

# WORKING P A P E R

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## Five Steps to Planning Success

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## **Five Steps to Planning Success**

### *Abstract*

We have investigated the effectiveness of both videos and narratives in improving people's understanding of five basic concepts in financial planning: (1) compound interest; (2) inflation; (3) risk diversification; (4) tax treatment of retirement savings vehicles; and (5) employer matches of defined contribution savings plans. To that end we have administered a quiz about these concepts in the American Life Panel to establish a baseline of what respondents understand about these concepts. Next, in a number of waves, respondents were shown narratives and videos related to the five concepts and the quizzes were administered again. We find significant improvements in understanding of these concepts in comparison with a control group that was not shown any material. We do not find a difference between videos and narratives in terms of effectiveness.

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## **Five Steps to Planning Success**

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### **I. Introduction**

Individuals are increasingly being asked to be in charge of their financial security throughout their lifetime and after retirement. With the shift from Defined Benefit to Defined Contribution pensions, individuals have to decide not only how much to save but also how to invest their retirement wealth. These decisions have to be made in the face of much more complex financial markets. Moreover, the opportunities to borrow and access to credit have changed substantially, shifting the responsibility for deciding how much they can afford to borrow onto individuals.

Notwithstanding the shift in individual responsibility, many workers are not doing any planning for retirement (Lusardi, 1999; Lusardi and Beeler, 2007; and Lusardi and Mitchell, 2007, 2009). This is the case not only for young workers: even older workers only a few years away from retirement do not do any planning (Lusardi and Mitchell, 2006, 2009). This finding has been confirmed in many surveys, from the Health and Retirement Study to the Retirement Confidence Survey to the National Financial Capability Study (Lusardi and Mitchell, 2006; Yakoboski and Dikemper, 1997; and Lusardi, 2010). Moreover, lack of financial planning is present even among people with high income and high educational attainment (Ameriks, Caplin, and Leahy, 2003).

Several papers have also shown that individuals lack knowledge of the basic concepts of economics and finance. According to the module designed by Lusardi and Mitchell (2006) for the Health and Retirement Study, only half of respondents who are 50 and older can answer two simple questions about interest rates and inflation, and only one-third can answer these two

questions and a question about risk diversification. Financial knowledge is particularly low among young adults (age 23–28), who display a much lower level of knowledge of basic financial concepts (Lusardi, Mitchell, and Curto, 2010). These findings are confirmed in the American Life Panel and in the recent National Financial Capability Study, both surveys covering a representative sample of the U.S. population (Lusardi and Mitchell, 2009; Yoong, 2010; and Lusardi, 2010). When confronted with a battery of questions measuring financial knowledge, the majority of individuals fared poorly. These findings are not only widespread but are particularly severe among specific groups of the population, such as the young (Lusardi, 2010).

Most importantly, financial literacy has been linked to retirement planning and wealth accumulation. According to Lusardi and Mitchell (2006, 2009), those who display little knowledge of the basic concepts of economics and finance are less likely to plan for retirement. This is an important finding, as retirement planning has been found to be highly correlated with wealth at retirement (Lusardi and Mitchell, 2007, 2009). Moreover, those with lower financial literacy are less likely to participate in the stock market (van Rooij, Lusardi, and Alessie, 2007; Yoong, 2010) and to choose mutual funds with lower fees (Hastings and Tejada-Ashton, 2008). These behaviors can also affect the amount of wealth that has been accumulated at the time of retirement. There is evidence that financial literacy affects debt as well. Moore (2003) reports that respondents with lower levels of financial literacy are more likely to have costly mortgages. Similarly, Campbell (2006) shows that individuals with lower incomes and lower education levels—characteristics that are strongly related to financial literacy—are less likely to refinance their mortgages during a period of falling interest rates. Lusardi and Tufano (2009a) show that those with low literacy are more likely to engage in high-cost borrowing.

## II. Five Steps to Planning Success

Acknowledging the lack of financial planning and widespread financial illiteracy documented in the existing literature, this project seeks to improve the understanding of five fundamental concepts that lie at the basis of most financial decisions. These concepts are grounded in economic theory and their validity is universal, i.e., it is not based on specific situations or economic circumstances. Moreover and importantly, knowledge of these concepts has been shown to improve financial behavior and financial planning, as was mentioned above. The five concepts we have chosen are as follows:

- (1) compound interest
- (2) inflation
- (3) risk diversification
- (4) tax treatment of retirement savings vehicles
- (5) employer matches of defined contribution savings plans

*Compound interest:* The fact that interest compounds over time is a fundamental piece of knowledge that can help individuals both appreciate the importance of starting to save early and the dangers of borrowing at very high interest rates. Understanding how fast assets and debt can grow at a specific interest rate is an integral part of financial decisions.

*Inflation:* Most saving and debt contracts relate to exchange of monetary sums from the present to the future. However, if prices increase over time, the purchasing power of money decreases. Thus, it is fundamental that individuals understand how to incorporate inflation into any saving and borrowing decisions. It is particularly important to consider inflation when planning for retirement.

*Risk diversification:* In order to protect retirement assets, individuals have to choose well-diversified portfolios and avoid investment pitfalls such as investing in only one asset, particularly if that asset is the company stock.

*Tax treatments of retirement savings vehicles:* Retirement assets that are invested in vehicles such as 401(k) individual retirement accounts benefit from tax advantages, as the interest earned or the principal are not subject to taxation. This means faster accumulation of those assets and an opportunity to increase retirement savings in the long run.

*Employer matches of defined contribution savings plans:* Many employers match (in different proportion, often one-to-one) the contributions employees make to retirement accounts. This provides a much higher return on that contribution and allows for a faster accumulation of retirement savings.

One of the common features of the above concepts is that they require the ability to do some calculations and to understand somewhat abstract concepts, such as risk and risk diversification. In fact, numeracy is rather low in the population and many have difficulty performing even a simple 2 percent calculation or simple division (Lusardi and Mitchell, 2006, 2007).

To gain more information on effective ways to communicate and also to leverage the insights of behavioral economics, we conducted an in-depth review of the psychology literature to identify key factors that would raise the appeal of an educational intervention overall, and in particular for young people, who do not consider retirement savings-related decisions relevant to their current lives. Primary goals included increasing accessibility, creating personal identification with the situation, and avoiding alienating individuals with low initial skills or confidence. Based on our findings, we embedded these concepts into five simple stories that

describe the concepts verbally, and incorporated a focus on relatable situations and characters, as well as the present benefits of taking action. The stories describe, in an everyday setting, how these concepts can be applied toward better financial decision-making.

In addition, we developed and produced materials based on the same content using two delivery methods: written narratives and videos. The titles and video links are shown below, while the narratives are reproduced in Appendix B.

