

# Training in Survey Methods

Current Practice and Looking ahead



Photo: Matt H. Wade

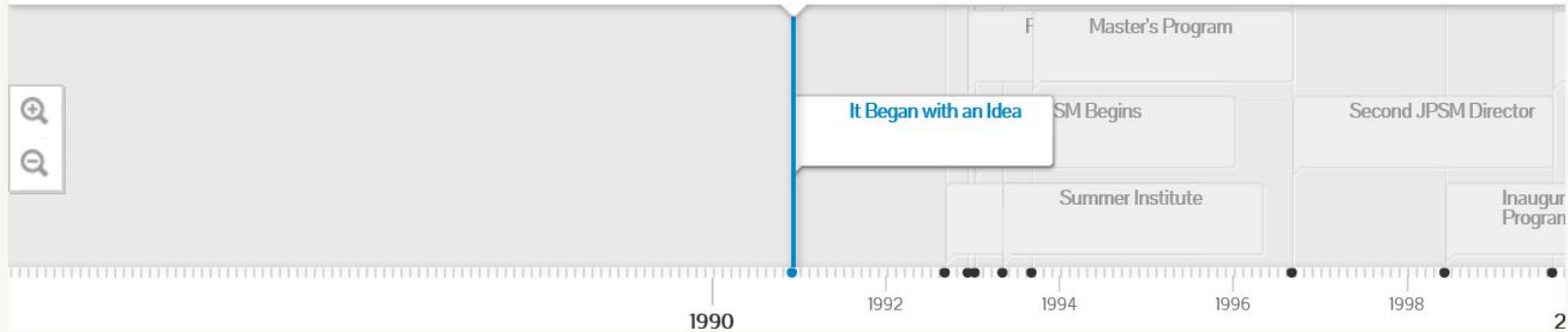
December 1, 1990

## It Began with an Idea

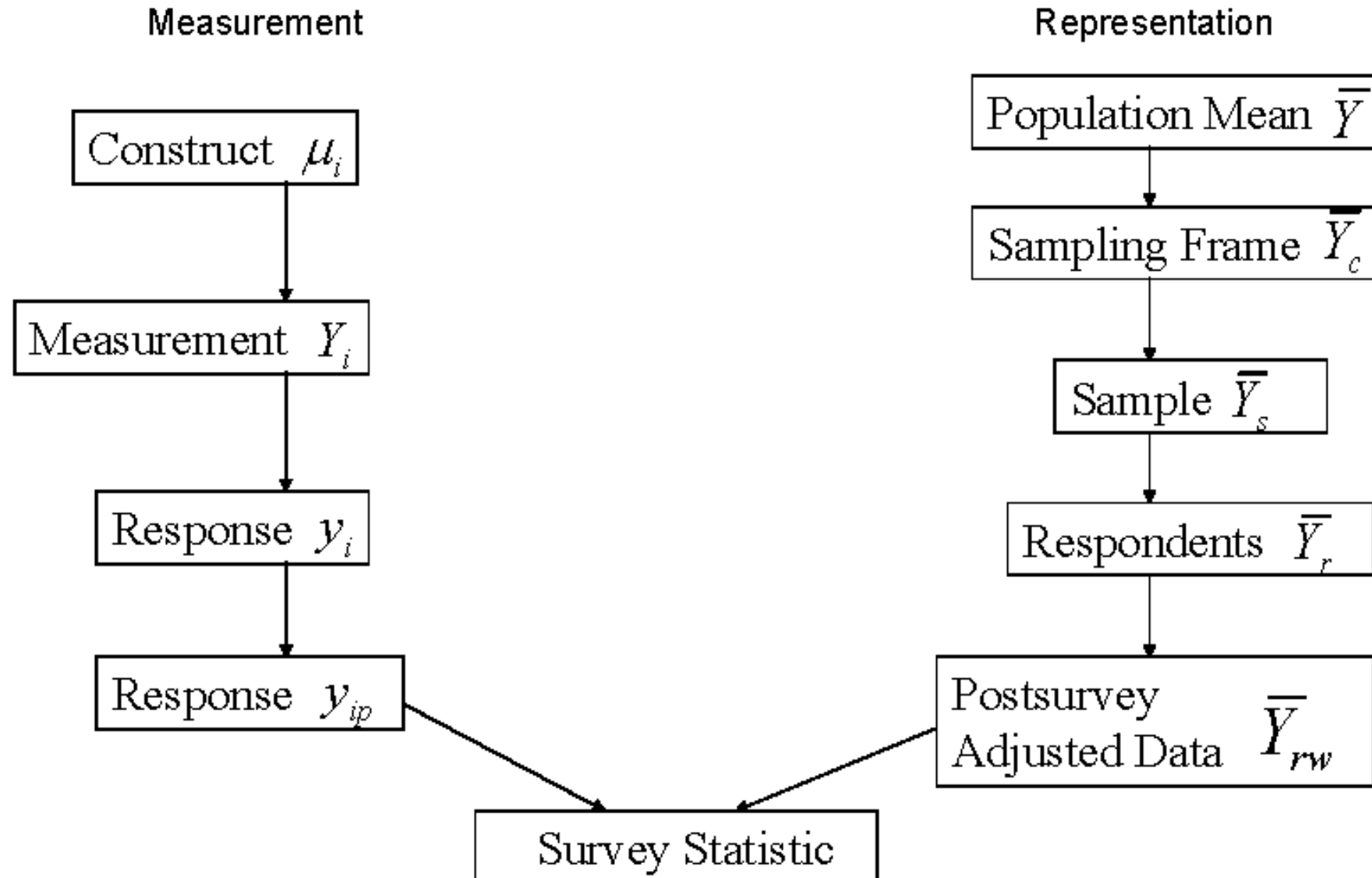
The idea for the Joint Program emerged from a 1990 initiative of the Federal Statistical agency heads, the then current head of the OMB Statistical Policy Office, and then chair of the Council of Economic Advisors. The mismatch between the disciplinary organizations of most universities and the technical staffing needs of the system required a new academic organization. The legislative initiative called for a graduate education and research center offering courses in the DC area.



