



International Program in Survey and Data Science: Lessons learning

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INTERNATIONAL PROGRAM IN SURVEY AND DATA SCIENCE

offered through the University of Mannheim and the Joint Program in Survey Methodology

(Universities of Maryland and Michigan, Westat)

BE PART OF IT



We are pleased to announce the launch of the International Program in Survey and Data Science (IPSDS). Fundamental changes in the nature of data, their availability, the way in which they are collected, integrated, and disseminated are a big challenge for all those working with designed data from surveys as well as organic data. IPSDS was developed in response to the increasing demand from researchers and practitioners for the appropriate methods and right tools to face these changes. We offer a multidisciplinary curriculum, world-class faculty, and a web-based learning environment that allows you to take courses from anywhere in the world.

Project Coordinators/Funding



SPONSORED BY THE



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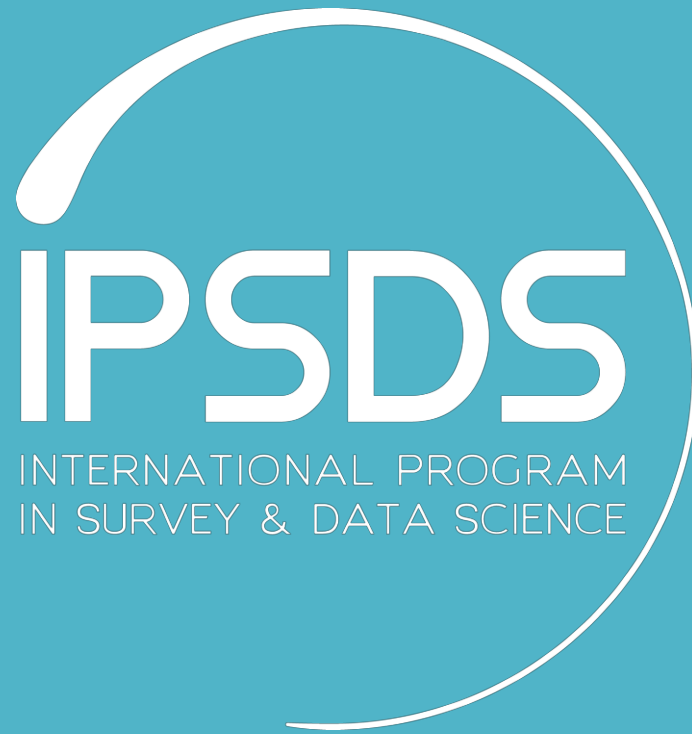