<b>Topic</b>	<b>Title</b>	<b>Video Link</b>
Compound interest	A Wedding Gift and Compound Interest	<a href="http://www.youtube.com/watch?v=aekR36rxkK8">www.youtube.com/watch?v=aekR36rxkK8</a>
Inflation	Inflation and the Plaid Shirt	<a href="http://www.youtube.com/watch?v=uuczRBFQU4I">www.youtube.com/watch?v=uuczRBFQU4I</a>
Risk diversification	Don't Put All Your Eggs in One Basket	<a href="http://www.youtube.com/watch?v=I0iF29eQDkU">www.youtube.com/watch?v=I0iF29eQDkU</a>
Tax treatment of retirement savings vehicles	Take Advantage of Tax-Free Assets	<a href="http://www.youtube.com/watch?v=C7yRTQ9ffZ0">www.youtube.com/watch?v=C7yRTQ9ffZ0</a>
Employer matches of defined contribution savings plans	Taking Advantage of Employer Matches	<a href="http://www.youtube.com/watch?v=BZEj7wiFarg">www.youtube.com/watch?v=BZEj7wiFarg</a>

### **III. Study Design**

#### *Focus Groups*

In order to test the intervention materials and get feedback, as well as to gain insight on savings attitudes and behavior, we conducted two focus groups with young workers between the ages of 25 and 40. Focus groups were held in Washington, DC, on July 28, 2010. The first group, the “savers” group, consisted of ten participants who are already saving for retirement. The second group, the “non-savers” group, consisted of eight participants who are not currently saving for retirement. This stratification allows participants with similar experiences to engage in a productive discussion about their experiences and plans for the future. We were also interested to know how the educational information we provided in the focus groups may influence young workers differently based on whether or not they had already begun saving for retirement.

The format for both focus groups was the same. Upon arrival at the focus group session, participants were given a background questionnaire (see Appendix A of the accompanying Focus Group Report). At the beginning of each focus group, participants discussed their views on saving and where they go for financial information. The participants were then provided an intervention—in either a text narrative or video format—and asked to answer questions related to that particular topic (a subset of the original background questionnaire). Comments and feedback on the interventions were solicited and the groups concluded with a general discussion of the different presentation formats (narrative and video) as well as how the information might motivate any behavioral changes.

#### *American Life Panel and Experimental Design*

The American Life Panel (ALP) is a sample of approximately 3,000 households who are regularly interviewed over the Internet. An advantage relative to most other Internet panels is that the ALP is mostly based on a probability sample of the US population.<sup>1</sup> Currently, the panel

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<sup>1</sup> ALP respondents have been recruited in one of three ways. Most were recruited from among individuals age 18+ who were respondents to the Monthly Survey (MS) of the University of Michigan's Survey Research Center (SRC). The MS is the leading consumer sentiment survey that incorporates the long-standing Survey of Consumer Attitudes and produces, among others, the widely used Index of Consumer Expectations. Each month, the MS interviews approximately 500 households, of which 300 households are a random-digit-dial (RDD) sample and 200 are reinterviewed from the RDD sample surveyed six months previously. Until August 2008, SRC screened MS respondents by asking them if they would be willing to participate in a long term research project (with approximate response categories “no, certainly not,” “probably not,” “maybe,” “probably,” “yes, definitely”). If the response category is not “no, certainly not,” respondents were told that the University of Michigan is undertaking a joint project with RAND. They were asked if they would object to SRC sharing their information about them with RAND so that they could be contacted later and asked if they would be willing to actually participate in an Internet survey. Respondents who do not have Internet were told that RAND will provide them with free Internet. Many MS-respondents are interviewed twice. At the end of the second interview, an attempt was made to convert respondents who refused in the first round. This attempt includes the mention of the fact that participation in follow-up research carries a reward of \$20 for each half-hour interview. A subset of respondents (approximately 500) were recruited through a snowball sample; here respondents were given the opportunity to suggest friends or acquaintances who might also want to participate. Those friends were then contacted and asked if they wanted to participate. Respondents without Internet (both in the Michigan sample and the snowball respondents) were provided with so-called WebTVs (<http://www.webtv.com/pc/>), which allows them to access the Internet using their television and a

comprises over 3,000 active panel members, of whom approximately 5% respond to the questionnaires using a WebTV.

In May 2010, all members of the ALP (regardless of age) were given a quiz on topics related to our five concepts: (1) compound interest; (2) inflation; (3) risk diversification; (4) tax treatment of retirement savings vehicles; and (5) employer matches of defined contribution savings plans. The questions are reproduced in Appendix A. Starting in August 2010, with the exception of a control group, respondents were shown videos and narratives about each of the five topics. After each video or narrative, the respondent was asked questions related to the topic dealt with in the video or narrative. These questions were taken from the May 2010 quiz. They refer to both knowledge of the concept itself and application of that knowledge to a hypothetical behavior, allowing researchers to examine whether respondents are improving in terms of both financial knowledge and the ability to apply that knowledge.

In total, three waves were administered, which were at least two weeks apart. Videos and narratives were randomly assigned. In total every respondent would see a video or narrative related to each of the five topics. In one of the waves, a respondent would see both the video and narrative (in random order) related to one of the topics. In the remaining two waves they would always see narratives and videos related to different topics. A video or narrative was never

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telephone line. The technology allows respondents who did not have previous Internet access to participate in the panel and furthermore use the WebTVs for browsing the Internet or use email. A new group of respondents (approximately 500) has recently been recruited after participating in the National Survey Project, created at Stanford University with SRBI. This sample was recruited in person, and at the end of their one-year participation, they were asked whether they were interested in joining the RAND American Life Panel. Most of these respondents were given a laptop and broadband Internet access. Recently, the American Life Panel has begun recruiting based on a random mail and telephone sample using the Dillman method (see e.g. Dillman et al, 2008) with the goal to achieve 5000 active panel members, including a 1000 Spanish language subsample. If these new participants do not have Internet access yet, they will also be provided with a laptop and broadband Internet access. These panel members are not part of the sample used in this paper.

repeated, so that a respondent would not see videos or narratives related to the same topic in different waves.

The answers to the quizzes are all binary (the answer is correct or incorrect). Thus what needs to be evaluated are changes in answers pre and post intervention between treatment and control groups. The analysis can be a straightforward differences-in-differences approach, where changes in correct answers of the respondents exposed to videos or narratives (the treatment group) are compared to changes in answers in the control group.

#### **IV. Results**

##### *Focus Groups*

The saver group did slightly better than the non-saver group in the number of correct answers on the background questionnaire that was presented before any interventions were introduced. Out of the 17 questions, the saver group averaged 69% correct answers and the non-saver group averaged 55% correct answers. However, once the interventions were introduced, both groups improved. The saver group jumped to 91% correct answers and the non-saver group jumped to 82% correct answers. The information provided in the interventions appears to be the main cause for improvement as there was no discernible difference between format type (narrative or video) and improved score.

The saver and non-saver groups expressed fairly similar thoughts on format differences. Some expressed keener interest in the videos as they are more passive and do not require the work of reading. Some noted being visual learners and that the visual would stick with them long after the narrative had been read (e.g., pile of money on the table from the compound interest video). However, others noted that they preferred having access to both formats. They

reported that they could refer back to the narratives and there was some information missed in the video that was picked up on in the reading. No one argued for narratives alone. Some in the saver group identified the narratives as more educational and the videos as more motivational.