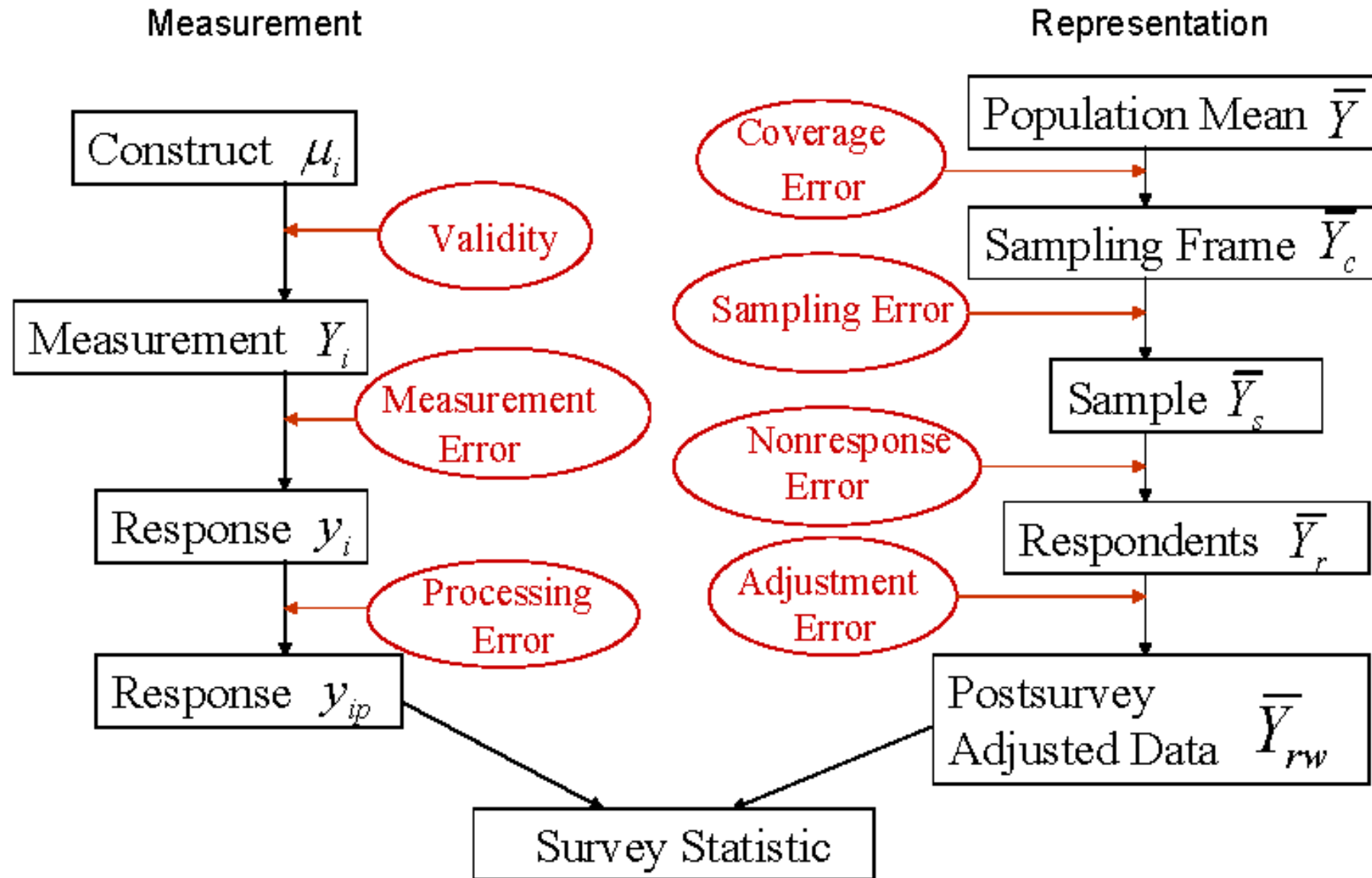
SEPTEMBER 1,  
1992  
NSF Award



# Curriculum driven by Total Survey Error Framework (Groves et al. 2004)



# Curriculum driven by Total Survey Error Framework (Groves et al. 2004)



The 21 month course schedule (and course credit hours) for a full time student in each of the areas of concentration are listed below.

Term	Statistical Science	Social Science
<b>Fall, Year 1</b>	410: Intro Probability (3) 615: Stat Methods I (3) 623: Data Collection (3) 672: Introduction to the Federal Statistical System (1) 10 credits	615: Stat Methods I (3) 623: Data Collection (3) 632: Social and Cognitive Founds. (3) 672: Introduction to the Federal Statistical System (1) 10 credits
<b>Spring, Year 1</b>	420: Intro to Stat (3) 440: Sampling Theory(3) 616: Stat Methods II (3) 640: Surv Practicum I (2) 11 credits	616: Stat Methods II (3) 625: Applied Sampling (3) 630: Questionnaire Design (3) 640: Surv Practicum I (2) 11 credits
<b>Summer, Year 1</b>	<b>Internship</b>	<b>Internship</b>
<b>Fall, Year 2</b>	641: Survey Practicum II (Data Analysis) (2) 720: Total Survey Quality I (2) 745: Practical Tools for Sampling and Weighting (3) 746: Advanced Statistical Modeling (3) Elective (3) 13 credits	641: Survey Practicum II (Data Analysis) (2) 701: Analysis of Complex Data (3) 720: Total Survey Quality I (2) 722: Random and Nonrandomized Research Design (3) 746: Advanced Statistical Modeling (3) 13 credits
<b>Spring, Year 2</b>	721: Total Survey Quality II (2) 742: Inference (3) 744: Statistical Topics in Survey Methodology (3) 772: Design Seminar (3) 11 credits	721: Total Survey Quality II (2) 772: Design Seminar (3) Elective (3) Elective (3) 11 credits
<b>Total Credits</b>	<b>45</b>	<b>45</b>

[Close](#)

# Four developments



1. Format

2. Degree

3. Content

4. Partners

# 1. Format

# Change of Delivery Mode

MHEC approved both Certificate programs to be moved online (master under review)

Enrollment same requirements as graduate school

Online offerings follow slightly different schedule: 4 Terms per year

Dec-Feb,  
March-Mai,  
June-August,  
Sept-Nov;

Recordings + online office our (synchronous) + Forum

Use of videos (slightly altered) and [MOODLE platform](#)





## TABLE OF CONTENTS

- General
- Session 1: Overview (JUN 25)
- Session 2: Sampling (JUL 2)
- Session 3: Sampling (JUL 9)
- Session 4: Sampling (JUL 16)
- Session 5: Mode of data collection (JUL 23)
- Session 6: Computer-Assisted Data Collection (JUL 30)
- Midterm exam (AUG 6)
- Session 7: Questions and Answers in Surveys (AUG 13)
- Session 8: Questionnaire Development (AUG 20)
- Session 9: Interviewing (AUG 27)

## ADMINISTRATION

- Course administration
  - Grades
- My profile settings

HOME / MY COURSES / ONLINE / SURV 400

## Session 8: Questionnaire Development (AUG 20)

### Topics Covered:

Research findings on question wording, structure, and context

### To Do:

Converse, J. and Presser, S., *Survey Questions: Handcrafting the Standardized Questionnaire*, Newbury Park: Sage Publications, 1986.