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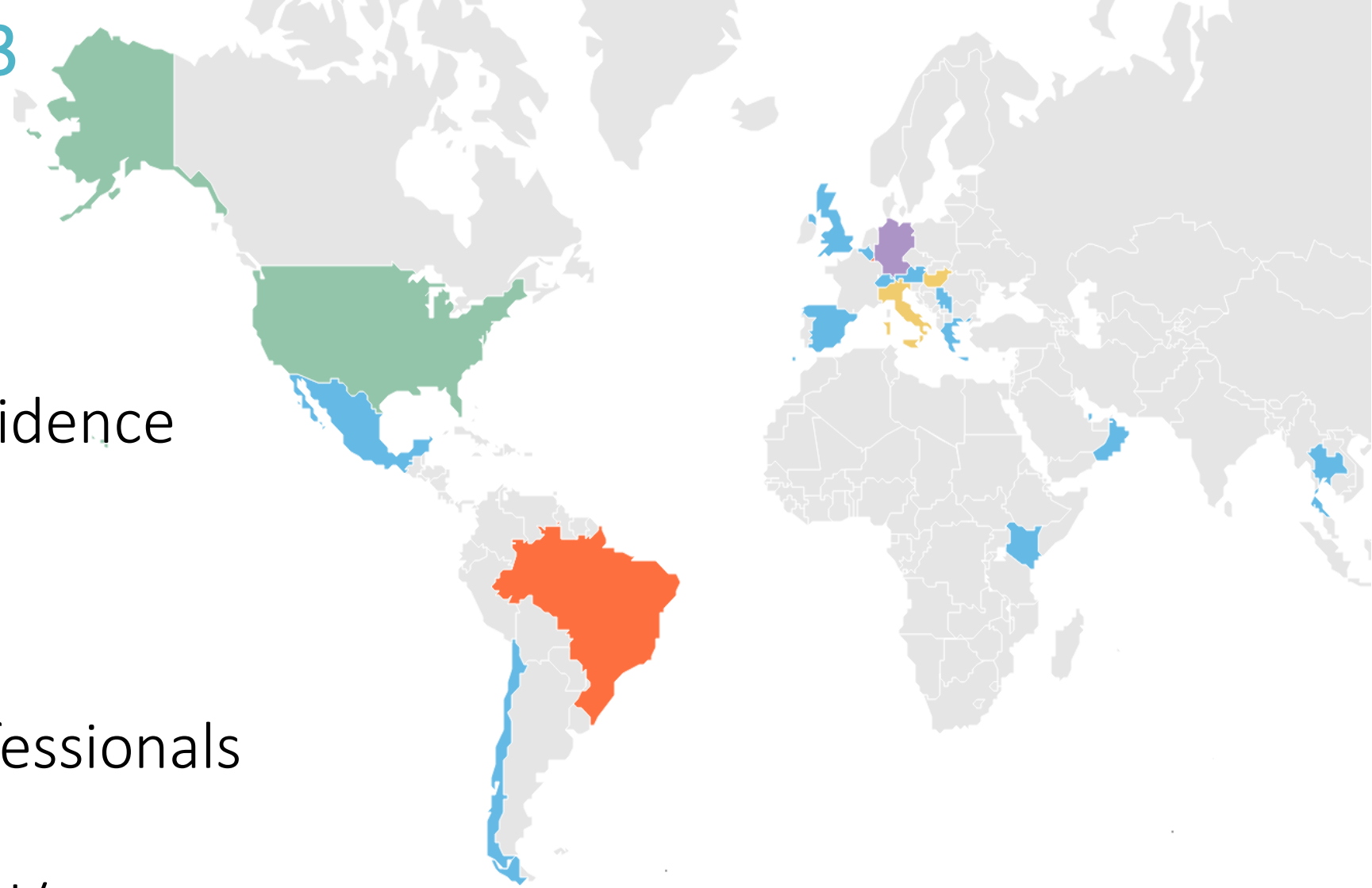


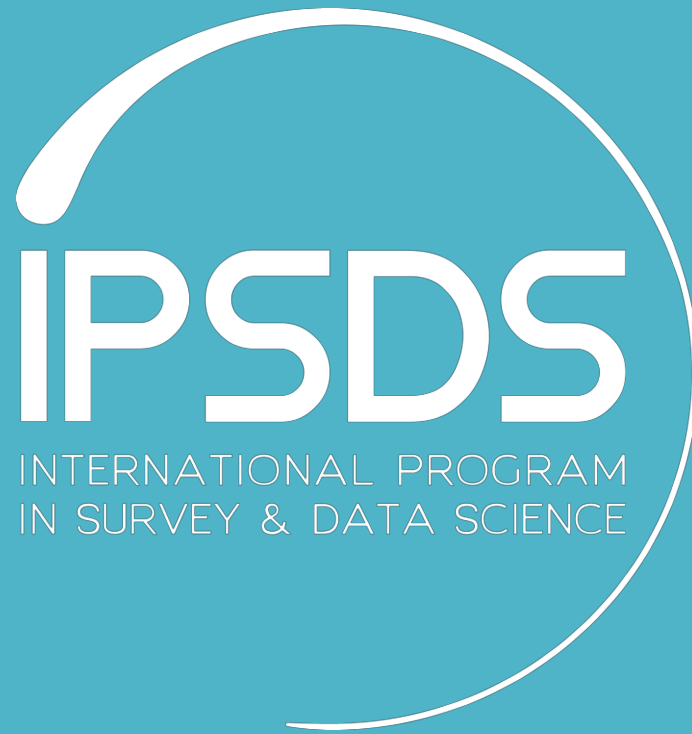


Participants

IPSDS (Test) Cohorts 1-3

- 47 Participants
(27 f + 20 m)
- 19 countries of residence
- Age: median=31
- 100% working professionals
- Diverse educational/
professional backgrounds