### *American Life Panel*

The current report uses data collected until September 23, 2010, and uses only data from the first wave. Table 1 shows the number of correct answers to each of the questions at baseline (May 2010). Baseline knowledge of these concepts was not universally high, with correct responses to some of the questions falling below 50%. However, correct responses to some individual questions were quite high. Question CI2, a simple test of knowledge of interest compounding, stood out in this regard with 92% of respondents answering correctly.

Table 1 breaks down responses by gender, education, age, and income. Though no formal statistical tests were conducted, men performed numerically better than women on every single question at baseline, confirming the results of many other surveys on financial literacy (Lusardi and Mitchell, 2006, 2009; Lusardi and Tufano, 2009a; Lusardi, 2010). Similarly, respondents ages 18–40 performed numerically worse than those ages 41–64 and worse than those age 65 and older on all but two questions, again consistent with other related research (Lusardi, Mitchell, and Curto, 2010; Lusardi, 2010). On every question, those with incomes below \$35,000 performed more poorly than those with incomes between \$35,000 and \$75,000, who in turn performed more poorly than respondents earning \$75,000 and above. The same type of pattern was found for education; respondents with high school diplomas or less performed more poorly on each question than respondents who attended some college, who in turn

performed more poorly than those with college diplomas, as has been found in other work to be the case (Lusardi and Mitchell, 2006, 2007a).

Wave 1 went to the field in August 2010<sup>2</sup>. Table 2 shows the number of interventions that were administered during this wave, by topic and medium (narrative or video). Each narrative and video was seen alone by between 187 and 227 respondents, while each intervention topic was administered in a double format consisting of both the narrative and the video to between 97 and 117 respondents.

Table 3 presents a summary of respondent performance in each of the five topic areas, aggregated across individual questions. It provides the percentage of questions on each topic answered correctly at baseline and at wave 1, by intervention condition. It suggests that respondents in the control group did not perform much better on any of the topics during wave 1 than at baseline. In contrast, respondents in most treatment groups had higher post-intervention scores than the controls. Additionally, the data suggests more dramatic improvement on employer match performance following intervention than on other topics, for which performance started off higher at baseline.

Table 4 presents changes in the percentage of correct answers for each question between the baseline survey in May and the follow-up surveys starting in August. The labels in the first column signify the question that was asked, where the first two or three letters correspond to the question labels in Appendix A. The column head “Any Tx” includes all respondents presented with an intervention, including those who saw the video, read the narrative, or did both. The

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<sup>2</sup> In principle respondents can answer question whenever that is convenient for them. Typically most respondents reply within the first two weeks of a field period. After two weeks a reminder is sent by email to those who have not responded yet. This procedure is repeated four weeks after a survey goes in the field. Generally, there is no reason to “close” a survey, so that for instance even after six weeks responses still trickle in. Wave 2 is also in the field, where we have selected respondents who had responded to wave 1 at least two weeks earlier. This procedure will be regularly repeated and also applied to wave 3.

column headed “Video” refers to respondents who have only seen a video on a particular topic; similarly the heading “Narrative” signifies that a respondent has only read a narrative about the topic. “Both” indicates that a respondent has been exposed to both a video and a narrative about the topic.

Corresponding to each question are five rows. The first row indicates the percentage of respondents who answered the question correctly at baseline, by intervention condition. The second row indicates the percentage of respondents who answered correctly the second time they received the question, at wave 1. The third row indicates the difference between the previous two rows, with percentage correct at baseline subtracted from percentage correct at wave 1, within each intervention condition. In the fourth row, for each of the treatment conditions (i.e. any treatment, video only, narrative only, or both), the change in performance in the control condition is subtracted from the change in performance found in each treatment condition. In other words, the fourth row records change in percentage correct following a given treatment, controlling for the change found in the control condition. A series of paired t-tests were conducted comparing the changes in the treatment group to the changes in the control group. The fifth row for each question records the p-values for these t-tests.

The differences-in-differences comparison of the various treatments with the control groups does show a substantial number of highly significant treatment effects. The weakest results are found for inflation, where only the narrative seems to have had a significant positive result. Within topics the treatment effects varies quite a bit, and it is worth discussing the differences in some detail.

Question CI2 (about interest on interest) does not seem to have benefitted from the treatments. This is a relatively simple question with already 90% correct answers at baseline, and

thus the treatment could not add much. Question CI3 (the rule of 7 and 10) shows marked improvement and indeed this rule was explicitly dealt with in the video and narrative. CI4 shows some improvement, but the changes are not statistically significant. Generally this is a complex question, which may require more effort to explain. CI5 improves significantly, except in the “both” treatment. The explanation of the effect of compound interest has had a clear positive effect, particularly when comparing with the control group in which the number of correct responses has decreased.

Generally, the answers to the inflation questions did not appear to have improved much following the videos and narrative interventions. The only positive significant effect that is found is of the narrative on I2. Generally, at baseline the percent correct answers was already high and thus the room for improvement was limited.

The answers to RD2 (relation between risk and return) improve somewhat (and significantly so for the “both” treatment). Baseline knowledge was already fairly high (on the order of 75% correct). RD3 (risk diversification) shows marked improvements, except for the narrative. RD4 shows improvements across the types of treatment, but these improvements are not significant, perhaps because baseline was already rather high (about 77%).

The treatments were most successful in improving knowledge of the tax treatment of DC plans. Changes are generally highly significant. Baseline knowledge was modest (on the order of 50%) and thus there was ample room for improvement.

The quantitative effects of the treatments on EM2 (return on various investment, with or without employer match) is very substantial. The percentage of correct responses goes up by approximately 20 percentage points on a base of about 50%. EM4 (behavior with respect to employer match) also shows significant improvement, particularly for the narrative treatments.

T-tests were also conducted comparing differences in the degree of change in performance on each question between the types of treatment groups. We found little difference between the types of treatments. Out of 51 p-values, only two are less than .05 (details not reported here), an outcome that could easily be the result of chance.

## **V. Conclusions and future work**

Overall, we find that these financial education interventions appeared to be effective. Baseline knowledge of these concepts was not universally high, and exposure to the interventions overall managed to raise individual test scores relative to controls.

In general, we found that this approach worked best with the two topic areas in which we introduced interventions with specific factual, actionable information (retirement savings plans and employer matches), although some gains were also observed for interventions that explored more basic topics (compounding, inflation, diversification).

Interestingly, in this stage of the analysis we find no major differences by format in terms of knowledge change. We note that the focus groups appeared to have expressed a preference for the videos or having both the videos and the narratives, over the narratives, or having both. However, in the focus groups, all improved their scores dramatically once the interventions were introduced, regardless of the format type—narrative or video. Similarly, with the larger sample of ALP respondents, we find that overall there are changes in knowledge but that these changes do not appear to be different by format type. However, it is critically important to reiterate that the experiment at this stage measures only knowledge. One hypothesis suggested by the focus group discussions is that narratives may promote knowledge retention but videos may more

strongly motivate action and behavior change; this remains a possibility to be tested in future work.

