

Persuading Respondents: Writing Readable Surveys and Letters

The PRISM Readability Toolkit



GroupHealth

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- Introduction
- Background: readability and plain language
- How to improve readability, including examples
- Try it!
- Plain language as applied to scripts and informed consent
- PRISM Readability Toolkit

Our research setting



The Group Health Center for Health Studies

- Based in Seattle, established in 1983
- Non-profit research arm of Group Health Cooperative, an integrated health care delivery system
- Group Health has 530,000 members in Washington & Idaho

Grant-funded research is our bread-and-butter

- 45 faculty, ~200 active grants at any given time
- Typical projects recruit from our health plan membership
- Invitation letters, informed consent, related study materials generated mostly from scratch every time

Our research setting



Survey Research Program

- 11 professional research staff
- 20-45 part-time telephone interviewers & data entry staff
- Up to 25 CATI stations
- Mix of phone, mail, data entry, focus groups, & scanning
- \$1.2M survey research revenue in 2007

Your Presenter

- Managing & expanding SRP for nearly 5 years
- Prior to that, spent almost 15 years at the University of Nebraska-Lincoln, Bureau of Sociological Research, conducting largely population based RDD studies

Readability is the ease with which text can be read



Readability is the measure of how comfortably or easily text can be read

Usually expressed as a grade level

- Many different formulas provide an approximate grade level score

Factors that affect overall readability:

- Vocabulary
- Sentence and paragraph structure
- Page formatting
- Amount of information
- Content that is meaningful and interesting

2003 National Assessment of Adult Literacy (NAAL):

- **Nearly half of American Adults read at or below an 8th grade reading level.**
- **Even well-educated people prefer information at an understandable reading level**

Why aren't we meeting our reading level targets?



Despite 3+ decades of discussion by researchers and ethicists alike, we've seen little improvement in consent form readability.

Consider our typical research environment:

- Accustomed to writing for the scientific community
- Complex research terminology
- Confusing privacy laws
- Institutionally-mandated language geared toward protection from liability

Writing research consent forms or informed consent statements and scripts in plain language is not as easy as “just doing it.”

An evolving Group Health CHs readability initiative to address health literacy concerns in the research context

- Three primary resources, based on principles of plain language:
 - Readability Toolkit
 - Editing service
 - Training workshop

At Group Health Center for Health Studies:

- **A readability analysis of participant materials from 32 studies fielded before 2005 found the average grade level to be 11.2.**
- **Nearly one-third of written consent forms were at or above a 12th grade reading level.**
- **Only one of the 70+ documents reviewed achieved the target grade level (8th grade).**

What is “plain language”?

Plain language is...

- communication the audience can understand the first time they hear or read it
- focused on what the audience needs to know
- delivered—either verbally or in print—using terms and techniques that the audience can easily understand

Plain language is not...

- talking down to people
- impossible—successful plain language movements are taking place in the medical, legal, and financial sectors...even in the state and federal governments!

How plain language supports readability



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- Familiar vocabulary
- Straightforward sentence structure
- Concise sentences and single-topic paragraphs
- Well-organized
- Amount of information is appropriate
- Formatted for easy reading
- Developed with the readers' needs in mind

Before

Your initial evaluation may take up to one hour.

During the evaluation, your therapist will provide appropriate testing and discuss various treatment strategies designed to help you reach your optimal state of health and function.

It is advised that you wear comfortable and loose clothing for this initial evaluation. If your legs or feet are being examined, gym shorts are recommended.

After

Your first appointment may take up to one hour.

Your therapist will do some tests and talk to you about your treatment options.

Please wear comfortable clothes that fit loosely. If we are looking at your legs or feet, please wear shorts.

How do we measure readability?

Among several readability formulas, the most commonly used are the Flesch algorithms:

- **Flesch-Kincaid Reading Level, which reports a grade level score based on the US high school grade level system.**
- **Flesch Reading Ease, which is based on a 100 point scale. The higher the score, the more readable the text. 60-70 corresponds to 8th-9th grade.**
- **Both algorithms are based on the average number of syllables per word and words per sentence.**

How do I find out how readable my document is?

