good

In a recent news editorial, John Wilson wrote that our nation's success depends on our ability to support the common good for all. He says that supporting the common good means pursuing policies that benefit our entire society like providing excellent schools, adequate educational resources, and quality educational experiences for our children. So, even if you don't have children, or your children are grown, or attend private schools, your tax dollars still go to support the public education system because it benefits everyone to have an educated population. Have you read or heard others talking about education reform in terms of advancing the common good in America?

3. Fairness Between Places

In a recent news editorial, John Wilson wrote that our nation's success depends on our ability to make society fair for all. He says that fairness between places means pursuing policies that make resources available in all places to provide excellent schools, adequate educational resources, and quality educational experiences for our children. So, even if you don't have children, or your children are grown, or attend private schools, your tax dollars still go to support the public education system because having a level playing field creates a fair society. Have you read or heard others talking about education reform in terms of fairness for different places in America?

4. Future Preparation

In a recent news editorial, John Wilson wrote that our nation's success depends on our ability to prepare our population for the 21st century. He says that preparing for new challenges means pursuing policies that add new skills to the traditional curriculum to provide excellent schools, adequate educational resources, and quality educational experiences for our children. So, even if you don't have children, or your children are grown, or attend private schools, your tax dollars still go to support the public education system because it prepares our students for the 21st century. Have you read or heard others talking about education reform in terms of preparing for the 21st century in America?

5. Ingenuity

In a recent news editorial, John Wilson wrote that our nation's success depends on our ability to tap our ingenuity and innovation to solve social problems. He says that using innovation to meet challenges means pursuing policies that redesign programs and curricula to provide excellent schools, adequate educational resources, and quality educational experiences for our children. So, even if you don't have children, or your children are grown, or attend private schools, your tax dollars still go to support the public education system because it provides the talent that keeps us innovative. Have you read or heard others talking about education reform in terms of developing the next generation of American ingenuity?

APPENDIX B: POLICY BATTERIES

Now we would like to ask you a few questions about your opinions across a wide range of policies currently in the news. Please select the answer that is closest to your view.

I. POLICY SUPPORT

1. States should make funding available to extend the hours of instruction students receive (either by lengthening the school year or extending the hours in each school day).
2. States should require more art and music and provide adequate funding to do so.
3. Schools should be required to have programs that incorporate student mentoring by adults in their communities as one way of broadening students' educational experiences.
4. Federal and state tax credits should be given to small businesses and nonprofit organizations that provide apprenticeships, job training, or practical professional experiences for high school students.
5. High school graduation requirements should be revised to incorporate a variety of practical, out-of-school learning experiences that will count for academic credit toward graduation.
6. Teacher candidates should be given financial incentives to do a portion of their field training in urban schools which are experiencing the greatest need for teachers.
7. Increased funding to provide basic health information should be provided by in-school health clinics.
8. Schools should place every student on an educational track that specifically prepares them for the possibility that they will go to college.
9. School districts should provide opportunities for teachers to update their teaching methods to include 21st century skill-building in areas such as teamwork, leadership, and global knowledge.
10. Greater federal funding should be made available to schools in low-income neighborhoods so that they can offer more programs that give students the educational resources to compete with students in more affluent neighborhoods.
11. Community colleges should be provided with more funding to incorporate policies and programs that have been shown to improve student graduation rates (such as intensive student advising, participation in learning communities, orientation programs, student success courses, and other approaches).
12. More funding should be directed toward programs that improve high school students' preparation and transition to college.
13. Federal/state funds should be increased to reduce the disparity in funding between rural and urban school districts.

14. Federal/state funds should be used to develop stronger initiatives that reduce high school dropout rates in the United States.

15. Community colleges and universities should be given federal/state funds to help increase college completion rates, especially among low-income students.

II. POLICY INOCULATION – REVERSE CODED

16. Congress should reform existing programs to give parents greater control over how education funding is spent at the local level.

17. Schools should develop programs that help motivate parents to work with their children and help them excel academically.

18. States should expand educational voucher programs that allow parents to use public school funding for private school education as a way of creating more competition with the public school system.

19. School districts should screen teachers more carefully to ensure that they have the caring personality and right temperament for teaching.

20. States should refine the standardized tests they give to students and use those tests to assess student achievement in more subject areas.