Program Structure

Problems we tried to solve – in brief

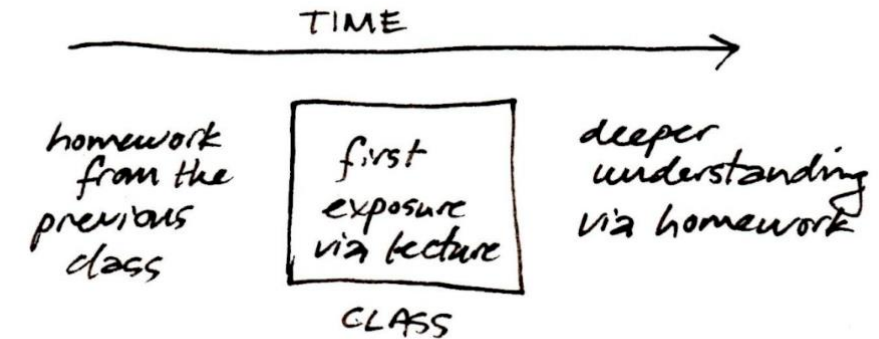
Key elements:

- Flexible web-based learning environment
- Live (video) interaction with faculty and students
- Face-to-face networking meetings

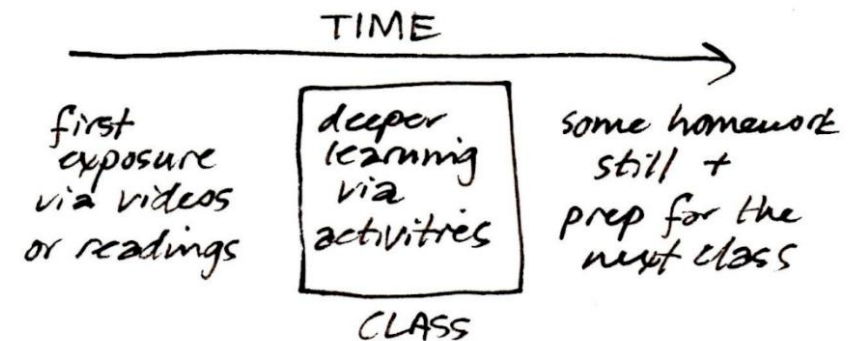
Courses

Advantages of Flipped Teaching

- more opportunities for interactivity in (online) discussions
- more personalized guidance
- more time for feedback
- deeper learning



Traditional classroom



Flipped classroom

Source: Derek Bruff at <https://goo.gl/Nrt1xA>

Videos

- Lectures, interviews and discussions with experts, demonstrations of specific techniques and software tools
- Lectures are broken into easily-digestible sessions
- Students engage with the material at their own pace: e.g., replay parts that cover difficult concepts