- **Microsoft Word provides a readability analysis tool that will give you both Flesch scores for any document as you spell check.**
- **You can check readability in the whole document or in one part.**
- **Caveats and considerations when using the Flesch formulas**
- **Other online resources:**

<http://resources.aellalei.com/writer/sample.php>

Readability formulas are useful as an estimating tool



But beware of their limitations

- They don't factor in overall organization, formatting, or page density
- Not all short words are familiar or well-understood
- Automated tool in Microsoft Word™—but it may overrate readability in some cases
- Sometimes getting the most accurate results requires and investment of time or resources

Options



Track Changes

User Information

Compatibility

File Locations

View

General

Edit

Print

Save

Spelling & Grammar

Spelling

- Check spelling as you type
- Hide spelling errors in this document
- Always suggest corrections
- Suggest from main dictionary only
- Ignore words in UPPERCASE
- Ignore words with numbers
- Ignore Internet and file addresses

Custom dictionary:

CUSTOM.DIC



Dictionaries...

Grammar

- Check grammar as you type
- Hide grammatical errors in this document
- Check grammar with spelling
- Show readability statistics

Writing style:

Standard



Settings...

Check Document

OK

Cancel

Readability Statistics



Counts

Words	144
Characters	655
Paragraphs	2
Sentences	8

Averages

Sentences per Paragraph	8.0
Words per Sentence	17.7
Characters per Word	4.3

Readability

Passive Sentences	25%
Flesch Reading Ease	72.0
Flesch-Kincaid Grade Level	7.6

OK

Examples of research language at differing grade levels



12th Grade

Your participation in this study is strictly voluntary. You have the right to choose not to participate or to withdraw your participation at any point in this study without prejudice to your future health care or other services to which you are otherwise entitled.

8th Grade

Participation in this study is entirely voluntary. You have the right to leave the study at any time. Leaving the study will not result in any penalty or loss of benefits to which you are entitled.

From IRB Readability Standards

N Engl J Med 348:8, Feb 20, 2003

Typical consent language at different grade levels:

12th Grade

Your participation in this study is entirely voluntary. You have the right to choose not to participate or to withdraw your participation at any point in this study without prejudice to your future health care.

4th Grade

You don't have to be in this research study. You can agree to be in the study now and change your mind later. Your decision will not affect your regular care. Your doctor's attitude toward you will not change.

Four principles of plain language and strategies to support them



#1 – Use language your audience can easily understand

- Choose common, everyday words
- Replace or define research and legal jargon
- Check the reading level

Examples of plain language alternatives



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additional	added, more, other, extra
beneficial	helpful, good
compensate	pay, give you
consider	think about
fundamental	basic
majority	most
participate	take part, join, do, be
withdraw (from)	stop, drop, leave

Example #1

Original

Flesch-Kincaid grade level = 19.7

If you are eligible **to participate in** the study, every two years we will **repeat the initial assessment procedures at the Center for Health Studies, and we will periodically review** your medical record to see if there is a change.

Revised

Flesch-Kincaid grade level = 8.3

If you are eligible **for** the study, we will **ask you to come in for a similar interview and blood draw** every two years. **We will also check** your medical record **from time to time** to see if there is a change.

Slide 22

JR1 Also, what do you think of the blue?...does it work better than just bolding (see next slide)

Jessica Ridpath, 11/27/2007

#2 – Write in a conversational style, as if you were speaking

- Use active voice.
- Write in the first-person using “I,” “we,” and “you.”
- Read your document out loud.

Example #2

Original

Flesch-Kincaid grade level = 10.2

Participants assigned to a study treatment group will make 10 visits over a 7-week period. These visits **will be paid for by** the study. **Regardless of group assignment, all participants will be contacted at 2, 6, and 12 months after the start of the study for** about a 20-minute **telephone interview.**

Revised

Flesch-Kincaid grade level = 5.6

If you are in a study treatment group, **you** will make 10 visits over a 7-week period. The study **will pay for** these visits.

No matter which group you are in, we will call you for three phone surveys that will last about 20 minutes each. These surveys will take place 2, 6, and 12 months after you join the study.

#3 – Organize and filter content with your readers' needs in mind

- Use short sentences.
- Limit paragraphs to one main topic.
- Put the right amount of information in the right place.
- Consider your audience—their literacy level, age, culture, and ethnicity.
- Ask someone unfamiliar with your project to read your materials

Example #3 (study invitation letter)

Original

Flesch-Kincaid grade level = 13.0

Can you take five minutes **to provide information that will help plan an important** study **to aid** people with arthritis **pain and problems getting** a good night's sleep? I am an investigator at Group Health Center for Health Studies **who is** planning a major study **to test new ways of helping people with** arthritis pain and sleep problems.

Revised

Flesch-Kincaid grade level = 6.2

Can you take five minutes **for a** study **about helping** people with arthritis **get** a good night's sleep?

If you have arthritis, you may know what it's like to have trouble sleeping. I am a **researcher** at Group Health Center for Health Studies. **We are** planning a major study **about** arthritis pain and sleep problems.