Next steps in our analysis include more rigorous statistical analysis, including the estimation of potentially heterogeneous treatment effects among different groups of respondents. We also speculate that format effects may vary across different groups. First, as the interventions were explicitly designed with young workers in mind, we will investigate whether or not they worked particularly well for the young in general and young workers specifically; we will also investigate whether different media are more or less effective for different age groups. Second, we will explore whether relatability has any additional effect. This also remains an open question: the story that most focus group participants found least relatable (inflation) was also one of the least effective when formally tested. We will test to see if matches between respondents' gender and ethnicity and the gender and ethnicity of the individuals in the video lead to greater impact.

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## Appendix A: Financial Literacy Quiz

Today we would like to ask you some questions about financial decision making. You may have previously answered a number of questions that you will be asked today. Please answer all the questions you are asked to the best of your ability, even if you have seen them before. We are very interested in your responses, as some of your information and perceptions may have changed. Thank you!

### CI1 self-efficacy about interest rates

When making decisions about personal finances, how likely is it that you would be able to effectively take into account the impact of interest compounding?

- 1 Extremely likely
- 2 Very likely
- 3 Somewhat likely
- 4 Very unlikely
- 5 Extremely unlikely

### CI2 knowledge of interest on interest

Suppose you put \$1,000 in an account that earns 5% interest per year, every year. You never invest additional money and you never withdraw money or interest payments. So in the first year, you earn \$50 in interest. In Year 4, how much will this account earn?

- 1 Less than \$50
- 2 \$50
- 3 More than \$50
- 4 Don't know

### CI3 knowledge of 7 and 10 rule

Suppose you invest \$2,500 and earn 7% per year on this investment. How many years will it take for your total investment to be worth \$5,000?

- 1 Between 0 and 5 years
- 2 Between 5 and 15 years
- 3 Between 15 and 45 years
- 4 More than 45 years
- 5 Don't know

### CI4 behavior regarding earning over time

Consider the following scenario: Jack and Jill are twins. At the age of 20, Jack started contributing \$20 a month to a savings account. After 20 years, at the age of 40, he stopped adding to his savings, but he left the money in the account. Jill didn't start to save until she was 40. Then, she saved \$20 a month until she retired 20 years later at age 60. Suppose both Jack and Jill earned 6% interest per year on their savings. When they both retired at age 60, who had more money?

- 1 Jack
- 2 Jill
- 3 They had the same amount
- 4 Don't know

### CI5 behavior regarding earning interest on interest

Pam is deciding between 2 options: Option A: - Invest \$1,000 in a certificate of deposit that earns 5% interest. - Pam would not add or remove any money from this investment for the next 30 years. Option B: - Invest \$1,000 in a savings account that earns 5% interest.- Move the interest earned on this account every year into a safe home.- Pam would not add or remove any other money from the savings account or the safe for the next 30 years. At the end of 30 years, which of these options would provide the most money?

1 Option A

2 Option B

3 Pam will have the same amount of money at the end of 30 years regardless of whether she chooses Option A or

Option B.

4 Don't know

**I1** self-efficacy about inflation

When making decisions about personal finances, how likely is it that you would be able to effectively take into account the impact of inflation?

1 Extremely likely

2 Very likely

3 Somewhat likely

4 Very unlikely

5 Extremely unlikely

**I2** knowledge of inflation

Suppose that by the year 2020 your income has doubled and prices of all goods have doubled too. In 2020, how much will you be able to buy with your 2020 income?

1 More than today

2 The same amount as today

3 Less than today

4 Don't know

**I3** behavior regarding inflation

Rita must choose between two job offers. She wants to select the job with a salary that will afford her the higher standard of living for the next few years. Job A offers a 3% raise every year, while Job B will not provide a raise for the next few years. If Rita chooses Job A, she will live in City A. If Rita chooses Job B, she will live in City B. Rita finds that the price of goods and services today are about the same in both areas. Prices are expected to rise, however, by 4% in City A every year, and stay the same in City B. Based on her concerns about standard of living, what should Rita do?

1 Take Job A

2 Take Job B

3 Take either one: she will be able to afford the same future standard of living in both places

4 Don't know

**RD1** self-efficacy about risk diversification

When making decisions about personal finances, how likely is it that you would be able to effectively select a mix of investments that reflected your preferred level of risk?

1 Extremely likely

2 Very likely

3 Somewhat likely

4 Very unlikely

5 Extremely unlikely

**RD2** knowledge of relationship between risk and return

In general, investments that are riskier tend to provide higher returns over time than investments with less risk.

1 True

2 False

3 Don't know

**RD3** knowledge of risk diversification

Which of the following is an accurate statement about investment returns?

1 Usually, investing \$5,000 in shares of a single company **is safer** than investing \$5,000 in a fund which invests in shares of many companies in multiple industries.

2 Usually, investing \$5,000 in shares of a single company **is less safe** than investing \$5,000 in a fund which

invests in shares of many companies in different industries.

3 Usually, investing \$5,000 in shares of a single company **is equally as safe** as investing \$5,000 in a fund which

invests in shares of many companies in different industries.

4 Don't know

**RD4** behavior regarding risk diversification

Suppose you are a member of a stock investment club. This year, the club has about \$200,000 to invest in stocks and the members prefer not to take a lot of risk. Which of the following strategies would you recommend to your fellow members?

1 Put all of the money in one stock

2 Put all of the money in two stocks

3 Put all of the money in a stock indexed fund that tracks the behavior of 500 large firms in the United States

4 Don't know

**TF1** self-efficacy about tax-favored assets

When making decisions about personal finances, how likely is it that you would be able to effectively take advantage of tax-favored investment options available to you?

1 Extremely likely

2 Very likely

3 Somewhat likely

4 Very unlikely

5 Extremely unlikely

**TF2** knowledge of 401(k) taxes

When you invest in an employer's retirement savings plan such as a 401(k), your contributions are taxed:

1 Either before you invest them or when you withdraw them during retirement, but not both times.

2 Both before you invest them and when you withdraw them during retirement.

3 Once a year on or before April 15.

4 When you reach age 65.

5 Don't know

**TF3** knowledge of employer independence

Both Irene and her employer contribute every year to her employer-sponsored 401(k) plan. Irene has worked at the company for twenty years, and is fully vested in her plan. Suppose Irene leaves her job or gets fired. Which of the following statements is true?

- 1 If she is no longer working for the company, the whole plan balance is forfeited, because her benefits are tied to her job.
- 2 If she gets fired, the company has the right to decide how much of her total plan balance she will get.
- 3 If she voluntarily leaves her job, she forfeits all of her employer's contributions.
- 4 Even if she leaves her job or gets fired, she is still entitled to the entire plan balance.
- 5 Don't know

**TF4** knowledge of avoiding double taxation

Which of the following statements are true?