III. POLICY TRADEOFFS

***indicates the correct direction as they articulate the policy agendas of our funders.**

21. Some experts argue that we should “get back to the basics” and pursue education reforms that focus more exclusively on teaching the three R’s of reading, writing, and arithmetic. Others say that while the basics are important and should be taught, America’s schools must also teach other subjects that help to develop the new types of skills necessary for the 21st century. Which of these two viewpoints is closer to your own?

- Education reform should focus on teaching the basics.
- Education reform should teach the basics but also teach new skills.*

22. Some experts argue that to improve education, it is important to focus on recruiting teachers that are nurturing and caring individuals. Others say that while having a caring nature is an important part of teaching, we need to focus more on improving teacher training so that our teachers are well-qualified and experienced in the subjects they teach. Which of these two viewpoints is closer to your own?

- We need a tougher selection process that prioritizes screening for nurturing and caring people.
- We need a tougher selection process that prioritizes more effective teacher training.*

23. Some experts argue that we should address the shortage of qualified teachers in our schools by allowing people to teach who have not been trained as teachers but whose professional training and

experiences would make them really good teachers. Others argue that while many people could be great teachers, we should maintain existing teaching certification standards and focus developing stronger recruiting methods to attract talented people into the teaching profession. Which of these two viewpoints is closer to your own?

- Cast a “wider net” to attract talented professionals into the teaching profession.*
- Maintain existing teaching certification requirements and use stronger recruiting methods to attract talented teachers.

24. Some experts argue that it is important to begin educating children early in life to take advantage of important brain development and skill building that happens between 0 to 3 years of age. Others say that while skill building at this age is important between the ages of 0 to 3, we should focus on educating parents so that they can give these skills to their own children in the home. Which of these two viewpoints is closer to your own?

- It is important that education reform focus on offering preschool for infants and toddlers that enhance the brain and skill-building development that occurs at these ages.*
- It is important that education reform focus their efforts on educating parents about how to enhance the brain and skill-building development for their own children.

25. Some experts argue that educational outcomes for children won’t improve until parents and teachers do a better job of motivating students to put more effort into their studies. Others say that while student motivation is important, educational outcomes won’t improve until schools are given the resources they need to meet the basic educational needs of their students, like up-to-date textbooks and facilities. Which of these two viewpoints is closer to your own?

- Education reform efforts should focus on motivating students to learn.
- Education reform efforts should focus on providing the resources needed to advance student learning.*

26. Some experts argue that real education reform cannot be achieved without extensive changes to the programs and overall structure of the educational system. Others say that big changes to the system would be too risky and that we can achieve education reform by making small strategic changes in educational programs and services. Which of these two viewpoints is closer to your own?

- Education reform efforts should focus on making major system changes to enhance student outcomes.*
- Education reform efforts should focus on making smaller program changes to enhance student outcomes.

IV. POLICY PRIORITIES

27. Thinking about the issues discussed in this survey, select the three education reforms that you think education reformers should place greater emphasis on. Rank them in the order that you think policymakers should address them, with 1 being most important and 3 being least important among your choices.

Education reformers should put greater emphasis on:

- _____ merit based pay systems for teachers and other school staff
- _____ standardized testing of teachers and students
- _____ accountability systems in schools
- _____ continuing education credits for school principals and teachers
- _____ preschool availability for children
- _____ funding for low-income schools
- _____ college preparation for students
- _____ teacher training in teaching skills like teamwork, leadership, and global knowledge
- _____ parent notification of their children's academic progress and development

28. Now, please rank the following issues in the order that you think policymakers should address them.

- _____ War in Iraq
- _____ The Economy
- _____ Crime and Law Enforcement
- _____ Education
- _____ The Environment
- _____ Health Care

APPENDIX C: ATTRIBUTION OF RESPONSIBILITY BATTERY

Thinking about improving the lives of young children, indicate on the following grid which of the viewpoints expressed come closer to your own – even if neither is exactly right.

