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How can we evaluate the social impact of media literacy programmes?

Tobias Dienlin, EPRA Workshop, 18.11.2022

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Background

- Diploma in **Psychology**, PhD in **Communication Science**
- Currently Assistant Professor of Interactive Communication
- Speaker of the **Media Effects Division** of the German Communication Association (DGPuK)

- Research focus: **Media effects** on privacy and well-being
- Methods: Mostly **quantitative analysis**, some qualitative

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Agenda

- What are the major **problems**?
- How can we **analyze effects** of literacy programmes?
- Conclusion: What are concrete **recommendations**?

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What are the major problems?

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What are the major problems?

1. **Criterion:** What is Media and Information Literacy?
2. **Funding:** Conducting evaluations is expensive
3. **Feasibility:** Various factors determine behavior
4. **Baseline problem:** What is the causal effect?
5. **Applicability:** Each project requires a specific evaluation
6. **Motivation:** People do not want to participate
7. **Incentives:** Projects only want to share success stories

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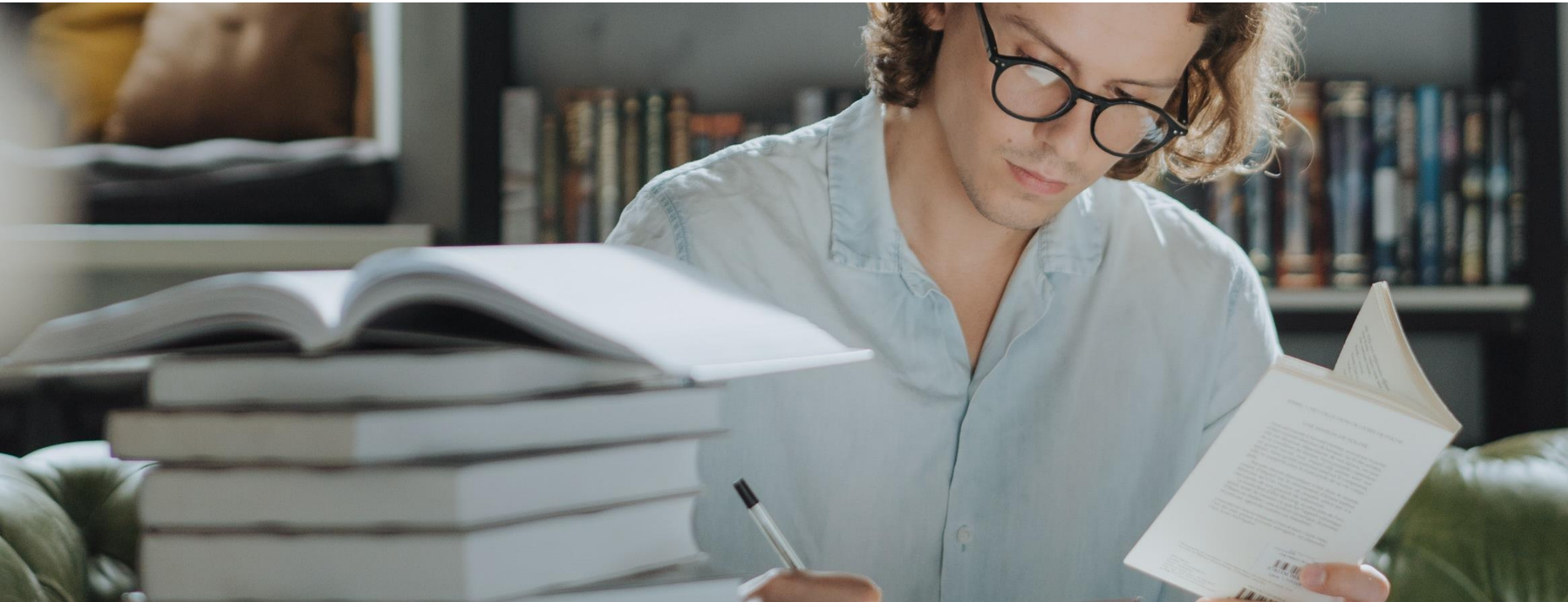
How can we analyze effects of literacy programmes?



1. Criterion: What is Media and Information Literacy?

- Literacy:
  - Knowledge
  - Understanding
  - Self-Efficacy
  - Behavior
- Example: Privacy and the GDPR
  - Knowledge: “What does GDPR stand for?”
  - Understanding: “Why was the GDPR developed?”
  - Self-efficacy: “If needed, would you feel competent to file a subject request access?”
  - Behavior: “Have you already filed a subject access request?