- 1 In any type of IRA or 401(k) account, all of the money in your account grows tax-free.
- 2 If you have a traditional IRA or 401(k), you make contributions out of pre-tax income and pay income tax at your future tax rate when you withdraw the funds.
- 3 Both are true
- 4 Don't know

**TF5** behavior regarding time and rate of taxation

This year, Marge's salary is \$100,000 and she contributes \$10,000 of her salary to a traditional 401(k) offered by her employer. Her current tax rate is 28%. In 40 years, when Marge retires, the money will have grown to \$160,000. Her tax rate during retirement will fall to 20%. Which of the following is true?

- 1 This year, Marge should pay income taxes on her entire salary. During retirement, she will pay 20% tax on whatever she withdraws from her plan.
- 2 This year, Marge should pay income taxes on only \$90,000. During retirement, she will pay the same deferred 28% tax rate on whatever she withdraws from her plan.
- 3 This year, Marge should pay income taxes on only \$90,000. During retirement, she will pay 20% tax on whatever she withdraws from her plan.
- 4 This year, Marge should pay income taxes on only \$90,000. During retirement, she will pay no tax on whatever she withdraws from her plan.
- 5 Don't know

**TF6** behavior regarding assorted 401(k) attributes

Which of the following is a true statement?

- 1 You will lose money that you personally invested in your 401(k) if you switch jobs.
- 2 You will be charged income tax as well as tax on dividends and increases in the value of your stock if you invest through a 401(k).
- 3 Unless you are undergoing significant hardship, you cannot withdraw money from a 401(k) without penalty until you reach a certain age.
- 4 All of the above
- 5 Don't know

**EM1** self-efficacy about employer match

When making decisions about personal finances, how likely is it that you would be able to effectively use information about employer 401(k) matches that was available to you?

- 1 Extremely likely
- 2 Very likely
- 3 Somewhat likely
- 4 Very unlikely
- 5 Extremely unlikely

**EM2** knowledge of match return equivalent

Alice wants to invest \$1,000 for retirement this year. Her new employer will fully match her 401(k) contributions, up to \$10,000 per year. All else being equal, which of the following options will give Alice the highest total amount at the end of the year?

- 1 Alice contributes \$1,000 to her 401(k) plan and invests that money in mutual fund A. At the end of the year, mutual fund A has earned a 5% return.
- 2 Alice does not contribute to her 401(k) plan but she invests \$1,000 in mutual fund B outside of her 401(k) plan. At the end of the year, mutual fund B has earned a 20% return.
- 3 Alice does not contribute to her 401(k) plan, but she invests \$1,000 in mutual fund A outside of her 401(k) plan. At the end of the year, mutual fund A has earned a 5% return.
- 4 Don't know

**EM3** knowledge of match maximization

David's new job offers a 401(k). His employer provides a 50% match up to \$2,000. How much should David invest at least in order to obtain the maximum amount of money from the employer match?

- 1 \$0
- 2 \$500
- 3 \$1,000
- 4 \$2,000
- 5 \$4,000
- 6 Don't know

**EM4** behavior regarding employer match

You have decided to set aside 15% of your salary for retirement. You work at a firm where your employer

matches your contribution to the 401(k) plan, dollar by dollar, up to 5% of your salary. Which of these statements is correct?

- 1 If you contribute up to 5% of your salary, the employer match is equivalent to a 100% return on your contribution.
- 2 What the employer contributes should not play any role in your decision.
- 3 It is always a good idea to contribute less than what the employer contributes.
- 4 Don't know

## Appendix B: The Narratives

### A Wedding Gift and Compound Interest

Dave and Michelle met in college, five years ago. Theirs isn't a romantic story of love at first sight; instead they slowly built the foundation for a strong relationship. Dave asked Michelle out for a coffee, then another, and another. Their relationship continued to grow stronger, and they recently got married.

When they got \$5000 in cash as wedding presents, Michelle and Dave had to decide what to do with the money. The answer didn't seem obvious. Looking over their finances didn't take long because they didn't have much money, especially since Michelle's job at the time paid more like an internship. The two of them don't generally consider themselves big planners and, at first, it seemed pointless to even think about investing for the long term. Dave suggested not investing right away, but instead waiting until they had better jobs and made more money.

But Michelle told Dave about the 7 and 10 rule. The rule describes how long it takes for an investment to double. At a 7% rate of return, it takes about 10 years for an investment to grow twice as large. At a 10% rate of return, it takes only about 7 years to double your money.

#### 7 and 10 Rule

At a **7%** rate of return, it takes about **10 years** to double your money.

At a **10%** rate of return, it takes about **7 years** to double your money.

At first, Dave wondered whether they could get such a high return: 10% is a lot! Michelle pointed out that a 7% return might be more realistic. After all, they would be investing for the long term. Dave realized that over the long term a diversified portfolio of stocks can yield returns in that range, though both he and Michelle understand that it always varies.

The simple 7 and 10 rule helped Michelle figure out that even at a 7% rate of return, the original \$5000 would grow to a whopping \$160,000 by the time she and Dave turn 75. When Michelle first pointed this out to Dave, he thought something had to be wrong with Michelle's calculation. But, as Michelle explained to him, the money grows that much because the returns compound over time. In other words, all of the money, including the earned interest, gets reinvested every year so that over the long term, there's some serious build-up!

If Dave and Michelle earn a 7% rate of return, their investment would approximately double every 10 years.

If they invest **\$5000** when they are **25 years old**, then:

by age 35, it would double to around.....\$10,000

which would double again by age 45 to around ... \$20,000

which would double again by age 55 to around ...\$40,000

which would double again by age 65 to around ...\$80,000

which would double again **by age 75** to around...**\$160,000**.

If Michelle and Dave waited until they were 55 years old to invest the \$5,000 and earned the same 7% rate of return, they would end up with \$20,000 by the time they were 75. And while \$20,000 would be nice, the \$160,000 they'd have if they invested right away would be even nicer.

Michelle also showed Dave the other half of the 7 and 10 rule. If their investments perform really well, their money could grow even faster. At a 10% rate of return, their investment would double in only 7 years. By the time Dave and Michelle reached their mid-70s, their \$5000 would double a whole bunch of times and turn into \$640,000!

Dave and Michelle decided to invest their \$5,000 right away, giving it more time to grow. When their friends and family gave them \$5000, they never imagined it could turn into six figures. But by applying the 7 and 10 rule, Dave and Michelle realized the money could turn into \$160,000 or maybe even \$640,000, for their future. Investing the money was the best wedding gift they could have given themselves!

## **Taking Advantage of Employer Matches**

Matt and Josh work at a company that holds a lot of tedious meetings but offers some great perks, like delicious lunches during those meetings. They like free stuff, especially good free stuff like the lunches on meeting days. They like free money even better than free food, so when the coworkers found out that their company matches their 401(k) contributions, they had to take advantage of it.

Their employer provides one-to-one matching of employee 401(k) contributions, up to \$2000 a year. For every dollar up to \$2000 that Matt (or Josh) puts in his 401(k), his company puts in a dollar too. It's like an "invest a dollar, get one free" deal. Just like the buy-one-get-one free deals at the deli across the street.