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

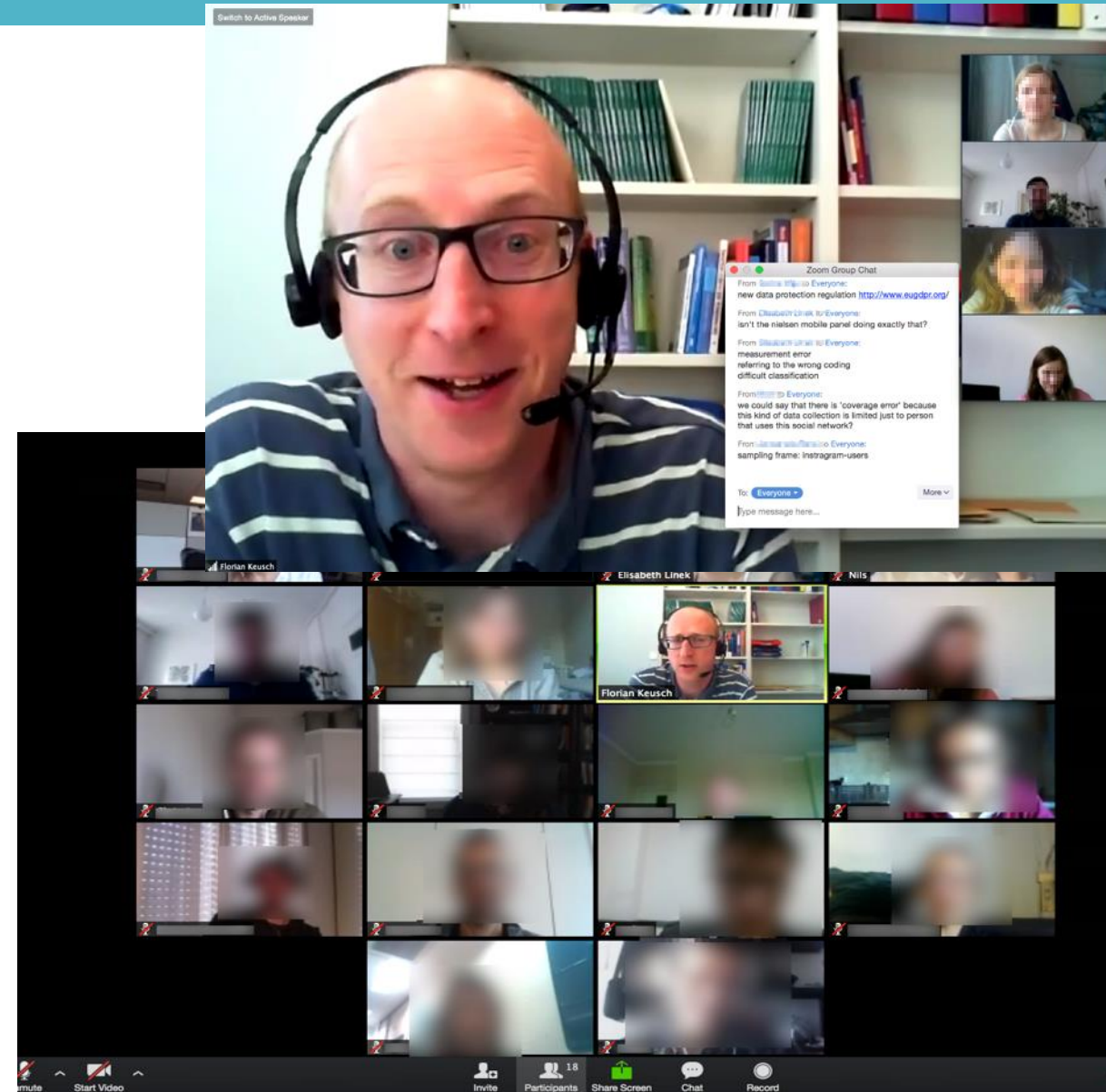
Videos

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- Lectures are broken into easily-digestible sessions.
- Students engage with the material at their own pace: e.g., replay parts that cover difficult concepts



Virtual Classrooms

- Weekly mandatory online meetings (50 minutes)
- Discuss students' questions
- Review problems with assignments
- Collaborative problem solving
- Motivate students to persist in the course
- Break out rooms, (private and public) chats, polls ...



Onsite

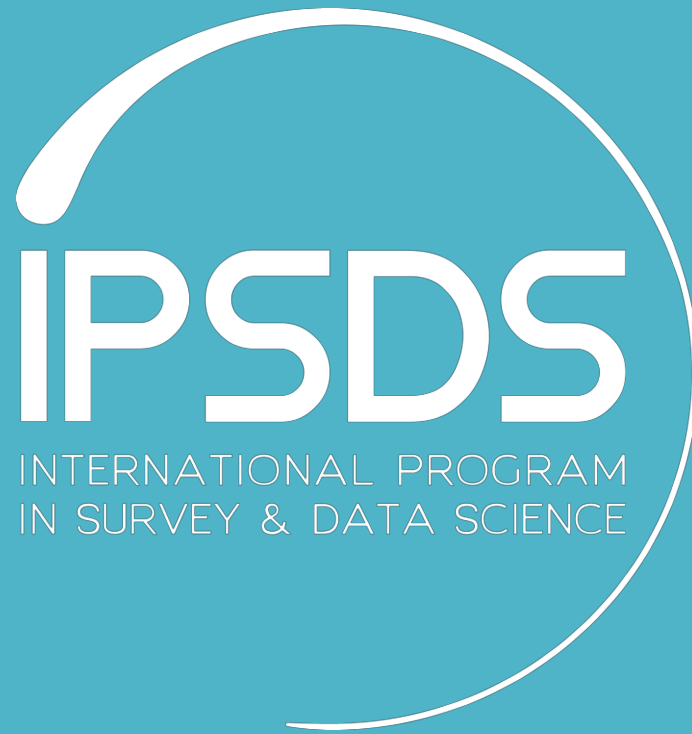
Connect@IPSDS

May 31st-June 1st, 2019

- Day1: create a community within IPSDS students
- Day2: open to audience interested in data science