1.	Government should do more to improve the educational achievement of the nation's children.	O O O O O O O	Government is doing too many things in education that should be left to individual students and families.
2.	In order to improve public education in America, we should focus on reforming the existing public school system so it works better for everyone.	O O O O O O O	In order to improve public education in America, the focus should be on reducing people's tax obligations so that they could invest in private education for their children, if they choose.
3.	The role of government should be to promote the principle of strong community. America is most successful when we pursue policies that expand opportunity and create greater prosperity for all.	O O O O O O O	The role of government should be to promote self reliance. America is most successful when we limit the role of government, allowing entrepreneurs and businesses to prosper.
4.	While charities and community groups can do a lot to help young people do well in school, the government has to play a leadership role in making sure students have quality educational environments that support better learning.	O O O O O O O	While charities and community groups can do much to help young people do well in school, they are most successful in this work when government moves out of the way and allows them to play a leadership role in student education.
5.	Public/private partnerships can be helpful in promoting educational opportunities for students, but they are only a small part of the responsibilities that our government must take on to solve the problems within our educational system.	O O O O O O O	Public/private partnerships can be helpful in promoting educational opportunities for students, and they should play a much bigger role than government in solving problems within our educational system.
6.	Federal funding has been used to help bridge the gap between wealthy school districts and those with fewer resources. This is just one way the government should continue to try to resolve the achievement gap among students.	O O O O O O O	The gap between wealthy school districts and those with fewer resources is unfortunate but is not something that the government can or should solve.

¹ See for example: (1) FrameWorks Institute. (2009). *Enough Blame to Go Around: A Focus Group Analysis of Education and Reform: A FrameWorks Research Report*. Washington, D.C.: FrameWorks Institute. (2) Chart, Hilary & Kendall-Taylor, Nat. (2008). *Reform What? Individualist Thinking in Education: American Cultural Models on Schooling: A FrameWorks Research Report*. Washington, D.C.: FrameWorks Institute.

² The No Child Left Behind Act of 2001 (Public Law 107-110, 115 Stat. 1425, enacted January 8, 2002) is the most far-reaching federal education legislation to date. Among other things, this legislation requires that developmental assessment of basic skills be given to all students in certain grades (if those states are to receive federal funding for schools) and links federal funding to performance on those assessments. The assessments are developed by each state, and there are no national achievement standards; however, school districts are required to provide detailed information about student performance on the assessments across many categories including by race to the federal government. See FrameWorks' eZine on communications strategies related to this law: <http://www.frameworksinstitute.org/ezines.html>.

³ For more discussion, see FrameWorks research on this topic: (1) FrameWorks Institute. (2009). *Enough Blame to Go Around: A Focus Group Analysis of Education and Reform: A FrameWorks Research Report*. Washington, D.C.: FrameWorks Institute. (2) Chart, Hilary & Kendall-Taylor, Nat. (2008). *Reform What? Individualist Thinking in Education: American Cultural Models on Schooling: A FrameWorks Research Report*. Washington, D.C.: FrameWorks Institute.

⁴ FrameWorks Institute. (2009). *Enough Blame to Go Around: A Focus Group Analysis of Education and Reform: A FrameWorks Research Report*. Washington, D.C.: FrameWorks Institute.

⁵ U.S. Census Bureau. (2009). Back to School: 2009-2010; Facts for Features. CB09-FF.14.

http://www.census.gov/Press-Release/www/releases/archives/facts_for_features_special_editions/013847.html

⁶ See the following for a clear and concise articulation of the cognitive traps in public thinking on this issue: Bales, Susan. (2010). *Framing Education and Education Reform: A FrameWorks Message Memo*. Washington, DC: FrameWorks Institute.

⁷ Iyengar, Shanto. (1991). *Is Anyone Responsible? How Television Frames Political Issues*. Chicago: University of Chicago Press. Gilliam, Jr., Frank D. & Bales, Susan Nall. (2001). *Strategic Frame Analysis: Reframing America's Youth*. Gilliam, Jr., Frank D. & Iyengar, Shanto. (2000). Prime Suspects: The Impact of Local Television News on Attitudes about Crime and Race, *American Journal of Political Science* 44, 3: 560-573. Stone, Deborah. (2002). *Policy Paradox: The Art of Political Decision Making*. New York: W.W. Norton & Company.

⁸ See the FrameWorks Institute website for FrameBytes that identify and explain various elements of an issue frame: <http://www.frameworksinstitute.org/framebytes.html>.

⁹ More specifically, FrameWorks has forwarded an important conceptual distinction, called "levels of policy reasoning," with regard to the way that framing contributes to people's understanding of social issues. This perspective argues that ideas and issues are organized as hierarchies in people's minds. At the broadest and most basic level are broad values such as freedom, justice, and individual responsibility. Level Two is the level at which ideas and issues are organized into more categories of policies or policy domains such as health, education, housing, women's rights, etc. Level Three is the most discrete level as it contains specific policies, actions, and programs such as affirmative action, minimum wage, the Earned Income Tax Credit, or the Child Nutrition Act. For the theoretical foundations for these three levels of reasoning, see the following: (1) Schön, D. A., & Rein, M. (1994). *Frame Reflection: Toward the Resolution of Intractable Policy Controversies*. New York: Basic Books. (2) Lakoff, G., & Johnson, M. (1980). *Metaphors We Live By*. Chicago: University of Chicago Press.