So, if Matt invests \$2000 of his own money in a 401(k) account, then the company puts in the same amount: \$2000. That would be \$4000 in his account, because the company matches every dollar. It's like Matt is getting a 100% return on his investment. Twice as much gets invested and twice as much grows in his account.

At Josh's old job, the company matched 50% of employee 401(k) contributions. His old employer would add half of what Josh put into his 401(k). If he invested \$1000, they'd add \$500, bringing his account up to \$1500 before even earning money on investments. That's not as amazing as a one-to-one-match, but it's still a lot of money!

Where Josh and Matt work now, there's something called a vesting schedule. They're "fully vested" after 3 years. That means that after working at the company for 3 years, employees get to keep the entire amount of the employer match in their 401(k) account, even if they leave the company. But no matter what, money that Matt or Josh or any other employee invests in a 401(k), out of their salary, always belongs to the employee. Even if they get fired or decide to leave the job before being fully vested, an employer can't touch the money an employee contributes.

Basically, employer matches are like free money. But if you don't invest in your 401(k), you don't get the match. And if you don't invest the full amount that's eligible for the match, it's like leaving free money on the table. For their part, Matt and Josh aren't trust fund babies. They can't afford to pass up free money! And the buy-one-get-one-free sandwich deal at the deli across the street makes it their favorite spot to go for lunch!

### **Don't Put All Your Eggs in One Basket**

As she packs up her grandmother's china for storage, Kate holds up a bowl and reminds her brother Sam that she was always afraid of breaking it when they were kids. Kate and Sam both miss their grandmother, but they each need to decide what they're going to do with the money she left them. Kate tells Sam that she's going to invest her inheritance. She knows their grandmother wanted them to each have a little "nest egg" for the future.

Sam recalls how their grandmother always said, "don't put all your eggs in one basket." For Kate, not putting all your eggs in one basket makes good financial sense and she tells Sam that she's going to spread her inheritance money around.

At first, Sam doesn't understand why just putting your money somewhere safe isn't enough. But, as Kate tells him, when you're investing for the long term, you have to take some risk. Otherwise, there's no way to make your money grow because the average amount of money an investment earns over the long run is related to the riskiness of the investment. Riskier investments tend to make more money, while less risky investments tend to make less money. But that doesn't necessarily mean that riskier investments are better. With riskier investments, there's a chance you'll lose money; there's a trade-off between risk and return.

Kate explains to Sam that each asset in his portfolio, every investment he owns, will have some degree of risk. But what he wants to avoid is having a total wipeout and losing everything he owns all at once. For example, if he owns stock from only one company, then he is betting on the performance of just that one company. If it were totally destroyed, say, by a hurricane, his investment would be in trouble. An individual company can be struck by less dramatic difficulties, too. That's why it's important to invest in a mix of assets and not put all your money in one place.

Sam thinks about what Kate is saying, then tells Kate he's thinking about investing in the company where he works—the company is growing and Sam is confident they're doing well. Kate wonders if he's been listening to her at all! She tells her brother that the whole point of putting his money in a bunch of different assets is that if something unexpectedly bad happens to one of them, he'll be cushioned to a certain degree. But if Sam invested in the company where he works and that company tanked, both his job *and* his investments would be in trouble. That's where not putting all your eggs in one basket comes in: you shouldn't have your investments and your job tied to the same company, and you shouldn't have all of your money invested in one company. Instead, spread it around.

Kate has Sam consider the following scenario: What if you invested in a whole bunch of companies, but they all manufactured umbrellas and all of a sudden, the value of umbrellas plummeted? That might sound unlikely, but think about when the tech bubble burst or when the real estate market crashed. It's smart to invest in many different kinds of companies and investments. Basically, you want the ups and downs of your investments to be as unrelated to each other as possible so that if some do badly, others will offset those losses. That's why it's a good idea to spread your investments across different countries, too.

Sam looks at his sister with a warm smile. She really is as smart as their grandmother. As they finish packing up their grandmother's china, Sam is already thinking about ways to go about keeping his "nest egg" of investments in lots of different baskets.

## Inflation and the Plaid Shirt

This is the story of how a very cute plaid shirt inspired Lisa to save more for the future. Lisa and Beth were shopping together when Beth spotted the shirt and knew it would look great on Lisa. But when Lisa saw it, she had a flashback to the 90's, the last time plaid shirts were trendy. The new shirt cost \$50 and Lisa remembered paying \$30 for similar shirts back then. So the word "inflation" popped into Lisa's head.

Inflation describes price increases over time. Lisa realized that not only do shirts that used to cost \$30 now cost \$50, but lots of things that used to be \$30 are now \$50. When inflation rises, the same number of dollars buys less. So the price of a shirt, and other things like haircuts and groceries, can get higher.

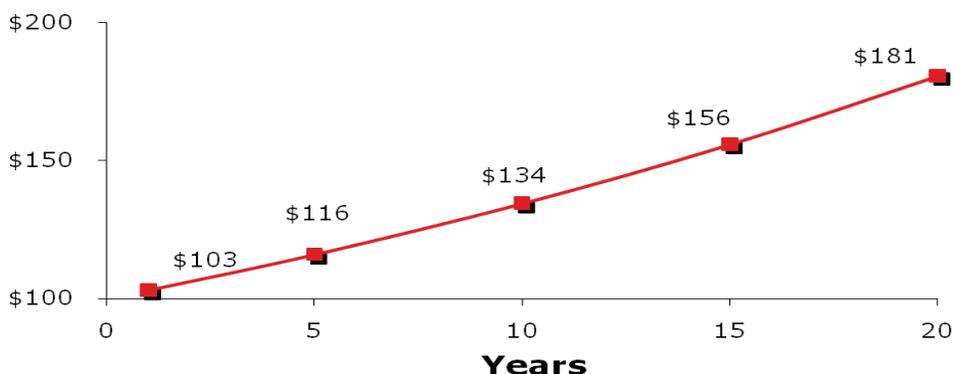
Let's say inflation increases at 4%. Something that costs \$100 at the beginning of the year will cost \$104 at the end of the year. Which doesn't seem like a big deal, until you consider that, on average, everything is going to cost a bit more. If your income doesn't increase, you can't buy as much as you used to because prices are higher. Even if you're making more money than you used to, it still might not be enough if your income didn't increase as much as the cost of what you normally buy.

When Lisa had her plaid shirt "aha" moment, she realized that prices are higher now than they used to be and they're probably going to be even higher in the future. Her friend Beth understood that part, too. But Beth could not figure out how a shirt could go all the way from \$30 in the 90's to \$50 now when it doesn't feel like the prices make such huge leaps from one year to the next.

Lisa explained that it's because the price increases build upon one another.

Let's say inflation increases at 3% every year for 20 years. A \$100 bag of groceries will cost \$103 after one year. After 10 years, it will cost \$134 dollars, and the 3% just keeps adding up to more and more money so that after 20 years your \$100 bag of groceries costs \$181. In other words, your \$100 groceries cost almost double, closer to \$200, 20 years later.