Adobe Connect Session 8 - AUG 21, 4-5 p.m.

Discussion Forum Session 8

## Session 7: Questions and Answers in Surveys (AUG 13)

### Topics Covered:

Various means of computer assisted data collection; impact on data quality

### To Do:

Couper, M.P. and Nicholls, W.L. (1998), "The History and Development of Computer Assisted Survey Information Collection." Chapter 1 in Couper, M.P.,

Baker, R.P., Bethlehem, J., Clark, C.Z.F., Martin, J., Nicholls II, W.L., and

O'Reilly, J. (eds.) *Computer Assisted Survey Information Collection*. New

## UPCOMING EVENTS

There are no upcoming events

[Go to calendar...](#)

[New event...](#)

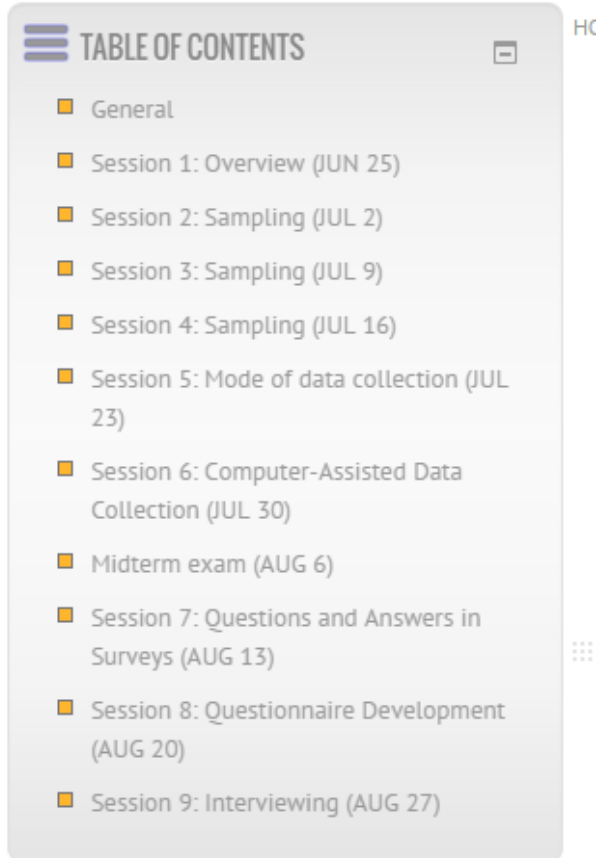
## RECENT ACTIVITY

Activity since Saturday, 6 September

2014, 11:06 AM

[Full report of recent activity...](#)

Nothing new since your last login



**TABLE OF CONTENTS**

- General
- Session 1: Overview (JUN 25)
- Session 2: Sampling (JUL 2)
- Session 3: Sampling (JUL 9)
- Session 4: Sampling (JUL 16)
- Session 5: Mode of data collection (JUL 23)
- Session 6: Computer-Assisted Data Collection (JUL 30)
- Midterm exam (AUG 6)
- Session 7: Questions and Answers in Surveys (AUG 13)
- Session 8: Questionnaire Development (AUG 20)
- Session 9: Interviewing (AUG 27)

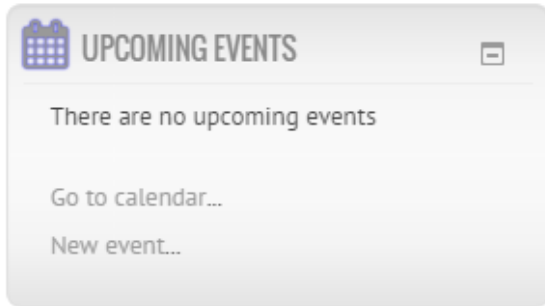
**ADMINISTRATION**



- Course administration
  - Grades
- My profile settings

# Table of Contents

Lists all sessions currently available to students in date order

Each entry is a link and will jump to that point on the page

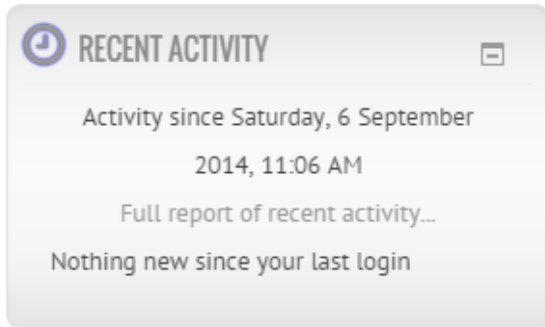




 **UPCOMING EVENTS** 

There are no upcoming events

[Go to calendar...](#)

[New event...](#)



 **RECENT ACTIVITY** 

Activity since Saturday, 6 September  
2014, 11:06 AM

[Full report of recent activity...](#)

Nothing new since your last login

# Events and Activities

## Upcoming Events

Lists assignments, exams, quizzes, and online discussion dates coming up for given class

Student can customize to date range

## Recent Activity


Lists recent changes made by instructor to the class site


## Session 8: Questionnaire Development (AUG 20)

### Topics Covered:

Research findings on question wording, structure, and context

### To Do:

 Converse, J. and Presser, S., *Survey Questions: Handcrafting the Standardized Questionnaire*, Newbury Park: Sage Publications, 1986.

 Adobe Connect Session 8 - AUG 21, 4-5 p.m.