Renowned speakers

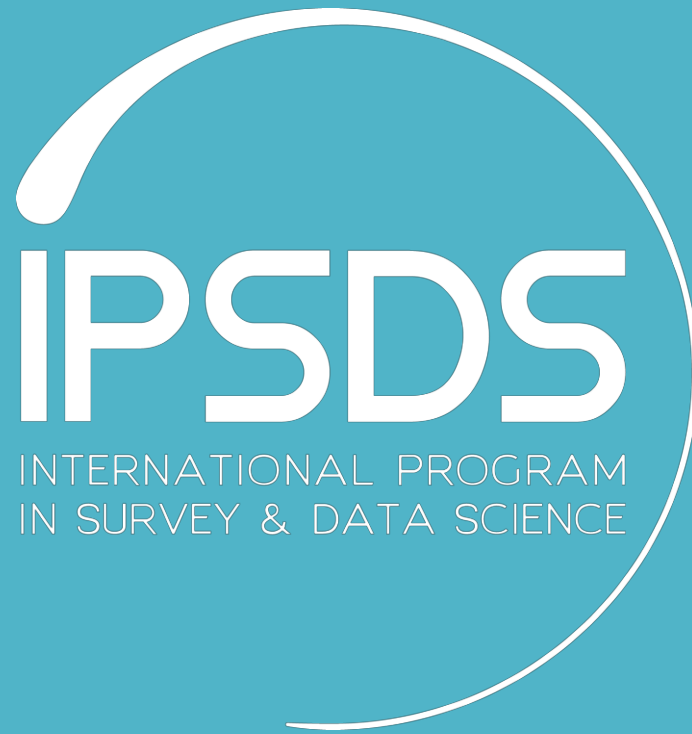
- Roberto Rigobon (Professor at the MIT Sloan School of Management)
- Mine Cetinkaya-Rundel (Associate Professor at Duke University, Professional Educator at RStudio)
- Hilary Parker (Data Scientist at Stitch Fix)



Lessons Learning

Lessons Learning

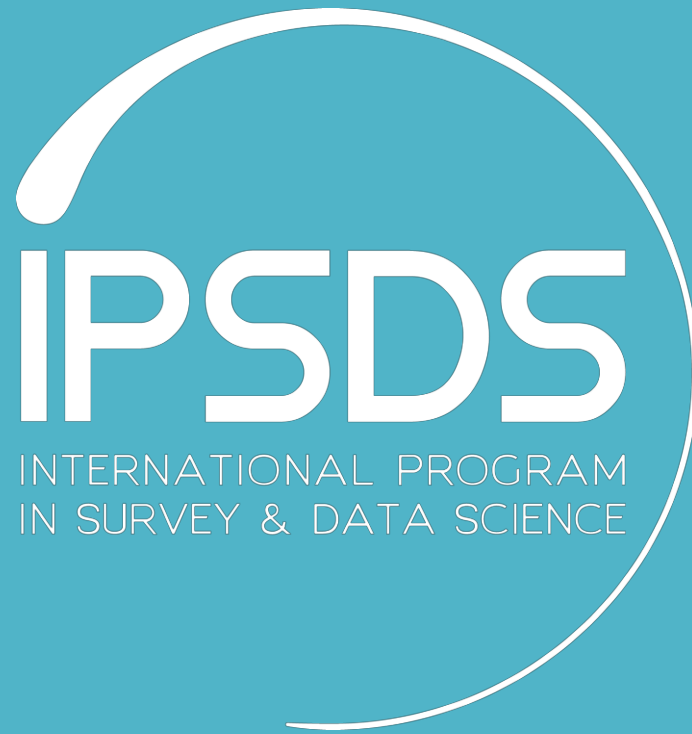
- Feasibility of combining studies with work and family
- Biggest challenge: workload management
- Balancing flexibility and consistency
- On-site events are helpful



YOUR Questions

Thank you for your attention!

ipsds@uni-mannheim.de
survey-data-science.net

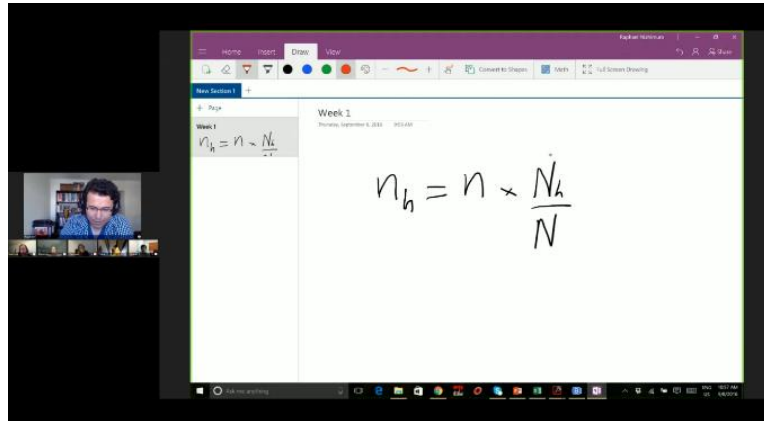


Studies

BMBF-Study: Online Communication

Synchronous Communication

Fundamentals of Survey and Data Sc.