#4 – Format your document so that it **looks easy to read.**

- Use ample white space and margins.
- Break up chunks of dense copy.
- Give your readers “road signs” to help them identify topic areas.
- Emphasize key information using bold, color, or large font.

Before:



ORIGINAL: grade 11.2; 33% passive sentences; reading ease 49.8; word count 238

The A.L. Burruss Institute at Kennesaw State University has contracted with the Supreme Court of Georgia's Committee on Civil Justice to conduct a telephone survey with Georgians about their experiences dealing with non-criminal legal matters. The person taking the survey will ask about a number of things, including the kinds of legal issues people face, their experiences with the courts and lawyers and their ability to get a lawyer to help them if they need one. The results of the survey will be used to guide policymakers as they work to ensure equal representation for all Georgians.

Your household may be contacted to respond to the survey. It should take about 20 minutes to complete. Your caller ID box will identify the call as coming from "Georgia State Government." In order to obtain as random and complete a sample as possible, it is important that everyone who is called participates in the survey.

All of your responses will be kept confidential and you will not have to give your name when you answer questions. If we call at a time that is not convenient for you, you will be able to reschedule to a more convenient time. If you have any questions about the survey, please call me toll free at 888-249-8912 or email me at cpierann@kennesaw.edu.

Thank you for taking time to contribute your experiences and opinions on this topic. Your input is very important to us.

AFTER:



REVISED: grade: 7.8 0% passive sentences; reading ease 64.0; word count 225

It is important that all Georgia residents get equal treatment under the law. The Georgia State Government is working with Kennesaw State University to ask Georgia residents how they deal with non-criminal legal matters. The survey results will help the state government develop policies that help you and others like you.

We may call to ask you to do this survey by phone. The survey takes about 20 minutes and asks about your experiences with the legal system, including:

- the kinds of non-criminal legal issues you've faced
- what you've experienced in the courts
- what's happened when you've needed help from a lawyer

We won't ask you about legal issues related to any crimes you may have committed.

If you have caller ID, our call will say "Georgia State Government." We are calling residents at random. It will help us get the best possible information if everyone we call takes part in the survey. If we call at a bad time for you, we can call back to do the survey at a better time.

We will keep all of your answers confidential, and you don't have to give us your name. If you have questions, please call me toll free at 1-888-249-8912, or email me at cpierann@kennesaw.edu.

Thank you for taking the time to talk to us when we call. Your input is very important.

Excerpt from easy-to-read template language: Randomization



We will use a computer to randomly assign you to one of the study groups. This means that you will be put into a group by chance. It is like flipping a coin or drawing names out of a hat. You will have an equal chance of being in placed in any group.

Flesch-Kincaid grade level = 3.8

“The hardest thing about writing is organizing your thoughts.”

Common format for written communications:

- Statement of issue
- Background information (history of issue)
- Supporting details
- What we, the authors, are doing about it
- How the issue affects the reader
- What the reader should do next

“The hardest thing about writing is organizing your thoughts.”



How written communications should be organized:

What's happening?

How does it affect me?

What must I do?

Details

Adapted from Don Glickstein, Group Health, 1/00

Use short sentences – allow for pauses or breaks

Be conversational

Say it in the fewest words possible

Consider a list of informed consent elements, but don't script the delivery – allow interviewers to do this

Elements of Informed Consent

- **Who you are**
- **Where and for whom you are calling**
- **Topic**
- **How you were selected or identified**
- **Amount of time it will take**
- **Voluntary, and you can stop anytime**
- **Can choose not to answer any question**
- **Will keep responses confidential**

OTHERS:

- **Additional risks or benefits**
- **May be monitored – my supervisor may listen**
- **If you have questions or concerns, call IRB**

BEFORE:



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We've been asked to speak with residents of Georgia about their opinions and attitudes on some sensitive issues. Your number was selected at random and your answers will be completely confidential. You have the right to refuse to participate in the study and if I ask a question you do not want to answer, just let me know and I'll go on to the next one. All surveys conducted by Kennesaw State are reviewed by an Institutional Review Board. You may at any time contact them with a complaint about any survey. This survey includes some topics which may cause some respondents to recall difficult situations. We hope that you will participate in this study as it will add to our understanding of rape prevention education. It should take less than 10 minutes and there are no right or wrong answers to any of our questions. Please note, this interview may be monitored by my supervisor to insure that I am conducting it properly. May we continue?

ORIGINAL = 8.9, 60.7 reading ease, and 40% passive sentences, word count 167

AFTER:



<Sponsor> is doing a study about an important but sensitive issue. We are asking Georgia residents to share their opinions and attitudes on <rape prevention education.>

You were chosen by chance to take part in this study, which involves answering <a few> survey questions by phone. It should take less than 10 minutes, and there are no right or wrong answers. We will keep all survey answers confidential.