 Discussion Forum Session 8


## Session 7: Questions and Answers in Surveys (AUG 13)


### Topics Covered:


Various means of computer assisted data collection; impact on data quality

### To Do:

 Couper, M.P. and Nicholls, W.L. (1998), "The History and Development of Computer Assisted Survey Information Collection." Chapter 1 in Couper, M.P.,

 Baker, R.P., Bethlehem, J., Clark, C.Z.F., Martin, J., Nicholls II, W.L., and

 O'Reilly, J. (eds.), *Computer Assisted Survey Information Collection*. New York: Wiley.

 Adobe Connect Session 7 - AUG 14, 4-5 p.m.

 Discussion Forum Session 7

 HWK2 - due AUG 20

# Sessions

New sessions auto-display each week

Each session includes

1. Session #: Title (Date)
2. "Topics Covered" subsection with brief description
3. "To Do" subsection

### *Readings*

URLs

PDFs

Note reference to book chapter

### *Adobe Connect link for online chat*

One per online chat time

Always has date and time next to it

### *Discussion forum for student/instructor online interaction*

One per session

### *Homework*

Assignment submission portal, or

Auto-generated and graded

### *Lecture link to video*

### *Exam*

Can set time restrictions

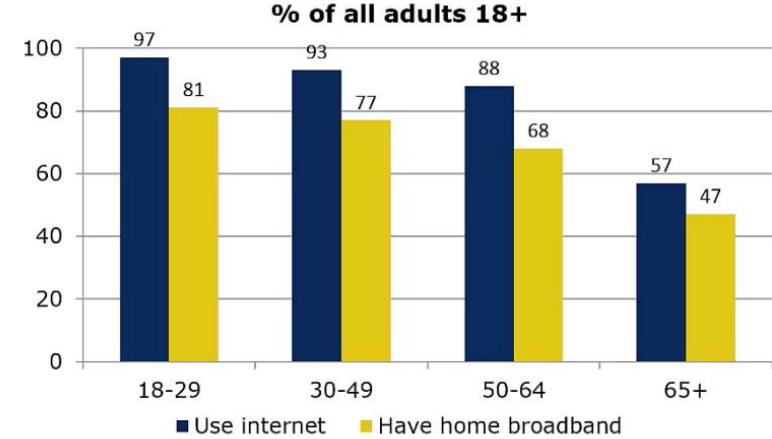
## Video-Format

Each week set of videos  
(pre-recorded)

Lectures are broken into easily-digestible sessions to help students to better focus on the material.

Engage with the material at their own pace: e.g., replay parts that cover difficult concepts; subtitles

### Internet Use by Age in U.S. 2014



Source: Pew Research Center's Internet Project survey, Jan 2014, N=1,006.

©2014, Florian Kauch



### Question with visual aids

#### VIII. Neighborhood Networks

INTERVIEWER SHOW CARD D TO RESPONDENT.

Now I would like to ask you some questions about the people who live in this neighborhood. For the first set of questions, please use the options on CARD D when giving your answers.

INTERVIEWER: WRITE IN THE RATING NUMBER THAT CORRESPONDS TO THE RESPONDENT'S ANSWER.

NONE	1-2	SEVERAL	MANY	ALMOST EVERYONE
1	2	3	4	5

\_\_\_ 1. First, how many people in your neighborhood would you recognize?

RESIDENT SURVEY OF NEIGHBORHOOD CONDITIONS, <http://povertycenter.cwrn.edu>



Paused  
2:03 / 5:09





 NAVIGATION

Home

 ADMINISTRATION

My profile settings

HOME / SITE PAGES / CALENDAR

Upcoming events

All courses ▾

**There are no upcoming events**

Export calendar





Manage subscriptions

iCal

Preferences

New event

 EVENTS KEY

-  Hide global events
-  Hide course events
-  Hide group events
-  Hide user events

 MONTHLY VIEW

AUGUST 2014

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SEPTEMBER 2014

Sun Mon Tue Wed Thu Fri Sat

## 2. Degree

# Master of Science in Survey Methodology

Certif. Surv. Stat.

Certif. Surv. Meth.

Short Course

Short Course

Short Course



# Master of Science in Survey Methodology

Certif. Surv. Stat.

Certif. Surv. Meth.

Short Course

Short Course

Short Course

MOOC

Master of Science in Survey Methodology

Professional Master in Survey Practice

Certif. Surv. Stat.

Certif. Surv. Meth.

Short Course

Short Course

Short Course

MOOC

Master of Science in Survey Methodology

Professional Master in Survey Practice

Certif. Surv. Stat.

Certif. Surv. Meth.