**Cost of Groceries**



Lisa knows that when she thinks about how much money she'll need for the future, she needs to consider how much more things will cost. Since her paycheck won't buy as much as it used to, she needs to start planning. And if she forgets about inflation, then wearing her cute new shirt will remind her!

## **Take Advantage of Tax-Free Assets**

It's payday and roommates Becca and Emily are making plans to go out for the evening. Emily touches up her makeup as Becca opens her paycheck, only to discover that while she made \$800 that week, the check is for only \$640. She hates how much they take out for taxes!

Emily explains that the reason she signed up for a 401(k) retirement account when she started her new job was to protect her money from getting eaten up by taxes. But Emily's explanation simply confuses Becca, who doesn't understand what a retirement account has to do with taxes.

Emily sits down with her roommate to explain. Everyone pays income tax on their salary. For example, if you're in the 20% tax bracket, then 20% of your salary goes to the government and you don't get to use it. But if you start a traditional 401(k) retirement plan, you can contribute pre-tax money to that account. You can contribute a portion of your salary straight to investments, without paying taxes on it, so there's more money for you. With a 401(k), your contributions grow tax-free. You don't pay taxes on the account until you retire, when you probably won't be earning as much and therefore will be taxed in a lower tax bracket.

While this sounds like a good idea, Becca asks what would happen if she wanted to take money out before retirement. Emily explains that if she withdraws money before she is 59 and a half, she will have to pay taxes and will get hit with a penalty fee, too—so it's not usually a good idea.

But the problem for Becca is that she doesn't think her employer offers a 401(k) plan. Emily explains that there are other options. IRAs are another type of retirement account and you don't have to get them through your job; you can get them yourself. As with 401(k)s, there are traditional and Roth varieties. Traditional IRAs protect your money from taxes when you put money in. And Roth IRAs protect your money from some taxes at the end, when you withdraw money during retirement.

Those aren't the only types of retirement accounts available that protect money from taxes. Lots of non-profit and government jobs offer similar types of retirement accounts that work in the same general way as 401(k)s and IRAs. When you're saving for retirement, it really pays to take advantage of these types of accounts and not give any more away in taxes than you have to! That's why Emily contributes to a 401(k).

Becca and Emily head out the door to their usual happy hour spot, with Becca thinking about how great it is to have friends who can give you financial advice and Emily thinking about whether the cute new bartender will be at happy hour!

Table 1: Percentage of correct responses to each question at baseline by gender, age, income, and education.

Question	All Respondents	Gender		Age			Income			Education		
		M	F	18-40	41-64	65+	<\$35k	>\$35k <\$75k	>\$75k	HS or Less	Some College/ Associate Degree	College Degree
Compound Interest												
CI2	91.66	94.80	89.47	87.33	92.76	95.15	85.04	92.87	95.57	83.41	90.63	96.59
CI3	65.74	74.74	59.60	61.82	66.36	70.15	56.22	64.11	75.65	53.45	61.22	75.93
CI4	71.10	81.70	63.75	65.53	72.67	75.06	57.41	71.47	81.90	52.27	66.48	84.49
CI5	79.05	84.29	75.45	71.98	80.98	84.32	66.72	79.04	89.31	65.44	77.18	87.36
Inflation												
I2	79.91	81.70	78.64	78.36	80.52	80.46	74.29	79.59	85.01	73.00	78.47	84.59
I3	74.00	77.55	71.56	72.95	75.88	69.41	63.72	72.36	84.62	61.77	71.40	82.32
Risk Diversification												
RD2	73.67	80.15	69.13	63.21	77.63	77.69	62.20	75.77	80.57	62.63	71.10	81.39
RD3	72.71	82.52	65.99	62.69	76.11	77.89	57.26	73.72	84.35	54.43	67.90	86.02
RD4	78.29	87.01	72.27	65.07	81.82	88.43	64.51	78.42	89.44	62.77	74.89	88.93
Tax-Favored Assets												
TF2	59.60	69.93	56.52	47.14	63.46	67.35	43.38	60.90	71.28	49.35	53.55	70.22
TF4	43.20	46.47	40.98	36.32	45.53	46.79	38.17	44.02	46.54	34.85	42.14	48.19
TF5	48.74	58.65	41.91	34.37	53.93	55.01	31.39	45.82	67.01	33.41	39.93	64.30
TF6	65.60	72.53	60.80	50.62	71.41	70.95	48.66	65.45	79.66	50.65	62.34	75.85
Employer Match												
EM2	46.35	55.98	39.70	40.68	48.13	49.74	32.02	45.28	59.84	33.33	39.93	58.65
EM3	45.86	50.78	42.43	45.05	46.83	43.96	32.65	46.74	55.54	33.33	41.05	56.42
EM4	70.70	77.29	66.06	62.42	74.10	72.94	56.31	71.06	82.11	55.75	67.94	80.43
EM5	81.87	86.49	78.62	70.32	85.93	87.40	68.30	82.48	92.17	71.00	79.56	89.25

Table 2: Interventions administered in Wave 1, by medium and topic.

Medium	Topic	Number of Observations in Wave 1
Video (only)	Compound Interest	227
	Inflation	223
	Risk Diversification	204
	Tax-Favored Assets	206
	Employer Match	208
Narrative (only)	Compound Interest	227
	Inflation	208
	Risk Diversification	187
	Tax-Favored Assets	216
	Employer Match	212
Video & Narrative	Compound Interest	97
	Inflation	104
	Risk Diversification	120
	Tax-Favored Assets	112
	Employer Match	117
Control group		568

Note: total number of respondents equals 2352. The total number of observations in the table is higher than that, since respondents in the treatment group receive between 1 and 3 treatments.

Table 3: Percentage of questions correct on each topic at Baseline and at Wave 1, by intervention condition.

Topic	Intervention	% Correct Mean (SE)	
		Baseline	Wave 1
Compound Interest	Control (No Intervention)	76.28 (2.12)	74.29 (2.26)
	Any Treatment	76.55 (1.22)	83.22 (1.16)
	Video (Only)	74.16 (2.05)	82.30 (1.89)
	Narrative (Only)	78.23 (1.83)	83.76 (1.74)
	Video & Narrative	78.02 (2.62)	84.07 (2.78)
Inflation	Control (No Intervention)	74.56 (2.53)	73.10 (2.66)
	Any Treatment	78.52 (1.43)	77.34 (1.43)
	Video (Only)	74.88 (2.37)	77.46 (2.22)
	Narrative (Only)	80.30 (2.21)	76.35 (2.24)
	Video & Narrative	82.81 (2.95)	79.17 (3.37)
Risk Diversification	Control (No Intervention)	73.67 (2.68)	75.80 (2.55)
	Any Treatment	77.15 (1.42)	84.61 (1.22)
	Video (Only)	77.78 (2.18)	86.07 (1.77)
	Narrative (Only)	75.93 (2.42)	81.11 (2.28)
	Video & Narrative	77.97 (2.97)	87.54 (2.35)
Tax-Favored Assets	Control (No Intervention)	59.11 (2.28)	41.00 (1.94)
	Any Treatment	61.28 (1.32)	55.47 (1.02)
	Video (Only)	57.92 (2.07)	56.90 (1.67)
	Narrative (Only)	61.92 (2.12)	54.52 (1.60)
	Video & Narrative	58.70 (2.90)	54.63 (2.11)
Employer Match	Control (No Intervention)	42.31 (2.01)	67.46 (2.26)
	Any Treatment	41.96 (1.14)	72.86 (1.09)
	Video (Only)	43.78 (1.81)	74.75 (1.75)
	Narrative (Only)	41.79 (1.86)	71.57 (1.74)
	Video & Narrative	39.06 (2.35)	71.88 (2.35)