→ Evaluations require to define MIL
→ Represents learning experience
→ Improves intervention/campaign

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2. Funding: Conducting evaluations is expensive

- Don’t let perfect be the enemy of good
  - Basic and simple evaluations are still worthwhile
  - For example, including open feedback and qualitative comments
- Scale-up:
  - Small projects, small-scale evaluations
  - Big project, large-scale evaluations
- **Cooperate with empirical social scientists**
  - Researchers want authentic, relevant, and if possible large scale data
  - Outsource expertise — complex evaluations are difficult

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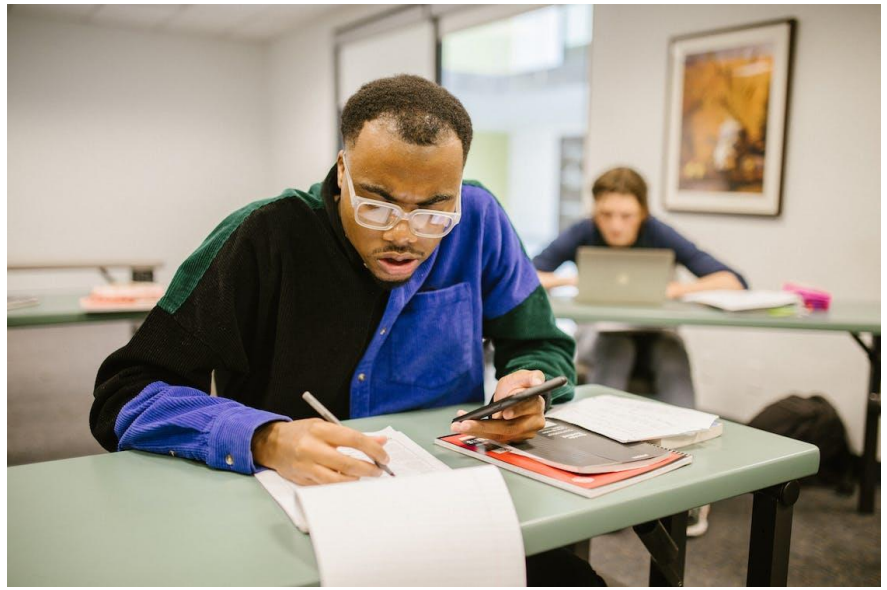
3. Feasibility: Various factors determine behavior

- CORRECT: “Human behavior influenced by a plurality of factors”
- FALSE: “Therefore, effects of MIL interventions cannot be researched”
- Better perspective:
  - Yes, good interventions do have **causal** effects on MIL
  - However, these are often **small**
  - Yes, detecting small effects is **more difficult**,
    often requiring larger samples & complexer designs
  - However, empirically detecting small effects **is possible**!

4. Baseline problem: What is the causal effect?

Pre, post, follow-up measurements

- Focus on within-person effects and changes
- Conduct **parallel tests**
  - E.g., design 9 knowledge items
  - Pretest items with online sample (n > 100)
  - Make three equally difficult tests
  - Compare scores to assess short-term and long-term effects



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Example for parallel test

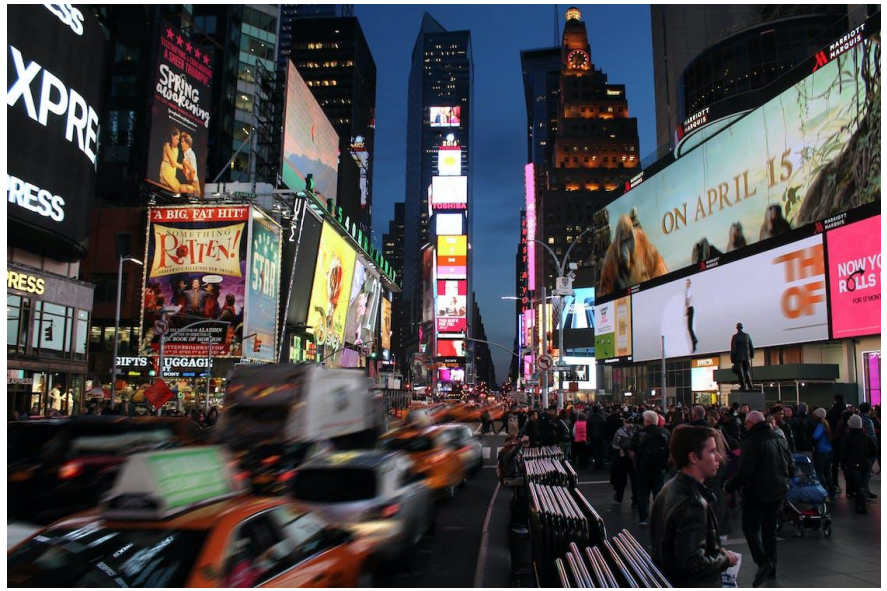
Test	Easy (80%)	Medium (60%)	Difficult (30%)
1	What is “browser history”?	Using false names and pseudonyms can make it harder to track you online behavior.	The forwarding of anonymous data for market purposes is legal in the EU.
2	Is it useful to have passwords consisting of numbers, letters, and special characters, but not words and names?	Deleting Cookies, Cache, and History can make it harder to track your online behavior.	For all social media in Germany, there is the requirement for having identical terms of use.
3	To prevent access, it is useful to have different passwords for different sites	What is a “cache”?	EU privacy guidelines need to be implemented by all EU countries