Short Course

Short Course

Short Course

MOOC

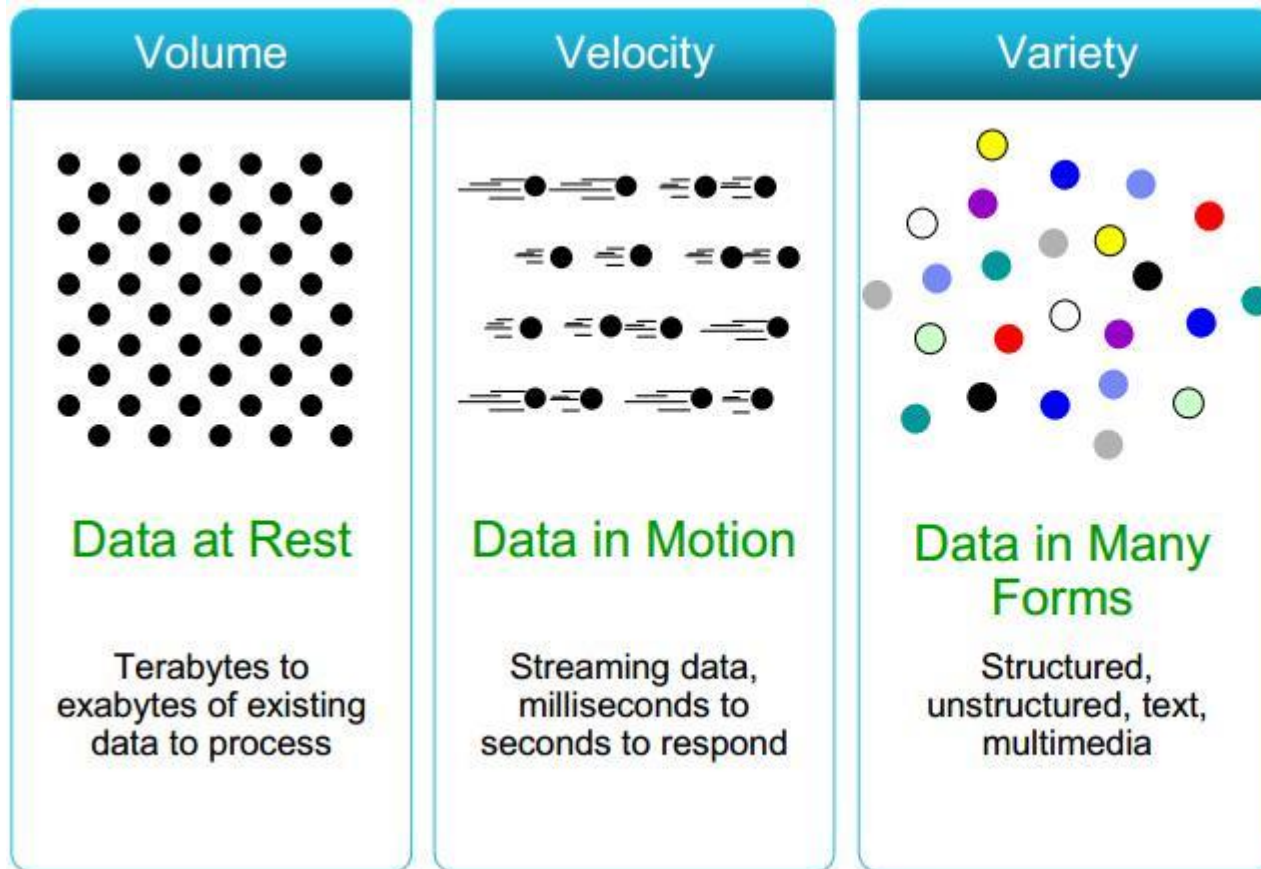
Specializations

Increasing faculty involvement

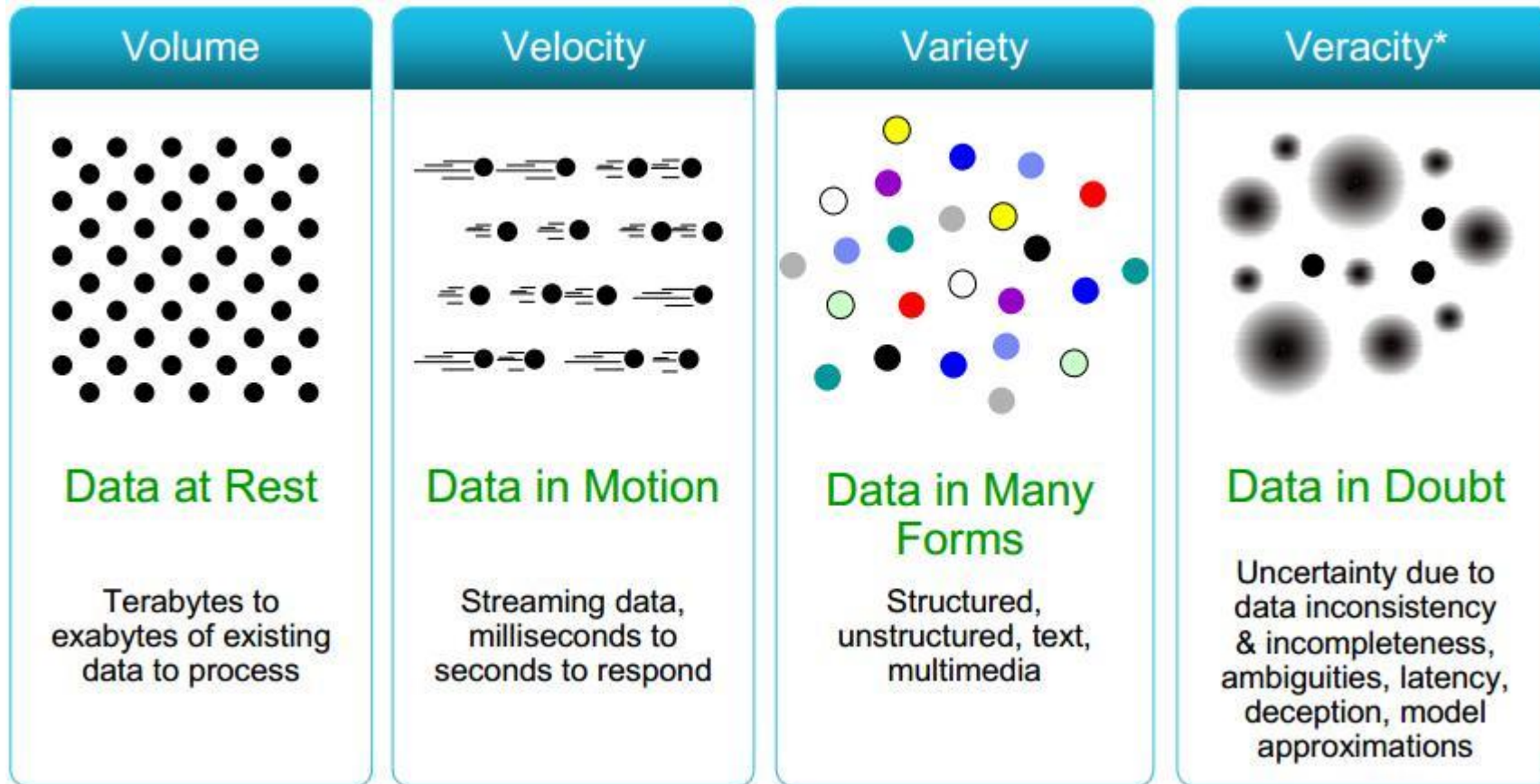


# 3. Content

# Found/Organic Data



# Error Framework Necessary



Data Output/Access

Data Analysis

Data Curation/Storage

Data Generating Process

Research Questions



Example: map visualization / privacy

Example: Hadoop MapReduce;  
High Frequency Data

Example: Record Linkage  
Hadoop Distributed File System

Examples: geolocated social media + survey  
+ administrative data

Examples: Behavior of interest  
(political participation/job searches)



## DOMAIN EXPERT

User, analyst, or leaders with deep subject matter expertise related to the data, its appropriate use, and its limitations

