In this lesson you will learn to:

• Distinguish between anecdotal and research evidence; and
• Recognize the structure of research evidence.
Types of Evidence

When you are given assignments for papers and projects in your classes you will typically be asked either to *inform* your audience of the facts on your topic, or *persuade* your audience to a particular point of view.

Either way, you will be making claims and you will need to back them up with *evidence*.
Anecdotal & Research Evidence

You will rarely hear researchers talk about proof. It’s very difficult to prove, for example, that one thing causes another. Instead, we look for relationships between variables, i.e. evidence.

This lesson is about two types of evidence, *anecdotal* evidence and *research* evidence. As you will see, for formal presentations one is preferred over the other.
Anecdotal Evidence

An anecdote is a story about an incident that happened in one situation. Anecdotal stories often appear in newspapers and newscasts because that is the news reporters’ job – to give us the story about an event that just happened. Keep in mind that events are news precisely because they’re unusual.

EXAMPLE: Over the last several years there have been many stories in the press about shark attacks. But shark attacks have not increased; only the coverage has increased. These are anecdotes – isolated incidents. The likelihood of being attacked by a shark is very small, but people love to read these sensational stories and the press loves to cover them.
Anecdotal Evidence

We also get anecdotal evidence from each other:

EXAMPLE: A classmate tells you that she ate at a local restaurant and got sick afterwards. This may make you leery of eating at that establishment, even though no one else who ate there that night got sick and it’s entirely possible that your friend just caught a virus somewhere.

EXAMPLE: A friend tells you that he doesn’t believe that smoking is as dangerous as they say because his great-uncle Harry smoked two packs a day and lived to 97. That’s anecdotal evidence – one isolated case. It’s true that smoking doesn’t kill every smoker but, statistically, the odds are against you if you smoke.
Anecdotal evidence causes us trouble when we generalize from one specific situation to all situations. If one person smokes and it doesn’t kill them, that doesn’t mean it’s safe for everyone.

EXAMPLE: Most people feel much more anxiety flying than they do driving, even though mile for mile — driving is far more dangerous. Auto accidents around the country are so common that they aren’t considered newsworthy. Plane crashes are unusual. They receive a lot of attention. Seeing the coverage we tend to generalize from specific flying situations — the crashes — to all flying situations. Flying is not risk-free, but our fear of it is out of proportion to the real risk.

Generalization based on anecdotal evidence is a bad idea. It leads you to make important decisions on the basis of a single piece of data.
Scholarly Journals

For college-level writing, you are expected to use research-based evidence. You will usually find it in the form of articles published in *scholarly journals* like those pictured here, also referred to as *academic journals* or *research journals*. 
Scholarly Books

Research is also reported in books...
Scholarly Web Sites
...and sometimes on web sites.

EXAMPLE: The Pew Charitable Trusts is a large foundation that provides funds to researchers for their work. One of their special concerns is the impact of new technologies. They gave the Woodrow Wilson International Center for Scholars a grant to study public perceptions of nanotechnology. When the research was completed the report was published on the Pew site at http://www.pewtrusts.com/pdf/Nanotech_0905.pdf.
The Structure of Research

Regardless of what form (journal, book or web site) you find research in, it will be reported in a recognizable and consistent structure.

The rest of this lesson is about how to recognize research. We are going to look at a sample article to see how the components of a published research report work together.
Here is the *citation* for our sample article:

These are the parts of a research article. We’re going to look at them in order to see how they appeared in our sample article:

“Exposure Duration: Effects on Eyewitness Accuracy and Confidence”
Although the **REFERENCES** come at the *end* of the article, they come at the *beginning* of the process. Researchers keep careful track of what is being published in their field, both to keep up on what’s being done, and to help them formulate a research question that *hasn’t* been done. Typically at the end of the article you’ll see a long list of other publications they have cited. Our article had a total of 60 references. The ones shown below are just a sample.


These are the parts of a research article. We’re going to look at them in order to see how they appeared in our sample article:

“Exposure Duration: Effects on Eyewitness Accuracy and Confidence”
You won’t always see a section clearly marked **Problem Statement**. The authors may start with an “Introduction,” or “Background.” But somewhere in there, they will tell you what they hoped to learn by doing this research. That’s the problem statement. Phrases like, “The current study sought...” are a giveaway. In our article the very first sentence tells us why they did this study. They wanted to know whether witnesses who see a crime perpetrator for a longer time are more accurate in identifying the criminal later. AND, they wanted to know whether the longer exposure makes the witness feel more confident about the identification. (If witnesses feel more confident but aren’t actually more accurate...that would be a good thing to know, right?)