Being in this study is voluntary, and you are free to say “no.” The survey includes questions that might cause some people to think about difficult situations. If you decide to do the survey, you may skip any question that you don’t want to answer.

This study has been reviewed by an Institutional Review Board, or IRB. An IRB is a committee that protects the rights of people who take part in research. If you have concerns about this study, you may contact the IRB at any time.

Finally, I need to let you know that my supervisor may listen to this call to make sure I’m doing the interview in the right way.

We hope that you will decide to help with this survey. The results will help us learn the best ways to <improve Georgia’s rape prevention education programs>.

May we continue?

REVISED = 7.2, 69.4 reading ease, and 14% passive sentences, word count 212

SUGGESTED:

- Your name from [institution] calling for [sponsor]
- A study about an important but sensitive issue. We are asking Georgia residents to share their opinions and attitudes on <rape prevention education.>
- You were chosen by chance to take part in this study
- It should take less than 10 minutes to answer questions by phone
- There are no right or wrong answers
- All survey answers will be kept confidential
- Being in this study is voluntary
- You are free to say “no”
- Some questions might cause some people to think about difficult situations.
- You may skip any question that you don’t want to answer
- This study has been reviewed by a committee that protects the rights of people who take part in research. If you have concerns about this study, you may contact the Institutional Review Board at any time
- My supervisor may listen to this call to make sure I’m doing the interview in the right way
- The results will help us learn the best ways to <improve Georgia’s rape prevention education programs>

May we continue?

Let's try one!



Researchers at the John Doe School of Public Health and Jane University are conducting this study to learn about the quality of life of men who have prostate cancer.

Dr. John Doe will be heading this study. Our long-term goal is to develop programs and procedures to improve the quality of life of men who have this disease. To carry out this study, we are interested in talking with men who were diagnosed with prostate cancer in 2002. We received your name from the John Doe Cancer Registry. This phase of the study has been designed to see how well the questionnaire works during a phone interview and to measure how easy it is for participants to understand the questionnaire and its instructions.

33% passive; 58 reading ease; 10.2 reading level; 123 words

Subject to change:



Researchers at the John Doe School of Public Health and Jane University are **conducting** this study to learn about the **quality of life** of men who have prostate cancer.

Dr. John Doe will be heading this study. Our long-term goal is to develop programs and **procedures** to improve the **quality of life** of men who have this disease. To carry out this study, we **are interested in** talking with men who were diagnosed with prostate cancer in 2002. We received your name from the John Doe Cancer Registry. **This phase of the study has been designed to see how well the questionnaire works during a phone interview and to measure how easy it is for participants to understand the questionnaire and its instructions.**

33% passive; 58 reading ease; 10.2 reading level; 123 words

Did we improve it?



Researchers at the John Doe School of Public Health and Jane University are **doing** a study to learn about the **lives** of men who have prostate cancer.

Dr. John Doe will be heading this study. Our long-term goal is to develop programs and **treatments** to improve the **lives** of men who have this disease. To carry out this study, we **want to talk** with men who were diagnosed with prostate cancer in 2002. We **got** your name from the John Doe Cancer Registry. This study **will help us to know if we are asking the right questions to learn about your life with prostate cancer.**

OLD:33% passive; 58 reading ease; 10.2 reading level; 123 words



Use your real estate wisely – put the most important information in the first two to five lines of the screen

Use spacing thoughtfully

EXAMPLE:

Call to action

- **Link to complete survey**
- **What to do if there are problems with the link**
- **Explanation and details about the study**



White space is good!!

Use clear, plain language for instructions and question text

Use roadsigns consistently

- Underline
- Bold
- Italics
- Shading
- Headings

The most important things to remember when writing in plain language...

It's just as much editing as it is writing...and just as much art as it is science.

- Be prepared for an iterative process and/or multiple rounds of editing.
- Think creatively, and don't be afraid to try new ideas.

It's a continual process of improvement.

- Your skills will improve dramatically with practice.
- It may be impossible to achieve “perfect” plain language writing—don't aim for perfection, aim to improve your document each time you edit it.
- There are MANY resources available to help you when you get stuck.

Slide 43

JR5

I don't like this slide anymore, but can't come up with anything better at the moment...I have a feeling Sarah can tweak (or replace) this with something that flows into her concluding slides...