## SYS ADMIN

Team member responsible for defining and maintaining a computation infrastructure that enables large scale computation

## RESEARCHER

Team member with experience applying formal research methods, including survey methodology and statistics

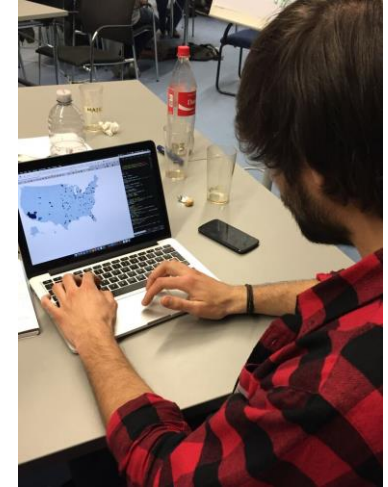
## COMPUTER SCIENTIST

Technically skilled team member with education in computer programming and data processing technology



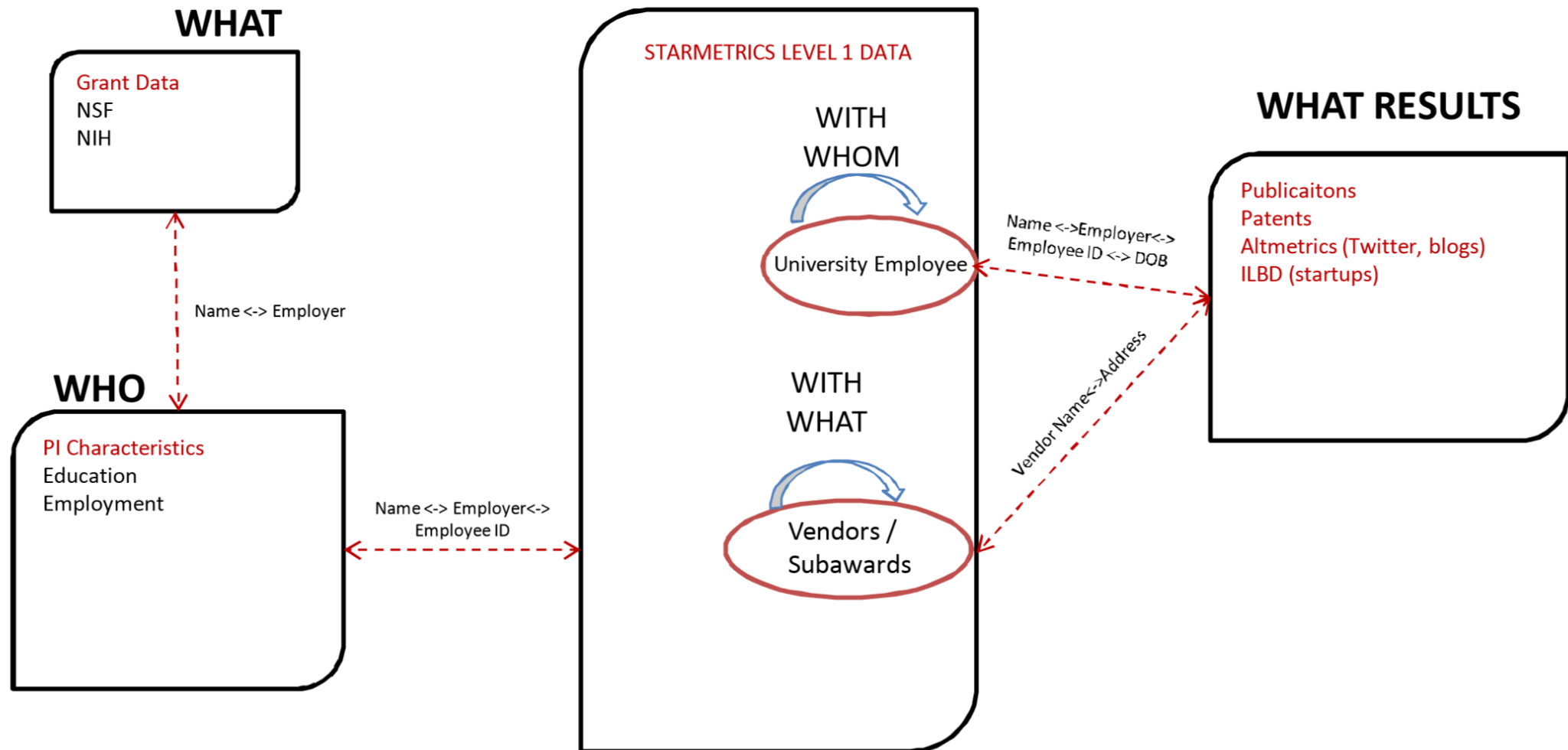
... our students are ready for it

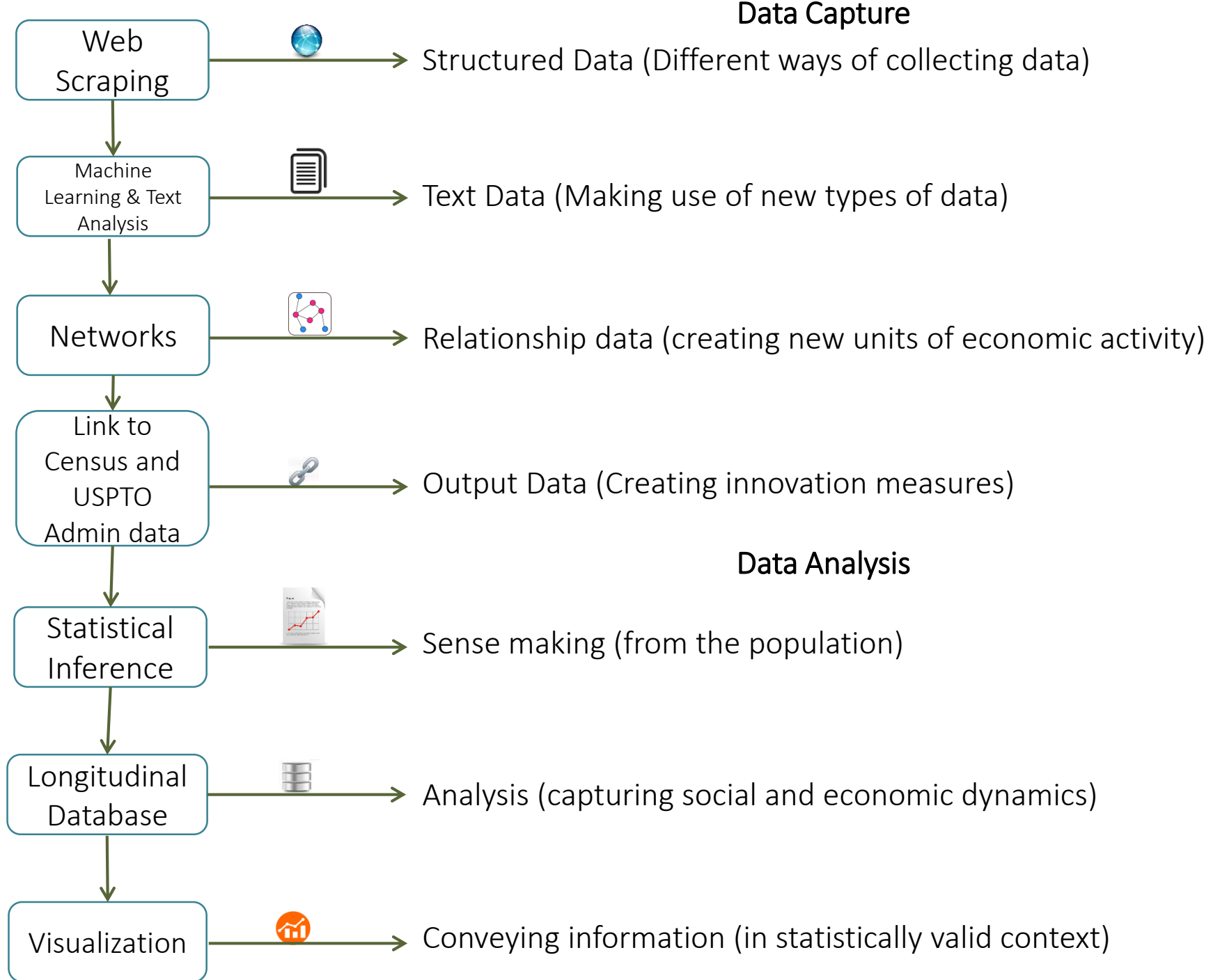