¹⁰ FrameWorks Institute. (2001). *A Five Minute Refresher Course in Framing*. Washington, DC: FrameWorks Institute, Pg. 6.

¹¹ A simplifying model is a reframing tool that concretizes and clarifies technical concepts and processes through a familiar and easily understood metaphor. These metaphors capture the essence of a scientific concept or explain an important mechanism on an issue and have a high capacity for spreading easily through a

population. Numerous studies in the cognitive sciences as well as a growing body of FrameWorks research have established that the public's ability to reason about complex, abstract or technical public policy concepts rely heavily on metaphor and analogy. As a result, we actively develop simple and concrete metaphorical frame elements that help people to organize information on issues in new ways, to fill in understanding currently missing from the public's repertoire, and to shift attention away from the default patterns they already use to understand those issues. See one of FrameWorks' Ezines on Simplifying Models for more examples at <http://www.frameworksinstitute.org/ezines.html>

¹² The data in the survey are weighted to reflect the U.S. population, but the raw data characteristics are as follows: the median age of the sample was 43; 52 percent were women, 73 percent were white, 11 percent were black, and 9 percent were Hispanic. Respondents with a high school education represented 37 percent of the sample, those with some college 31 percent, and college graduates made up the remaining 32 percent. The sample included residents of all 50 states, with California, New York, Florida, Pennsylvania and Texas accounting for 36 percent of the sample. In terms of their political party affiliation, 31 percent identified as Democratic, 29 percent as Republican, and 28 percent as Independent, 8 percent as other, and 4 percent as unsure.

¹³ We specifically made use of the national Web-based surveys conducted by YouGov Polimetrix. YouGov Polimetrix requires its two million panelists to participate in weekly studies in exchange for free Internet access. To match those participants to our survey, a two-stage sampling procedure is utilized that creates a "matched" sample. That is, first a conventional random sample is drawn, and Polimetrix subsequently mirrors the conventional sample by selecting panelists who most closely resemble each member of the random sample.

¹⁴ Reports outlining the results of these research efforts can be found on the FrameWorks Institute website under the issue of education reform.

¹⁵ Readability statistics are important to evaluate because they measure how easily an adult can read and understand a text. We wanted to ensure that the treatment effects were not biased because the participants' inability to accurately understand the core concepts in the treatments.

¹⁶ See for example: (1) Manuel, T. & Gilliam, Jr., F. (2009). *Advancing Support for Early Child Mental Health Policies: Early Results from Strategic Frame Analysis™ Experimental Research*. Washington, D.C.: FrameWorks Institute.

¹⁷ See for example: (1) Gilliam Jr., F. and Manuel, T. (2009). *The Illogic of Literalness: Narrative Lessons in the Presentation of Race Policies*. Washington, D.C.: FrameWorks Institute.

¹⁸ Simon, Adam. (2010). *An Ounce of Prevention: Experimental Research in Strategic Frame Analysis™ to Identify Effective Issue Frames for Public Budgeting and Taxation Systems*. Washington, D.C.: FrameWorks Institute.

¹⁹ Gilliam Jr., F. and Manuel, T. (2009). *The Illogic of Literalness: Narrative Lessons in the Presentation of Race Policies*. Washington, D.C.: FrameWorks Institute.

²⁰ See, for example: Manuel, Tiffany. (2009). *Refining the Core Story of Early Childhood Development: The Effects of Science and Health Frames*. Washington, DC: FrameWorks Institute.

²¹ See for example: (1) FrameWorks Institute, "Framing Early Child Development Message Brief." (2009). Washington, DC: FrameWorks Institute; (2) Gilliam, Jr., Franklin (2007). *Telling the Science Story: An Exploration of Frame Effects on Public Understanding and Support for Early Child Development: A FrameWorks Research Report*. Washington, DC: FrameWorks Institute. (3) Manuel, Tiffany. (2009). *Refining the Core Story of Early Childhood Development: The Effects of Science and Health Frames*. Washington, DC: FrameWorks Institute.