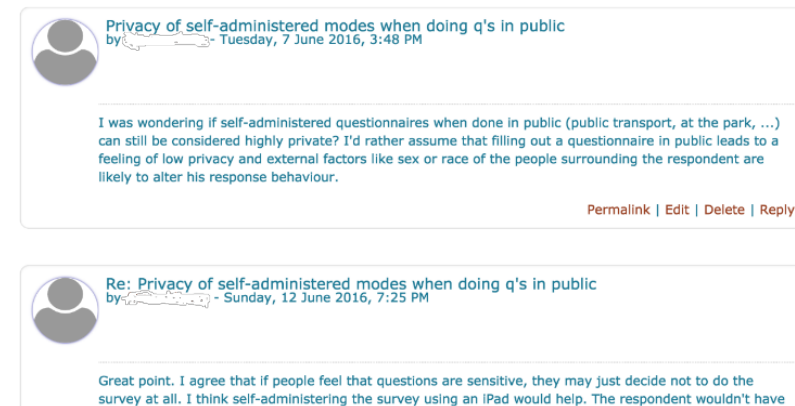


- 11 online discussions (mandatory)
- 16 students

- 12 weeks/6 ECTS
- Post questions
- Answer/comment questions of other students

Asynchronous Communication

Data Collections Methods

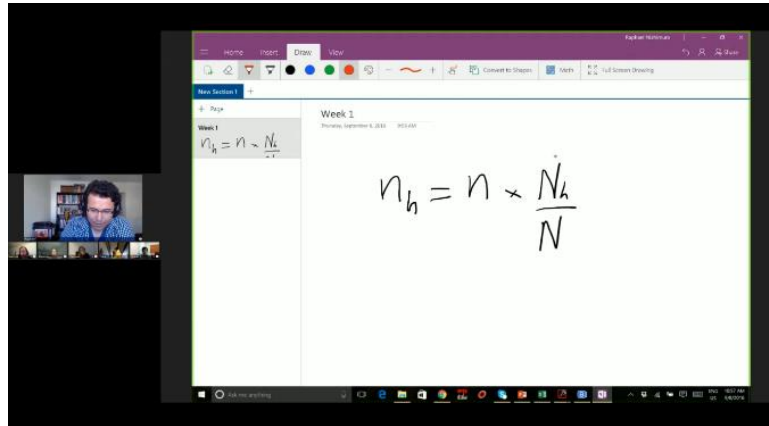


- 1 introductory online meeting
- Discussion forums
- 15 students

BMBF-Study: Online Communication

Synchronous Communication

Fundamentals of Survey and Data Sc.

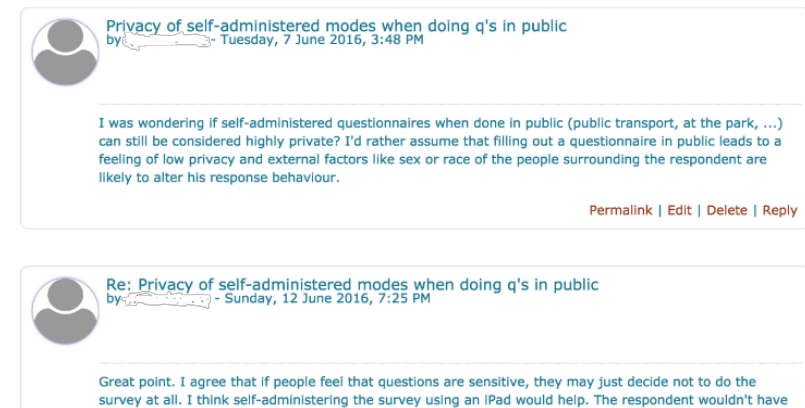


- Stronger sense of community and belonging
- Immediate feedback
- All students successfully finished the course