The current study sought to examine the relationship between duration of exposure to a face in an eyewitness setting, accuracy of identification and subjective assessments of confidence in the identification decision. It is not difficult to imagine the ways in which exposure to a face might vary substantially even between witnesses to the same event. Some witnesses might come face to face or even interact with a culprit while others might only realize a crime is taking place as the culprit runs past them to exit the scene. But is it always safe to assume that increased exposure to a face produces a more reliable identification? Eyewitness experts seem to think so (Kassin, Tubb, Hosch, & Memon, 2001), and yet case studies suggest that a good view of a person does not always guarantee that a witness will accurately identify that person on a later occasion (Shepherd, Ellis, & Davies, 1982). For instance, the Devlin Report (Devlin, 1976) cites the case of Laszlo Virag as an example of where extended exposure still resulted in a subsequent false identification. In this case, a witness who spent several minutes at the
These are the parts of a research article. We’re going to look at them in order to see how they appeared in our sample article:

“Exposure Duration: Effects on Eyewitness Accuracy and Confidence”
A research piece will always specify the METHODOLOGY – how the research was done.

EXAMPLES:
- A survey given to 500 recent immigrants
- An observation of 152 kindergarten children
- A focus group conducted of 9 middle-aged college students

The methodology section for this study is long. The part shown below is just the beginning. Notice how clearly it’s marked: Method.

This study had a very lengthy and complex methodology that involved exposing people to staged crimes, controlling the amount of time the subject saw the “perp’s” face, followed by phony line-ups – all repeated for two different age groups. The paragraph reproduced here is just the beginning of a very lengthy explanation of the methodology.

Method

Participants
A total of 164 participants were tested, of whom 84 were students recruited within the University of Aberdeen and aged between 17 and 25 years ($M = 19$ years, $SD = 1.13$). The 80 older participants were recruited from the local community and were aged between 59 and 81 years ($M = 68$ years, $SD = 5.9$). The older participants were required to complete a health and personal history questionnaire before proceeding to the main
Structure of a Research Article

These are the parts of a research article. We’re going to look at them in order to see how they appeared in our sample article:

“Exposure Duration: Effects on Eyewitness Accuracy and Confidence”
Results

To recap, the main aim of the current study was to examine identification accuracy and confidence in decisions following short (12 s) versus longer (45 s) exposures to the target’s face in a crime videotape. Second, exposure duration effects on identification choices were compared in the TP and TA conditions. In particular, we examined whether length of exposure would differentially influence the false choosing rates of young and older witnesses in the TA condition. To examine the impact of each of these variables on accuracy, first a hierarchical loglinear (HILOG) analysis was conducted with age group (young/old), exposure (short/long) and line-up type (TP/TA) as factors. Given that response options in a TA line-up are binary (correct rejection or false identification), we combined the incorrect responses (incorrect rejections and foil identifications) in the TP condition for the purpose of this overall analysis only. Hence, an accurate response is a hit in a TP line-up and a correct rejection in a TA line-up. An inaccurate response is a foil identification or incorrect rejection in a TP line-up or a false identification in a TA line-up. The HILOG analysis compared accurate responses with inaccurate responses. The only variables contributing to the final model were line-up type and exposure, \( \chi^2(9,164) = 4.58, p = .87 \). These findings suggest no main effects on the variables examined further.
These are the parts of a research article. We're going to look at them in order to see how they appeared in our sample article:

“Exposure Duration: Effects on Eyewitness Accuracy and Confidence”
The **CONCLUSIONS**, or **DISCUSSION**, section tells you what the researchers think is true as a result of the data they found. This section should be easier to understand than the data itself. For purposes of gathering evidence for a college-level paper – this is what you’re looking for. Our researchers found that, yes, witnesses who get a good look are more accurate at identifying criminals. Unfortunately, the longer look makes them more confident, whether they’re right or wrong. Interesting.

**Discussion**

To summarize, the present results indicated a clear effect of exposure duration on eyewitness identification accuracy. Longer exposure significantly boosted accuracy rates for both young and older participants, particularly for TP line-ups. It also increased the accuracy rates (correct rejections) in TA line-ups. These findings confirm the commonsense view that extended exposure should aid subsequent recognition accuracy. In line with the availability framework (Read, 1995), a longer exposure to the target also inflated witness confidence. However, this inflated confidence was seen only in the TP conditions, where inaccurate witnesses were as confident as accurate ones under the long exposure. Clearly, jurors and police officers should be aware of this potential undesirable effect of extended exposure to a culprit on witnesses’ subjective confidence in their identification decisions.

The only prior study that has systematically manipulated exposure duration in TP and TA line-ups is that of Read (1995). He found a modest increase in hits under TP conditions in the long exposure condition but also an increase in false alarms in TA conditions—in other words, an overall increase in choosing. Our results partially
These are the parts of a research article. We’re going to look at them in order to see how they appeared in our sample article:

“Exposure Duration: Effects on Eyewitness Accuracy and Confidence”
The researchers started by reviewing everything that had been written in this field. They formulated a question. They carried out their research and reported it. Sometimes at the end of an article researchers will make **SUGGESTIONS FOR FURTHER RESEARCH**. This is how a community of scholars develops knowledge over time.