Jessica Ridpath, 11/28/2007

Readability guidelines, tools, and resources for health research

- Plain language principles and strategies to help you adhere to them
- Information and advice about using readability formulas
- Editing checklist designed for participant materials
- Comprehensive alternative word list

While the Toolkit is the primary “weapon” in our readability efforts...

- **Editing service** – primarily an in-house resource at present, but based on Toolkit principles, so an adaptable strategy
- **Training workshop** – we’ll take the workshop on the road and customize the materials

51 unique materials edited between Oct 2005 - Oct 2007 JR6

- Average original Flesch-Kincaid grade level (n=51):

Before editing:	9.8	(range 6.6 - 14.1)
After editing:	7.7	(range 5.3 – 10.3)

- Among the 19 consents:

Before editing:	10.6	(range 7.8 – 14.1)
After editing:	8.6	(range 6.9 – 10.0)

Slide 46

JR6

Not up-to-date

Jessica Ridpath, 11/28/2007



Share the PRISM toolkit with them!

Readability presentation at PRIM&R conference in 2007

(Public Responsibility in Medicine & Research – the IRB conference)

Learn about the process

Volunteer to be a reviewer

Thank you!



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Download the Toolkit at:

www.centerforhealthstudies.org

(click on "Scientific Resources")



Let's try another one!



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All of the information provided during the interview is confidential. None of the information will be given to any doctors, health insurance companies, hospitals, or anyone else. The information that we collect will only be available to the key members of the research team and representatives of the U.S. Army Medical Research and Material Command, and all information will be kept in a locked file cabinet in Dr. Doe's office at John Doe University. The information will be used to write a report on the quality of life of prostate cancer patients and will be used only for the purposes of this study. The information will be stored until completion of the written report. Because the Department of Defense is funding this study, the U.S. Army Medical Research and Material Command will be eligible to review subject records as a part of their responsibility to protect human subjects in research.

**Persuading Respondents:
Writing Readable Surveys & Letters**

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New Orleans, Louisiana

Presented by Cheryl Wiese

Group Health Center for Health Studies Survey Research Program

PRISM Readability Toolkit

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Download the Toolkit at:

www.centerforhealthstudies.org

(click on "Scientific Resources")

OR

www.centerforhealthstudies.org/sciresc/readability/readability_home.html

Online Writing Sample Analyzer -

<http://resources.aellalei.com/writer/sample.php>

Plain Language Association International -

<http://www.plainlanguagenetwork.org/>

Results of the 2003 National Assessment of Adult Literacy (NAAL) -

<http://nces.ed.gov/naal/>

...many more web resources available as live links in the PRISM Readability Toolkit

Quick Reference Guide for Improving Readability

Guiding principles of plain language:

- Use language your audience can easily understand.
- Write in a conversational style, as if you were speaking.
- Organize and filter content with your readers' needs in mind.
- Use reader-friendly formatting so that your document *looks* easy to read.

The following specific strategies will help you adhere to these principles:

- Check the reading level.
- Choose common, everyday words.
- Use active voice.
- Write in the first-person.
- Keep sentences short and to the point.
- Limit paragraphs to one main idea.
- Use clear and descriptive headings.
- Consider the needs of your audience.
- Organize and format your document so that key information is clear and easy to find.
- Use adequate white space and margins.
- Read your document aloud.
- Ask others to read and edit the document.
- Use fresh eyes when you edit or proofread.
- Double-check names and contact information.

PURPOSE OF THE STUDY

Researchers at the John Doe School of Public Health and Jane University are conducting this study to learn about the quality of life of men who have prostate cancer.

Dr. John Doe will be heading this study. Our long-term goal is to develop programs and procedures to improve the quality of life of men who have this disease. To carry out this study, we are interested in talking with men who were diagnosed with prostate cancer in 2002. We received your name from the John Doe Cancer Registry. This phase of the study has been designed to see how well the questionnaire works during a phone interview and to measure how easy it is for participants to understand the questionnaire and its instructions.

33% passive; 58 reading ease; 10.2 reading level; 123 words

50% passive; 37 reading ease; 14.2 reading level; 150 words

All of the information provided during the interview is confidential. None of the information will be given to any doctors, health insurance companies, hospitals, or anyone else. The information that we collect will only be available to the key members of the research team and representatives of the U.S. Army Medical Research and Material Command, and all information will be kept in a locked file cabinet in Dr. Doe's office at John Doe University. The information will be used to write a report on the quality of life of prostate cancer patients and will be used only for the purposes of this study. The information will be stored until completion of the written report. Because the Department of Defense is funding this study, the U.S. Army Medical Research and Material Command will be eligible to review subject records as a part of their responsibility to protect human subjects in research.