Asynchronous Communication

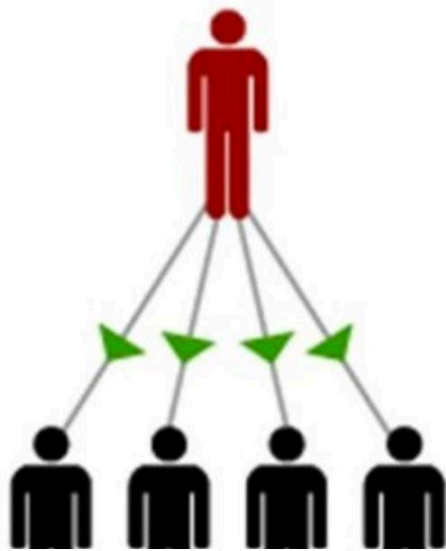
Data Collections Methods



- Greater flexibility
- More time for reflection
- Less workload
- 2 drop outs

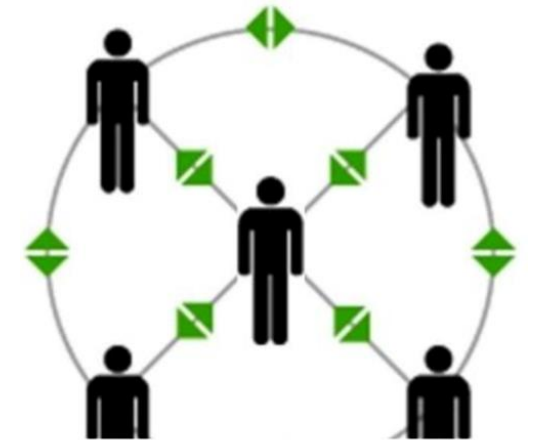
BMBF-Study: Flexibility

Instructor-Paced Format



- Weekly online meetings
- Set dates for all assignments and final exam

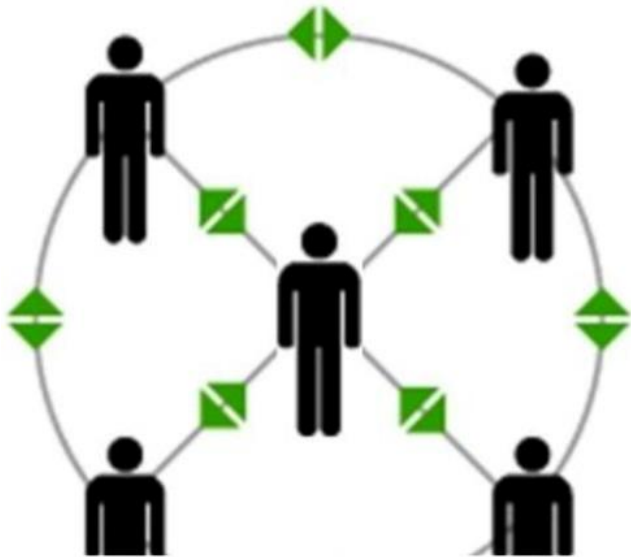
Self-Paced Format



- 4 ECTS/ 8 + 1 weeks
- 8 participants
- 1 introductory online meeting
- Only 1 deadline: all assignments and final exam due in the ninth week

BMBF-Study: Flexibility

Self-Paced Format



- 4 drop outs
- Flexibility with deadlines for assignments appreciated
- Biggest challenge: time management

