How Jurors Learn: Applying Learning Design to Trial Practice

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Abstract

Jurors encounter unique learning challenges when faced with the rigid structure of American trial procedures and the challenging nature of complex litigation. They are compelled to render judgment even though they may struggle to comprehend complex or technical testimony. The court strives to ensure justice, but may also struggle to understand complex issues. Litigation teams may struggle to understand how best to teach the jurors. The consequences of failure can be significant in financial or even personal liberty terms. This paper connects instructional design to trial practice to discover how jurors learn. It then presents a model for designing and developing trial presentations that optimize the juror learning process.

Introduction

Jurors in complex litigation trials face unique learning challenges not found in any other environment. They enter a courtroom knowing little to nothing about the events or people that led to the trial. They are compelled by law to participate, learn the information presented to them, come to a conclusion, and then render a verdict. The only new information they are allowed to use is provided to them by the court and two adversarial parties, often using language difficult to understand. Each party (plaintiff and defense for civil cases and prosecution and defense for criminal cases) provides its own set of information, which sometimes concurs but often contradicts. Jurors are required to behave and act within the strict rules of the court, many of which make learning more difficult than in a more typical learning environment.

In complex litigation, defined by Longhofer (1999) to include cases beyond the experience of the typical lay jury, comprehending the information is typically a challenge. The problem of juror's lack of adequate learning is significant enough that the American Bar Association (1990) commissioned a study reporting that over 80 percent of responding judges stated they had presided over cases they believed too complex for a jury to render a fair verdict. Rubin (1982) found that "the U.S. Court of Appeals for the Third Circuit and several federal district courts have held some cases so complex that juries are incompetent to decide them" (pg. 92), thus threatening the plaintiffs' Fifth Amendment's right to due process.

A primary source of complex information is the court-qualified expert witness. As stated in the Federal Rules of Evidence 702, this witness is "A witness who is qualified as an expert by

knowledge, skill, experience, training, or education" and is used to "help the trier of fact to understand the evidence or to determine a fact in issue" (2011). These witnesses have expertise in the subject of the litigation, such as medical, contracts, engineering, and other technical fields. They apply their expertise to the litigation by analyzing the evidence and generating opinions. They are then questioned on their work in open court for the purpose of educating the jurors. The jurors are directed to passively listen and try to learn.

The objective of each litigation team is to obtain a favorable verdict from the jury. To get there, jurors need to learn and accept a version of the case presented to them. Much of traditional learning theory is based on the goal of students passively receiving knowledge transfer by their teacher. In contrast, modern learning and cognitive research is focused on the process of students actively constructing their own knowledge. These researchers, as described by Driscoll (2005, pg. 393), believe "problem solving, reasoning, critical thinking, and the … use of knowledge" are the goals of instruction. These are the activities of motivated jurors. Therefore, the team needs to treat jurors not as passive, but as active directors of their learning process.

How can litigation teams turn non-engaged jurors into active learners? How can teams design and develop trial presentations that best take advantage of human learning characteristics and preferences? Teams need a reliable process, based upon research and best practices, to ensure they design and develop the learning tools jurors need.

In this paper, human learning theories are presented in the context of the needs of jurors. Specific characteristics of the juror learning process are identified and discussed. Trial-focused research is presented to provide the basis for informed trial presentation design. The Juror Learning Design Model is presented. This model is based upon the "story" model of juror decision-making and is adapted from a common instructional design model.

The Juror Learning Process

To determine the best methods for designing juror learning tools, we first consider how jurors learn. The "story" model, developed by Pennington and Hastie (1986), explains the process jurors in litigation trials go through to make their decisions. Jurors process the information they are provided by constructing a narrative story. This story consists of a combination of information and inferences they receive and, when needed, information they provide themselves.

Pennington and Hastie's (1992) later studies provide the conclusion that is central to the Juror Learning Design Model: whichever party makes it easiest for the jurors to construct a story that makes sense is the party most likely to prevail. The story model concept provides litigation teams a simple yet powerful structure to develop their trial presentations. Whenever the litigation team considers an issue regarding their presentations, they should first consider how it might affect the juror's story-making process.