# DataFest



# Big Data for Federal Agencies

## What is the link between federal R&D and innovation?





# 4. Partners



# Questionnaire Design for Social Surveys

by Frederick Conrad, Ph.D., Frauke Kreuter, Ph.D.

Overview

**Reach**

Engagement

Content

Polls

Classic Tools

Exports

16,521

total learners joined

183

different countries

7,103 (43%)

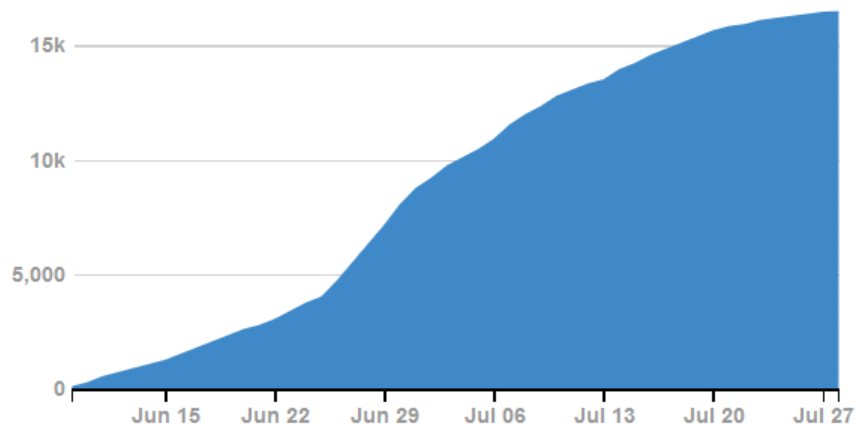
from emerging economies

0

on Signature Track

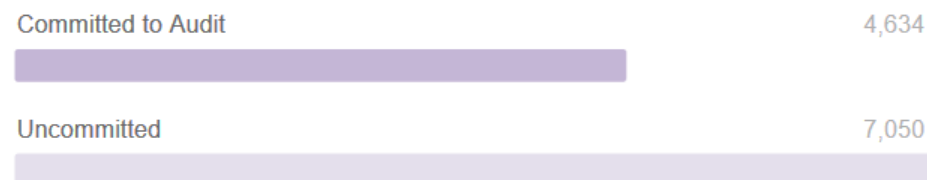
## Enrollment

Cumulative enrollment over time



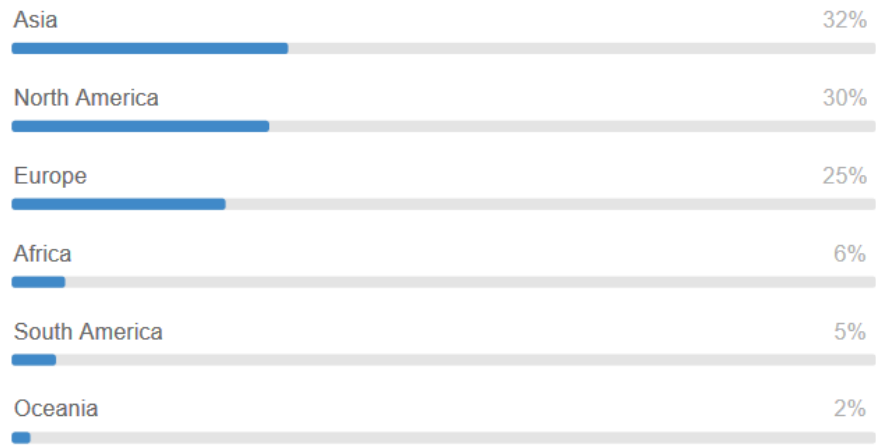
## Intent

[Learn more about how intent is measured »](#)

