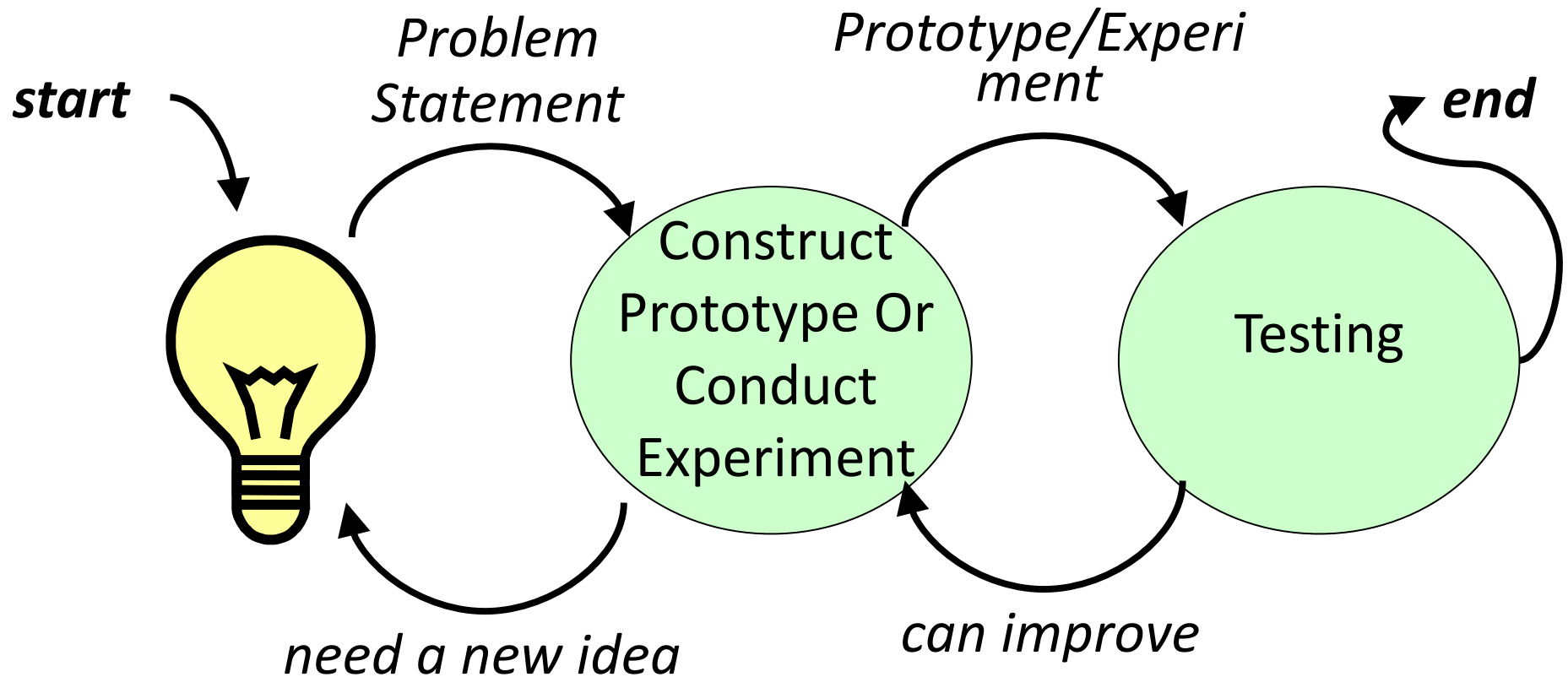# Gov Poster Session

How to Communicate Research in Writing and on a Poster

Prof. Latanya Sweeney
Fall 2017

Excerpts from "How to Do Research in Technology Science".
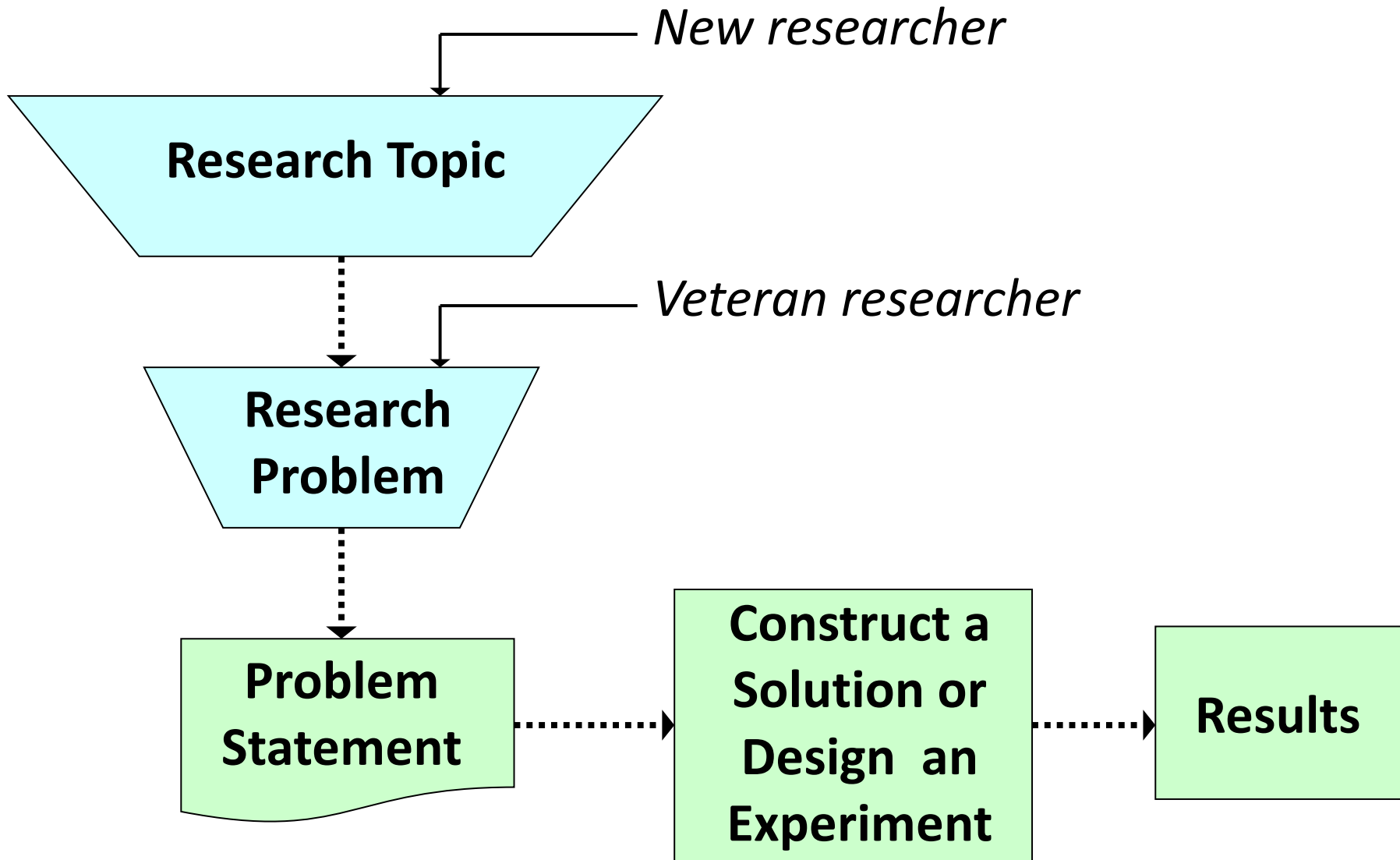
# How is research actually done?

# Iterative Approach

**start**

*Problem Statement*

*Prototype/Experiment*

**end**

Construct Prototype Or Conduct Experiment

Testing

*need a new idea*

*can improve*

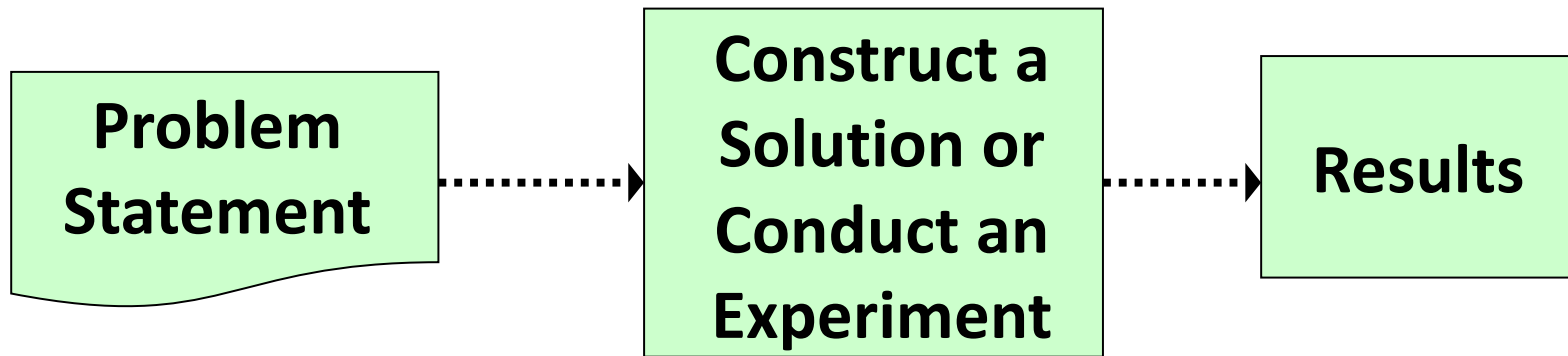# How is research described?

# Conventional View of Research Process

# Example: SSNs in Resumes

- ## Research Topic
  Identity Theft

- ## Research Problem
  Information needed for a fraudulent credit card application or tax return is name, date of birth, and SSN?

- ## Problem Statement
  Are name and SSNs freely available online?

# Conventional Way of Research Process



Popper, K. Objective knowledge. London: Oxford University Press. 1972.

# How is a research paper written?

# Scientific Writing

Abstract ——————| Summarize entire paper.