Applying Research to Design

Dempsey and Reiser (2011) describe the Schema Theory and how a person's existing knowledge set, known as a schema, is drawn upon to facilitate the learning of new information (a concept used by many theories under different names). A common example is a person's knowledge of driving a car. Through education, training and experience, their brains have developed a stored network of car-driving knowledge they draw upon whenever they drive. If they need to learn a new skill related to this existing schema, such as learning how to navigate a roundabout for the first time, they can draw upon their existing schema to help. Someone with no driving experience, and thus no schema, would struggle to comprehend and learn the process.

For simpler litigation, a juror's existing schemas may suffice to provide them the background needed to understand a particular case. In contrast, complex litigation is, by definition, beyond the experience of the average juror. Therefore, the litigation team needs to help the jurors to develop an elemental schema so they can later understand the more complex case-specific information. Examples include human anatomy for medical malpractice, simple accounting for business fraud, and how vehicle headlights work for a pedestrian strike. By starting with simple concepts, jurors develop basic schemas, and become better prepared to learn the case-specific information.

Information science considers the importance of learners making sense of information, a relevant consideration for jurors and complex litigation. Savolainen (1993) described a sense-making theory, associated primarily with Brenda Dervin, to explain this information-gathering process of learners. She described sense-making as a process involving information acquisition, processing, and using, with *sense* being the product of this process. Information that makes sense is more likely to be used than that which does not make sense. Litigation teams should continuously consider if the information they provide to jurors will make sense to their evolving story development.

A consideration for the litigation team's presentation structure is in which order the information should be presented. Pennington and Hastie (1992) conducted research using test subjects acting as mock jurors to determine how the order affected their ability to construct a story. They found that information presented in chronological order was more effective than information presented in other commonly used orders. The researchers believe that chronologically ordered presentations are more consistent with the way jurors construct their stories, and therefore more effective.

Characteristics of the Juror Learning Process

There are several unique characteristics of litigation trials that directly affect the jurors' learning process. The litigation team needs to accommodate these constraints when designing their presentations.

One-way communication

Jurors remain passive throughout the learning process, unable to interact with those presenting the information. Consequently, the presenters are unable to determine if jurors are learning. To address this constraint, presentations need to be thoroughly planned and tested before trial. Litigation teams may conduct mock trials so that strategies, presentations and exhibits can be tested and adjusted. Alternately, they may rely on some combination of informal testing and their best judgment based upon their education and experience.

Self-enclosed information sources

Except for their pre-existing knowledge, jurors may only use the information provided to them in court. Litigation teams need to ensure their presentations are comprehensive enough to avoid a knowledge gap. As described by Pennington and Hastie's (1986) story model, when there is a gap, the juror provides the missing story elements. As can be imagined, these added elements may be problematic when jurors start using their own assumptions. These gaps can be anticipated either from the team's experience or by testing the presentations. The better the presentation designs avoid gaps the less opportunity jurors will have to contribute their own content to their stories.

Complex litigation

The information jurors are expected to learn is typically beyond their experience and often of a technical nature. Using basic design techniques will aid the juror's learning process. Trial presentations should start with simple concepts and analogies that prepare jurors for case-specific information. To simplify learning, this information should be presented in chunks of elemental and discrete components. These components become the building blocks for a cohesive and believable presentation. To maximize memory storage and recall, key points should be repeated using multiple presentation methods, such as spoken combined with graphics-based exhibits.

Cognitive overload, which stops learning because a juror's working memory is no longer able to accept input, should be managed by reducing extraneous information presented to jurors. A good learning program should contain all it needs and nothing it does not need.

Motivational Challenges

Experienced educators recognize how motivation affects learning. "Many instructors consider the motivation level of learners the most important factor in successful instruction" (Dick, et al., 2009, pg. 93). Simply put, motivated jurors learn better. As compared to more typical learning environments, a courtroom trial is a motivational challenge, particularly when jurors are compelled to participate. However, there are opportunities to incorporate motivational features into design.

The court or an attorney in opening statements can impress upon the jury the critical importance of their role in the American legal process in general and this case in particular. Jurors may appreciate the recognition and be more likely to take their work seriously. Jurors may also be intimidated by the thought of navigating the diverse expectations of all the parties.

Attorneys may be able to help their confidence and thus their motivation by expressing that the jurors will receive the support they need to do what is expected of them.