Table 4: Changes in the percentage correct answer between baseline and follow-up

Question	Control	Any Tx	Video	Narrative	Both	
CI2	Baseline: % Correct	90.40	90.79	89.05	92.66	90.32
	Wave 1: % Correct	90.40	92.90	90.48	94.04	95.70
	Change (Wave 1 – Baseline)	0.00	2.11	1.43	1.38	5.38
	Change Beyond Control (Treatment Change – Control Change)		2.11	1.43	1.38	5.38
	p		0.44	0.66	0.66	0.20
CI3	Baseline	66.67	61.61	60.00	63.76	60.22
	Wave 1	64.41	79.85	80.95	78.44	80.65
	Change (Wave 1 – Baseline)	-2.26	18.24	20.95	14.68	20.43
	Change Beyond Control		20.50	23.21	16.94	22.69
	p		0.00*	0.00*	0.00*	0.00*
CI4	Baseline	69.49	73.55	71.77	75.58	72.83
	Wave 1	67.23	76.06	75.12	77.42	75.00
	Change (Wave 1 – Baseline)	-2.26	2.51	3.35	1.84	2.17
	Change Beyond Control		4.77	5.61	4.10	4.43
	p		0.19	0.20	0.34	0.46
CI5	Baseline	78.41	79.88	75.12	80.65	89.01
	Wave 1	74.43	83.37	82.30	84.79	82.42
	Change (Wave 1 – Baseline)	-3.98	3.49	7.18	4.14	-6.59
	Change Beyond Control		7.47	11.16	8.12	-2.61
	p		0.07*	0.02*	0.07*	0.65
I2	Baseline	78.36	80.86	75.59	86.21	81.25
	Wave 1	74.27	75.20	78.40	71.92	75.00
	Change (Wave 1 – Baseline)	-4.09	-5.66	2.81	-14.29	-6.25
	Change Beyond Control		-1.57	6.90	-10.20	-2.16
	p		0.70	0.15	0.04*	0.71
I3	Baseline	70.76	76.17	74.18	74.38	84.38
	Wave 1	71.93	79.49	76.53	80.79	83.33
	Change (Wave 1 – Baseline)	1.17	3.32	2.35	6.41	-1.05
	Change Beyond Control		2.15	1.18	5.24	-2.22
	P		0.644	0.83	0.33	0.725
RD2	Baseline	72.15	74.45	78.11	71.82	72.17
	Wave 1	75.32	83.70	83.58	80.11	89.57
	Change (Wave 1 – Baseline)	3.17	9.25	5.47	8.29	17.40
	Change Beyond Control		6.08	2.30	5.12	14.23
	P		0.15	0.64	0.32	0.01*
RD3	Baseline	70.70	75.20	72.14	75.56	80.00
	Wave 1	70.70	83.47	86.07	77.78	87.83
	Change (Wave 1 – Baseline)	0.00	8.27	13.93	2.22	7.83
	Change Beyond Control		8.27	13.93	2.22	7.83

P		0.02*	0.00*	0.60	0.09*	
Question		Control	Any Tx	Video	Narrative	Both
RD4	Baseline	77.22	81.69	83.08	80.11	81.74
	Wave 1	80.38	86.72	88.56	85.64	85.22
	Change (Wave 1 – Baseline)	-4.45	5.03	5.48	5.53	3.48
	Change Beyond Control		9.48	9.93	9.98	7.93
	P		0.595	0.573	0.581	0.946
TF2	Baseline	60.56	57.14	60.20	55.98	53.70
	Wave 1	56.11	70.46	73.13	67.46	71.30
	Change (Wave 1 – Baseline)	-4.45	13.32	12.93	11.48	17.60
	Change Beyond Control		17.77	17.38	15.93	22.05
	P		0.00*	0.00*	0.00*	0.00*
TF4	Baseline	42.78	43.24	44.28	43.27	41.28
	Wave 1	41.11	57.14	59.20	54.33	58.72
	Change (Wave 1 – Baseline)	-1.67	13.90	14.92	11.06	17.44
	Change Beyond Control		15.57	16.59	12.73	19.11
	P		0.00*	0.01*	0.04*	0.01*
TF5	Baseline	46.67	54.14	54.23	58.85	44.95
	Wave 1	47.22	72.45	74.63	73.21	66.97
	Change (Wave 1 – Baseline)	0.55	18.31	20.40	14.36	22.02
	Change Beyond Control		17.76	19.85	13.81	21.47
	P		0.00*	0.00*	0.00*	0.00*
TF6	Baseline	63.89	67.05	67.16	66.03	68.81
	Wave 1	60.56	76.88	77.61	76.65	76.15
	Change (Wave 1 – Baseline)	-3.33	80.21	80.94	79.98	79.48
	Change Beyond Control		83.54	84.27	83.31	82.81
	P		0.00*	0.01*	0.01*	0.09*
EM2	Baseline	52.05	48.64	49.49	49.51	45.54
	Wave 1	57.89	68.48	69.70	68.14	66.96
	Change (Wave 1 – Baseline)	5.84	62.64	63.86	62.30	61.12
	Change Beyond Control		56.80	58.02	56.46	55.28
	P		0.01*	0.021*	0.04*	0.02*
EM3	Baseline	47.06	47.00	48.24	50.73	38.05
	Wave 1	49.41	43.91	45.73	42.93	42.48
	Change (Wave 1 – Baseline)	2.35	-3.09	-2.51	-7.80	4.43
	Change Beyond Control		-0.74	-.16	-5.45	2.08
	P		0.26	0.40	0.07*	0.76
EM4	Baseline	70.41	71.71	76.26	66.83	72.57
	Wave 1	76.33	86.43	90.40	83.41	84.96
	Change (Wave 1 – Baseline)	5.92	14.72	14.14	16.58	12.39
	Change Beyond Control		8.80	8.22	10.66	6.47
	P		0.05*	0.10*	0.04*	0.27
EM5	Baseline	82.35	82.79	82.41	82.93	83.19

Wave 1	85.29	91.68	91.96	91.71	91.15
Change (Wave 1 – Baseline)	2.94	8.89	9.55	8.78	7.96
Change Beyond Control		5.95	6.61	5.84	5.02
P		0.07*	0.09*	0.13	0.27

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\*= p<.10