In our study, there isn’t a clearly marked section for suggestions. Throughout the Discussion of their findings the authors mention facets of the research that need further exploration.

In surveys of experts published in 1989 (Kassin, Ellsworth, & Smith, 1989) and 2001 (Kassin et al., 2001), psychologists with relevant expertise were asked about their opinions on variables influencing eyewitness performance. Both surveys contained the statement: ‘The less time an eyewitness has to observe an event, the less well he or she will remember it.’ Of the experts, 65% in 2001 and 63% in 1989 indicated this was a reliable statement. Experts generally felt that the effects of exposure time fell within the realm of common sense (Kassin et al., 1989). The current research findings show that there are situations where length of exposure may inflate witness confidence. Factors that may moderate the relationship between length of exposure to a face and accuracy should be investigated further in order to better understand the conditions under which extended exposure may benefit face recognition.
These are the parts of a research article. We’re going to look at them in order to see how they appeared in our sample article:

“Exposure Duration: Effects on Eyewitness Accuracy and Confidence”
Although it’s the first thing you see, the **abstract** is the last piece written, a summary of all the rest. Usually abstracts tell you the whole story. Try reading through this abstract and see if you can describe the problem, the methodology, the results and the discussion for our sample study.

---

**Exposure duration: Effects on eyewitness accuracy and confidence**

Amina Memon¹*, Lorraine Hope¹ and Ray Bull²

¹University of Aberdeen, UK
²University of Portsmouth, UK

The current study examined the relationship between the length of exposure to a face in an eyewitness setting and identification accuracy and confidence. A sample of 164 young (ages 17–25) and older (ages 59–81) adults viewed a simulated crime in which they saw the culprit’s face for a short (12 s) or long (45 s) duration. They were then tested with a target absent (a line-up not containing the culprit) or target present line-up. Identification accuracy rates for both young and older participants were significantly higher under the long exposure condition. In the short exposure condition, witnesses who had made a correct identification of the target were more confident than incorrect witnesses. In the long exposure condition the confidence ratings of accurate and inaccurate witnesses did not differ. Discussion focuses on the extent to which extended exposure may inflate confidence judgments and variables that may moderate the relationship between exposure duration and face recognition accuracy.
In most research articles you will see this process, or something very similar to it.
Communities of scholars in various disciplines carry on conversations, by means of their published research, that can go on for years or even decades. You can’t expect to understand the conversation by looking at a couple of articles you pull out at random.
Using Research Articles Effectively

Racialized memory and reliability: due process applied to cross-racial eyewitness identifications.

-New York University Law Review


-Cornell Law Review

Improving the identification accuracy of senior witnesses: do prelineup questions and sequential testing help?

-Journal of Applied Psychology

A CommonKADS representation for a knowledge-based system to evaluate eyewitness identification.

-International Review of Law, Computers & Technology

KEY TO SUCCESS
To get a good understanding of the research in your topic dig up as many articles as you can - 30, 40, 50, more - and read the abstracts. You will get a much better overview of the scholarly discussion than you could get by reading even one article from start to finish, in less time.
Thinking About Disciplines

Research is different in different disciplines. So far we have been talking about research in the social sciences, because much of the informative and persuasive writing you do in college will relate to these disciplines.

But think about an article in a history journal. How do you think it would differ from our example about the accuracy of eyewitnesses?

What about in a physics journal? How would the experimental design be different from a social science study like the sample article we’ve been exploring?
What’s Your Discipline?

By deciding to attend college and choosing a major you have started on the path to joining one of the many communities of scholars. You now have a discipline, whether it be education, environmental studies, communication or any other program of study.

Take advantage of the research and writing opportunities in your basic classes, such as English 101, to start exploring the scholarly literature in your discipline. Find out what your colleagues have been up to and prepare yourself to join the conversation.
Summary

When you are writing you must support your claims with good evidence.

Avoid anecdotal evidence – don’t generalize on the basis of one story or event.

Learn to recognize solid research evidence published in scholarly journals and books.

Use writing and research opportunities to explore the academic literature in your discipline (criminal justice, nursing, education...). Start recognizing how research is done in your field.
If you have any questions or would like some help finding good sources for your topic, talk with a librarian.

_Here’s how you can find us:_

**Come see us at the library:**
Current hours are posted on the Library Home Page:
[http://www.tc3.edu/library/a_hours.asp](http://www.tc3.edu/library/a_hours.asp).

**By Phone:**
607.844.8222, Extension 4363

**By Email:**
library@tc3.edu

**On the Web:**
www.tc3.edu/library

On every page on our site, there’s a link to _Ask-A-Librarian_.
Post your question. We’ll respond within one business day.