Introduction ——————| Motivation. Importance.

Background ——————| Relationship to prior work.

Methods ——————| Describe methods of problem construction or experimental design

Results ——————| Show results. Include graph.

Discussion ——————| Describe significance of results.

References

# Scientific Writing

Abstract —— Summarize e...

Introduction —— Motivat...

Background —— ...or work.

Methods ...ethods of problem ...uction or experimental design

Results ...how results. Include graph.

Discussion —— Describe significance of results.

References

Tell a story

# Elevator Story Litmus Test

The "elevator story litmus test" reflects whether the thesis of the paper is sufficiently interesting. The idea is based on the following scenario.

Suppose you are on an elevator with Bob, who asks what your paper is about. You have until the elevator ride ends (your abstract) to convince Bob to come and hear your talk. Given just your abstract, will Bob want to hear more?

# Example: Abstract

In the United States, a person's Social Security number (SSN) is a linchpin to his credit, educational, tax, employment, and other records. Numerous U.S. regulations designate a person's SSN as private information. Would people actually publish their SSNs publicly online? We searched for online resumes containing SSNs using the 30 most popular last names in the United States. We found SSNs on the first page of search results for 29 of the 30 names searched.

Impersonating a person in the United States usually involves knowing his Social Security number (SSN). So, would anyone actually make their SSN public?

Motivate the paper. Why is this the most important paper in the world.

A U.S. Social Security number (SSN) is private information that allows others to identify a person's credit report [1], educational record [2], driver's license record [3], health record [4], tax record [5], employment record [6], and so on. Assigned at birth, virtually all Americans have Social Security numbers [5] and SSNs remain unique to the person beyond death [6]. Federal regulations restrict sharing of SSNs, so it seems unlikely to find SSNs publicly available.

Provide **prior contextual knowledge** the reader needs to know to understand and appreciate the paper.

In 2005, Sweeney conducted web searches using the string "SSN vitae" and found large number of links to online resumes that contained SSNs [7]. In a rigorous public campaign that followed, thousands of SSNs were subsequently removed from the Internet [8]. Today, the same search yields web pages about SSNs and resumes but not resumes containing SSNs . Are resumes having SSNs no longer available?

Provide **prior methodological knowledge** the reader needs to know to understand and appreciate the paper.

Our approach is simple. We start with a list of the 30 most common last names in the United States, as provided by the U.S. Census Bureau [7]. We perform a Google search on "SSN vitae *lastname*" for each of the 30 most popular last names. We capture images of the screen results for each search and record whether an SSN was visible in the first 20 results that appear on the first page.

Describe in a stepwise manner how to conduct the study. Reading this section, a person should be able to replicate what you did.

We found SSNs visible on the first page of web results for 29 of the 30 searches. Five SSNs were found for Jones and none was found for Hernandez. The average page had 2.

What graph or table would you put here?

Report results. Almost always include a table or graph.

Introduction

Background

Methods

Results

Discussion

We found SSNs publicly available on the Web using the simple search "SSN vitae lastname". These people are vulnerable to identity theft.

In future work, we could check whether the SSNs are actual SSNs, how many SSN containing resumes may be online,  and whether the person would remove the SSN if notified. We could also check whether the online information included date of birth, which is necessary for most forms identity theft.

Describe why the paper is significant and then, list its limitations (often as next steps).

Writing exposes ways to improve your research.

Our approach is simple. We start with a list of the **30 most common last names in the United States, as provided by the U.S. Census Bureau** [7]. We performed a search on "SSN vitae *last* ... most popular ... the scree... ...ord ... first 20 re... ...st page.

Our approach is simple. We start with a list of the 30 most common last names in the United States, as provided by the Census Bureau [7]. We perform a search for "SN vitae lastname" for each of our last names. We results whether results that appl

**Improve method**

SSNs are publicly available on the Web and can be easily found using th___le search "SSN vitae lastname". T'___are vulnerable to ident___

In future wo___he SSNs ar___ava___would r___ould also che___nformation inclu___, which is necessary for most f___ty theft.

**Improve story line.**

# Poster Review

The parts of an academic paper appear on the poster.

# Title here
## Name of author(s)
### Email

## (click to edit) ABSTRACT
Type in or paste your text here

ABSTRACT The big idea in a couple of sentences!

## (click to edit) INTRODUCTION
Type in or paste your text here

INTRODUCTION Why is this the most important thing!

What reader needs to know to understand work.

## (click to edit) MATERIALS & METHODS
Type in or paste your text here

METHODS and RESULTS

What did you do and how did you do it!

Maybe Important picture here!

## (click to edit) RESULTS
Type in or paste your text here

What did you find (or expect to find)!

Important picture here!

## (click to edit) CONCLUSIONS
Type in or paste your text here

What was learned!

## (click to edit) NEXT STEPS
Type in or paste your text here

What was learned! What you or someone might do next.

## (click to edit) REFERENCES
Type in or paste your text here

# Poster Communication

# Efficient Communication

What is a title for your project?

Why is your project interesting or exciting?

What do you think you will find?