

Factors influencing jury instruction comprehension: New insights from working memory

Janet Randall, Samantha Bonnin, Ashley Robbins, Samantha Laureano, & Yian Xu | Northeastern University | randall@neu.edu

1.20 The standard of proof in a civil case is that a plaintiff must prove his or her case by a preponderance of the evidence. This is a less stringent standard that is applied in a criminal case, where the prosecution must prove its case beyond a reasonable doubt. By contrast in a civil case such as this one, the plaintiff is not required to prove

*"A preponderance of the evidence is such evidence which, when considered and compared with any opposed to it..."*¹

The Issue: In many states, jurors are challenged by jury instructions, which tell them how to evaluate and decide on a case.^{2,3} The linguistically complex language that these instructions contain (including passive verbs and legalese) can keep less-educated and non-native-speaking jurors from fully participating in trials and lead to misinformed verdicts.^{4,5} Our primary research question is: **What can psychologists do to improve juror comprehension?**

Hypotheses 1 & 2

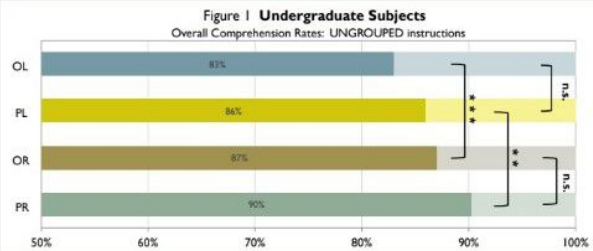
- H1. Plain English instructions, with passive verbs⁶ & legalese⁷ minimized, will be understood better than Original instructions.
- H2. Reading the instructions while listening to them will improve comprehension over just Listening.⁸

Materials, Design, & Procedure

In the studies below, four groups of subjects heard recordings of six Massachusetts civil jury instructions in a 2x2 design: Original instructions vs. Plain English, Listening-only vs Reading+Listening (OL, OR, PL, PR). Subjects in the two Reading conditions (OR & PR) had the texts to read along. Following each instruction, subjects answered true/false questions about it. These instructions, interspersed with questions, we call "ungrouped".

	Original	Plain English
Listening-Only	OL	PL
Reading + Listening	OR	PR

Study 1: Undergraduate subjects n = 214



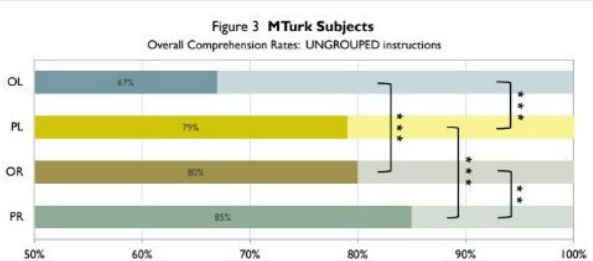
As Figure 1 shows, Hypothesis 2 was strongly confirmed: Reading significantly improved comprehension over Listening-only in both Original OR > OL (p < .001) and Plain English PR > PL (p < .01) conditions. Hypothesis 1 was marginally confirmed: Plain English instructions were understood better than Original instructions in the Listening-only PL > OL and Reading conditions PR > OR (both p > .05). However, differences were not great; students' high baseline comprehension rates left little room for improvement.

But: Are students representative of jurors? Not according to Census data, as shown in Figure 2. Nearly 50% of Massachusetts jurors have not gone beyond 12th grade. If we test a group of subjects whose educational levels are closer to jurors' than college students, will they show stronger effects?

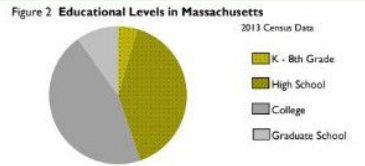
Hypothesis 3

- H3. MTurk subjects, with lower levels of education, will provide stronger evidence for Hypotheses 1 & 2 than students, across all conditions.

Study 2: MTurk subjects n = 389



As Figure 3 shows, the results confirmed Hypothesis 3: across all conditions, MTurk subjects' comprehension rates were lower than students', and all showed greater gains. With the switch from Original instructions to Plain English, students' non-significant gains became highly significant for MTurkers: PL > OL (p < .001); PR > OR (p < .01). When Reading was added to Listening, students' significant gains became highly significant, for both Original and Plain English conditions: OR > OL (p < .001); PR > PL (p < .001).



However, real jurors may comprehend EVEN LESS:

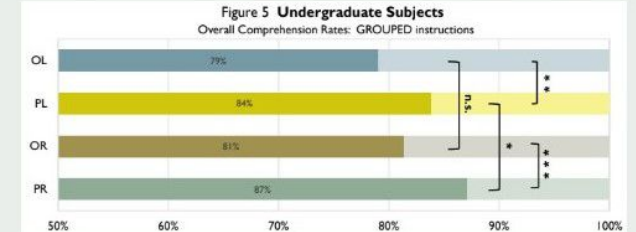
Our subjects had an advantage that jurors don't have. They heard each instruction and answered its questions before moving to the next. In a courtroom, jurors hear all the instructions in a "group" with no time to process or engage with each one, increasing the processing load.⁹ Moreover, holding onto more and more instructions before using them could tax working memory.^{10,11} To see if "grouped" instructions are more challenging than the "ungrouped" instructions of Studies 1 and 2, we designed Study 3, which presented all six instructions together and asked questions about all of them at the end.

Hypothesis 4

- H4. Because of limitations on processing and working memory, "grouped" instructions will result in lower comprehension rates than "ungrouped" instructions, across all conditions. Comprehension rates for Study 3 should be lower than rates for Study 1.

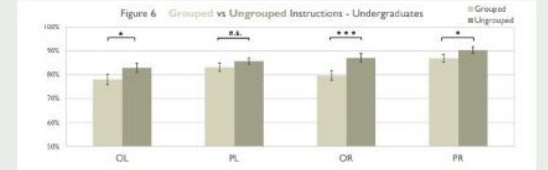
Study 3: Undergraduate subjects, "Grouped" instructions, a challenge to working memory n = 180

As Figure 5 shows, Study 3 supported both Hypotheses 1 and 2: comprehension improved for Plain English instructions over Original instructions in both the Listening-only PL > OL and Reading conditions PR > OR, now significantly. Comprehension also improved for Reading compared to Listening-only, for the Original instructions OR > OL (non-significantly) and Plain English instructions PR > PL, still significantly (p < .05).



Study 3 also supported Hypothesis 4, as Figure 6 shows.

As predicted, comprehension rates for the students hearing the Grouped instructions of Study 3 were lower than for those hearing the Ungrouped instructions in Study 1, with the OL, OR, and PR differences all significant.



Discussion

- Studies 1-3 supported Hypotheses 1 & 2:
 - rewriting Original instructions in Plain English and
 - providing texts of instructions so that listeners can Read as they Listen can improve jury instruction comprehension
- Study 2 supported Hypothesis 3:
 - Education affects comprehension: MTurk subjects, less educated than students, show lower comprehension rates and greater gains.
- Study 3 also supported Hypothesis 4:
 - Presentation matters: Grouped instructions lead to worse comprehension than ungrouped instructions because they pose a greater challenge to processing and working memory.

Conclusions

If our studies model what jurors encounter in the courtroom, they demonstrate not only how difficult jury instructions are, but how much more comprehensible they can be with three simple changes: (a) switch to Plain English, (b) allow listeners to read while they listen and (c) present the instructions in a way that avoids processing and working memory overloads. These changes would increase jurors' understanding and engagement, and lead, ultimately, to better-informed verdicts and fairer trials.

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