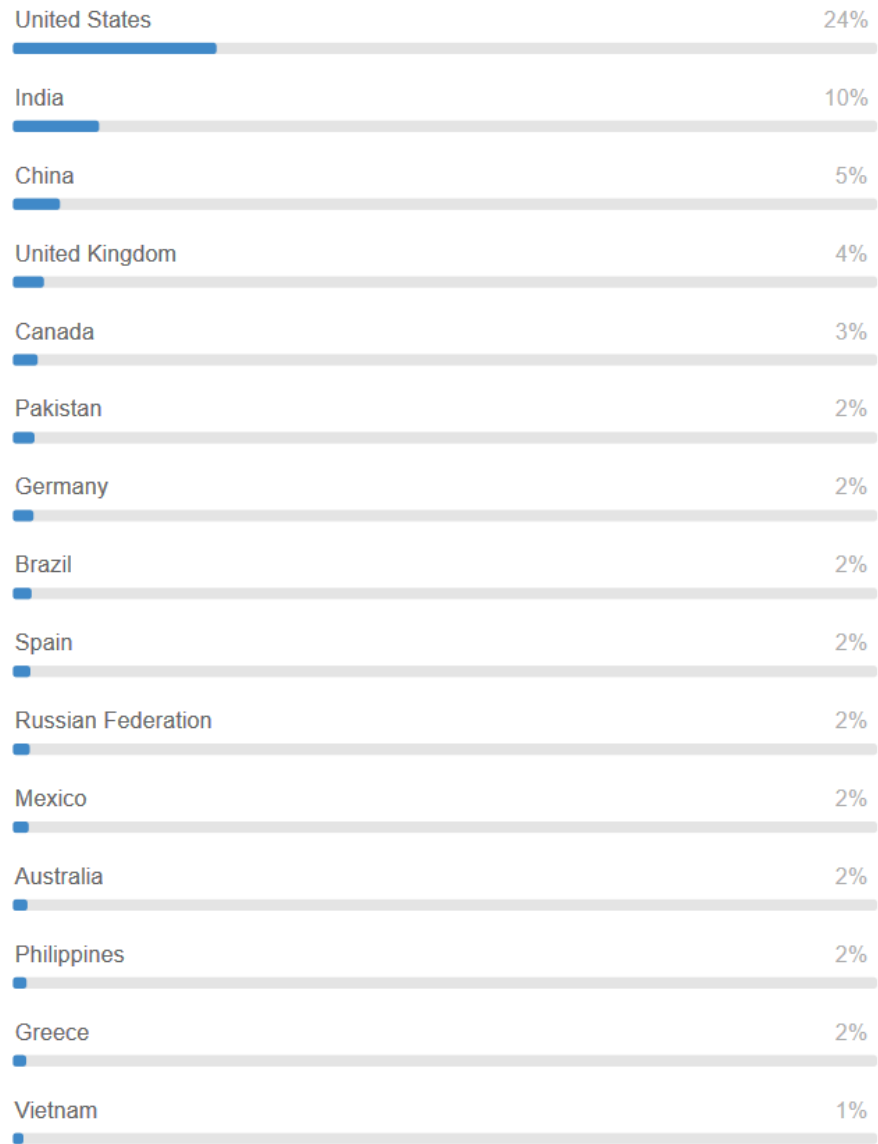


Values extrapolated based on responses from 10,491 learners. [Learn more](#)

### Continent



### Country



## Gender & Age

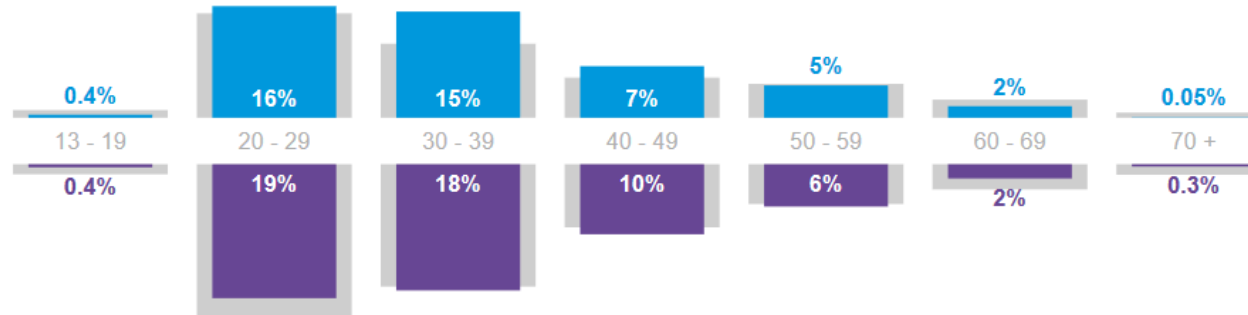
### Female

■ 44%

Your Session

■ 40%

Coursera



### Male

■ 55%

Your Session

■ 60%

Coursera

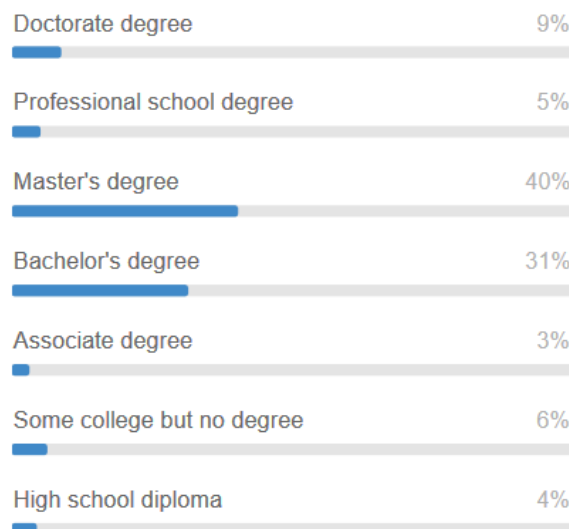
Based on responses from 1,850 learners. Estimates accurate to  $\pm 2$  percentage points. ?

## Education Status



Based on responses from 1,837 learners. Estimates accurate to  $\pm 2$  percentage points. ?

## Highest Education Level



## Employment Status



# #international expansion

International Program in Survey Practice and Data Science - IPSM



Funding

SPONSORED BY THE



Federal Ministry  
of Education  
and Research





## Structure

- ✓ Students admitted to the program can choose between:
  - Enrolling into the Master's degree program
  - Attending single courses
- ✓ 30 credits/60 ECTS (5 required courses + electives)
- ✓ 1-2 on-site components (regionally);  
regional discussion section (in different languages if needed)
- ✓ Assessment: a final exam at the end of the course + graded assignments during the class (e.g. quizzes, projects, etc.) + participation

# #collaborations