When jurors struggle to follow a poorly designed trial presentation, frustration and de-motivation can be expected. Jurors will more likely to be motivated with a presentation they can follow, thus facilitating the juror's story creation process. As described by Maher (2005), "Your case presentation strategy should not merely be a list of points to present. A case presentation needs to be flowing, systematic and consistent, leading to an inevitable and believable conclusion (pg. 7)."

Jurors get bored when they are not engaged. Boredom leads to de-motivation. Engagement is an indication of a motivation to learn. Skilled presenters have learned how to engage their audiences. Graphics-based exhibits also work well to engage the attention of viewers. Of course, they need to be relevant, useful and well designed.

Juror's decision-making motivations may not always be based upon what litigation teams expect. Jurors may be influenced by an attorney's aggressive attitude while questioning a sympathetic witness, the socio-economic status of a plaintiff, or the arrogance of an expert witness. Teams may need to consider issues beyond the rational juror this paper is focused upon and anticipate how undesired motivations may affect the course of the trial. Thorough testing will assist this effort.

A final thought on motivation comes from Rich Matthews (Craigie, 2013) discussing what juror's want: ""I think jurors want two and only two things from counsel, and get alienated easily when these are violated: help with understanding the material, and not wasting their time. That's it."

Trial Graphics Research and Use

Successful attorneys and expert witnesses are usually capable at their ability to vocally explain complex information in an understandable manner. However, listening to words alone may not be adequate to learn complex concepts and information. Testifiers often support their verbal testimony with visual trial graphics or exhibits. These consist of photographs, charts and graphs, timelines, illustrations, scale models, interactive computer exhibits, video, and trial animations (video graphics). Our brains like to learn from visual representations. Graphic exhibits can facilitate learning in ways words cannot. This should not be surprising considering that humans relied on their eyes/brain to understand their world long before they developed structured language.

These visual exhibits need to be developed to supplement the testifier and not supplant them. For instance, exhibits should not have voice-overs or too much text; the testifier should instead control the presentation. This approach ensures the jurors know the testifier is the authority and the exhibit is a faithful representation of his or her testimony.

A large body of research confirms the usefulness of using graphics-based tools to enhance the learning process, including the specific needs of juror learning, story development

and memory retrieval during deliberation. Among them, Lin and Dwyer (2009) studied the effectiveness of animation as an instructional tool and state that “animated presentations, compared with static visuals, provide learners with external illustrations, help them visualize knowledge that involves changes in direction, speed, and path of travel … and improves their performance at all levels of learning” (pg 16). Their reference to motion factors is particularly useful for trial animations of vehicular crashes, a common subject of civil litigation.

Juror Learning Design Model

The following model is designed for litigation teams to develop trial presentations and their associated exhibits. It is based upon common learning design practices and the experience of the author. The ADDIE learning model (as described by Dempsey and Reiser, 2011) is used as the structure because of its systematic and easily understood nature. ADDIE is an acronym for the elements of the model; analyze, design, develop, implement, and evaluate. These elements should be straightforward for litigation teams to implement. The order for the Implement and Evaluate steps are switched to accommodate the particular needs of litigation trials.

Juror Learning Design Model	
Description	**Details**
1. Analyze the case to determine the information components to present.	What do the jurors need to learn to enable them to construct their stories? These components consist of evidence, given facts (who, when, etc.), statements, testimony, background information, testing, analysis, and opinions. Include all that is needed and nothing that isn't needed.
2. Design the trial presentations using the learning theories and practices provided in this paper.	• Consider developing one or more themes that distill your case into a simple to understand phrase. This makes it easier for jurors to remember your key messages. • Organize the information components into a chronological narrative story so that jurors can more easily construct their own story. Think of this process as the path the jurors need to take to get from the facts and evidence to what they mean (the theme). • For complex issues, begin with simple, generalized concepts and analogies, and then progress to case-specific information. • For ease of comprehension, ensure the information components are presented in their most elemental form (chunking). • Use plain and concise language as much as possible. Jurors can't learn what they don't understand or after their working memory is exceeded. • Ensure the presentations are comprehensive, necessary and make sense. • Consider the motivational needs of the jurors. Jurors motivated to do what is expected of them learn and perform better. • Determine which information components will benefit from trial graphics (a.k.a. demonstrative evidence). Considerations include the information's importance, complexity, need for reinforcement, and use to engage jurors.