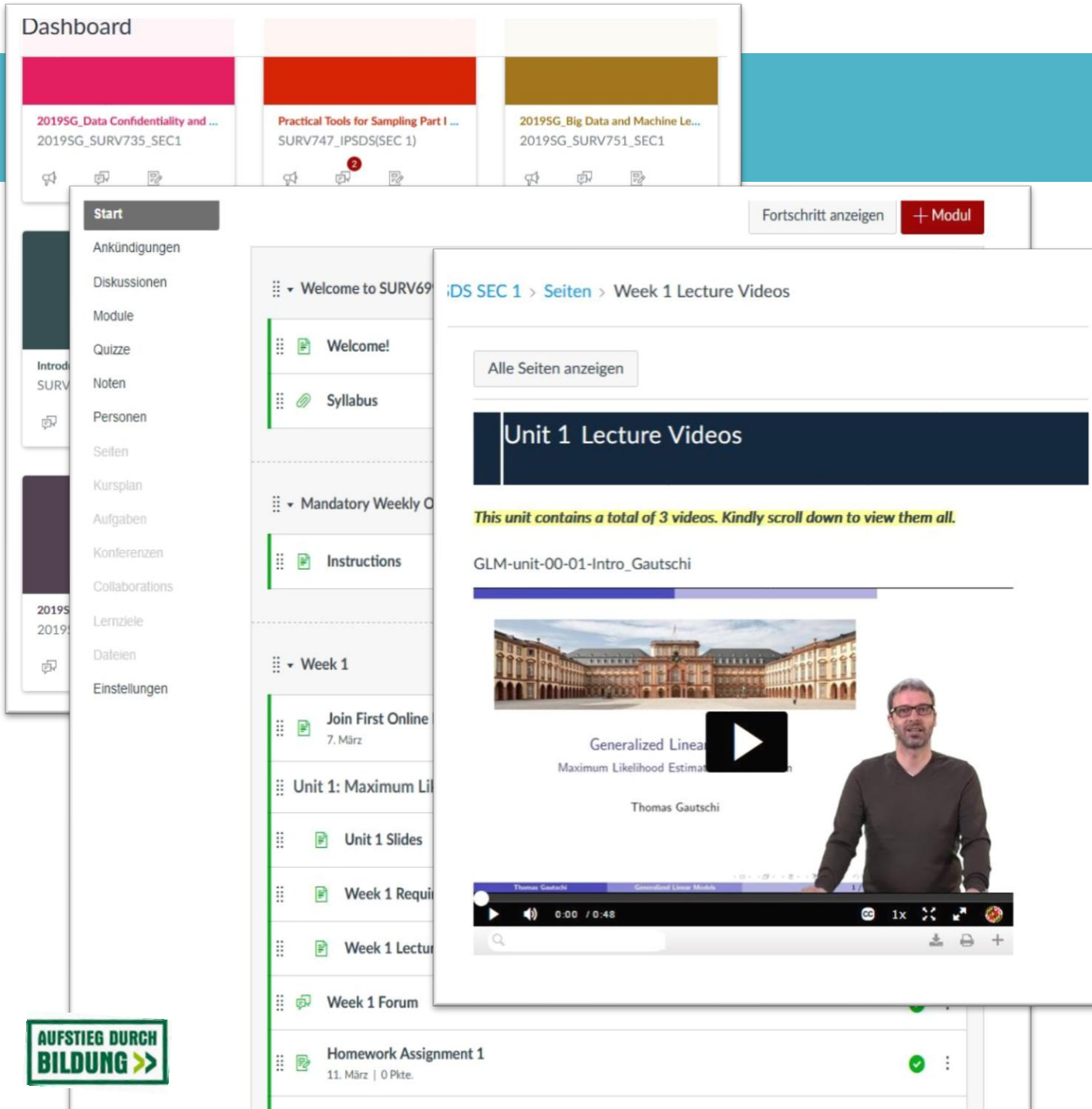
Canvas

Course description/General Information

Topics covered, syllabus, additional resources

New units auto-display each week. Each unit includes:

- Readings (Note reference to book chapter, URLs, PDFs)
- Slides
- Lecture videos
- (Link to external resources)
- (Additional material)
- Zoom link for online meeting + date and time
- Discussion forum for submitting questions/student-instructor interaction
- Homework
 - Quiz (autograded)
 - Assignment submission
 - Solutions



The screenshot displays the Canvas LMS interface. At the top, there is a 'Dashboard' section with three course cards: '2019SG_Data Confidentiality and ...', 'Practical Tools for Sampling Part I ...', and '2019SG_Big Data and Machine Le...'. Below this is a navigation menu with options like 'Start', 'Ankündigungen', 'Diskussionen', 'Module', 'Quizzes', 'Noten', 'Personen', 'Seiten', 'Kursplan', 'Aufgaben', 'Konferenzen', 'Collaborations', 'Lernziele', 'Dateien', and 'Einstellungen'. The main content area shows a course page for 'SURV69...DS SEC 1 > Seiten > Week 1 Lecture Videos'. It includes a 'Welcome!' message, a 'Syllabus' link, and a section for 'Mandatory Weekly O...'. The video player is currently displaying a video titled 'Generalized Linear Models' by Thomas Gautschi, with a play button and a progress bar. The video player controls show a duration of 0:00 / 0:48. At the bottom left, there is a logo for 'AUFSTIEG DURCH BILDUNG'.