3. Develop each testifier's trial presentation.	• Ensure that each presentation is matched to accommodate the testifier's strengths and weaknesses. For instance, testifiers who are not strong at unstructured public speaking will benefit from exhibits rich in content they can use to guide their testimony. • Integrate the individual information components so that they become a unified, interesting and believable presentation. • Take care to avoid cognitive overload to facilitate long-term memory storage and recall. One way is to avoid extraneous content. • Make sure exhibits are developed in close conjunction with the testifier to ensure they accurately portray and support their testimony. • Developers must be knowledgeable of admissibility rules to ensure the court qualifies the trial exhibits. Education technologists who specialize in demonstrative evidence design and development can provide needed experience and skills.
4. Evaluate the effectiveness of your presentations before trial by conducting formal or informal testing.	Objective testing to determine effectiveness is a mainstay in instructional design to avoid the common temptation of believing that if it works for you it will work for anyone. Expect to learn things from the test subjects that you never anticipated. Adjust your presentations as needed.
5. Implement at trial.	Ensure that all testifiers and technology are fully prepared. Afterwards, conduct a debriefing session to learn what worked and what needs to be improved for your next trial.

Conclusions

Jurors' experiencing learning problems during complex litigation trials are an identified issue. The story model provides the means to understand how jurors develop a narrative story to make sense of what they are told. Whichever litigation team makes it easiest for the jurors to develop their story is more likely to prevail. Instructional design theories and practices can be utilized to facilitate jurors' learning process. Presentations and exhibits are optimized for learning by thoughtful design, presenting information chronologically, developing juror schemas from simple to complex, managing cognitive loads, and providing all the information jurors need. Testifiers can sustain juror engagement by using trial exhibits to maintain attention, motivation, comprehension and recall. Experienced developers can assist litigation

teams with these exhibits, as well as ensuring admissibility and consulting on trial presentation design. The Juror Learning Design Model provides the litigation team a practical structure for trial presentation and exhibit design.

References

Elements of this paper originally appeared in The Information Needs of Jurors in Complex Litigation (2002), Indiana University (unpublished), by the author, and Juror Learning Design: Applying Education Technology to Complex Litigation Trials, Purdue University (unpublished), by the author.

American Bar Association, Special Committee on Jury Comprehension (1990). Jury comprehension in complex cases: report of the Special Committee of the ABA Litigation Section. *American Bar Association, Division of Professional Education.*

Craigie, A. (2013). Will you give these jurors what they want? Retrieved from https://atcounseltable.wordpress.com/2013/12/30/will-you-give-these-jurors-what-they-want/

Dempsey, J. & Reiser, R. (2011). *Trends and Issues in Instructional Design and Technology (3rd Edition).* Pearson HE, Inc. Kindle Edition.

Dick, W., Carey, L., Carey, J. (2009). *The Systematic Design of Instruction*. Pearson.

Driscoll, M. P. (2005). *Psychology of Learning for Instruction*. Pearson Education Inc.

Federal Rules of Evidence, retrieved from http://www.law.cornell.edu/rules/fre/rule_702, Pub. L. 93–595, §1, Jan. 2, 1975, 88 Stat. 1937; Apr. 17, 2000, eff. Dec. 1, 2000; Apr. 26, 2011, eff. Dec. 1, 2011.

Lin, H. & Dwyer, F. (2009). The effect of static and animated visualization: a perspective of instructional effectiveness and efficiency. *Education Tech Research Dev, 58,*155–174.

Longhofer, R. (1999). Jury trial techniques in complex civil litigation. *University of Michigan Journal of Law Review, Winter 32, 2,* 335-347.

Maher, T. (2005). *Demonstrative Evidence for Complex Litigation: A Practical Guide*. Lawyers & Judges Publishing.

Pennington, N. & Hastie, R. (1986). Evidence Evaluation in Complex Decision Making. *Journal of Personality and Social Psychology, 51 (2),* 242-258.

Pennington, N. & Hastie, R. (1992) Explaining the evidence: tests of the story model for juror decision-making*. Journal of Personality and Social Psychology, 62 (2),* 189-206.

Rubin, A. (1982). Trial by Jury in Complex Civil Cases: Voice of Liberty or Verdict by Confusion? *Annals of the American Academy of Political and Social Science, 462*, 87-103.

Savolainen, R. (1993). The sense-making theory: reviewing the interests of a user-centered approach to information seeking and use*. Information Processing & Management, 29, 1,* 13-28.