Masur, P. K., Teutsch, D., & Trepte, S. (2017). Entwicklung und Validierung der Online-Privatheitskompetenzskala (OPLIS). Diagnostica, 1–13. https://doi.org/10.1026/0012-1924/a000179

5. Baseline problem or: What is the causal effect?

Randomized roll-out of programmes

- Randomly select cities where to advertize
- Run MIL tests
- Between-person approach:
  Compare results across people
- Then roll-out everywhere



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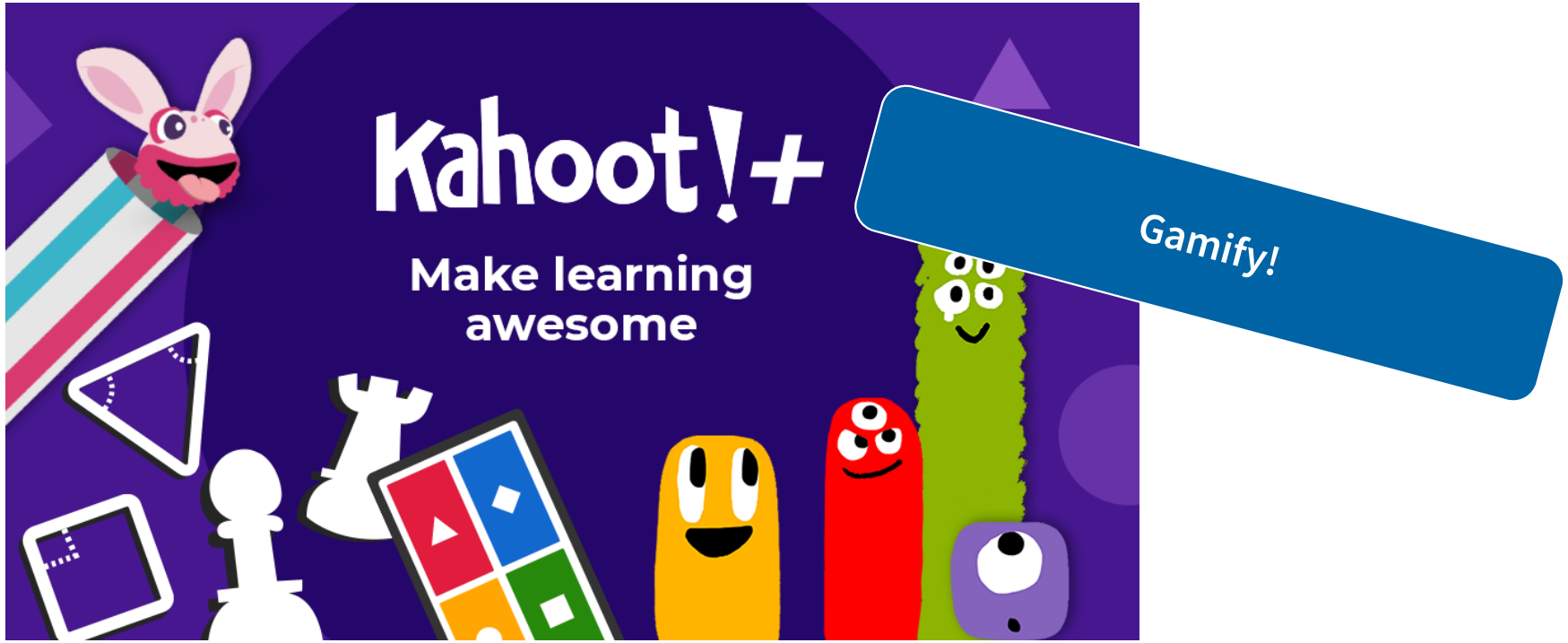
5. Scope: Each project requires a specific evaluation

- Yes, each intervention or campaign requires an individual evaluation
- But, general strategies exist for typical designs

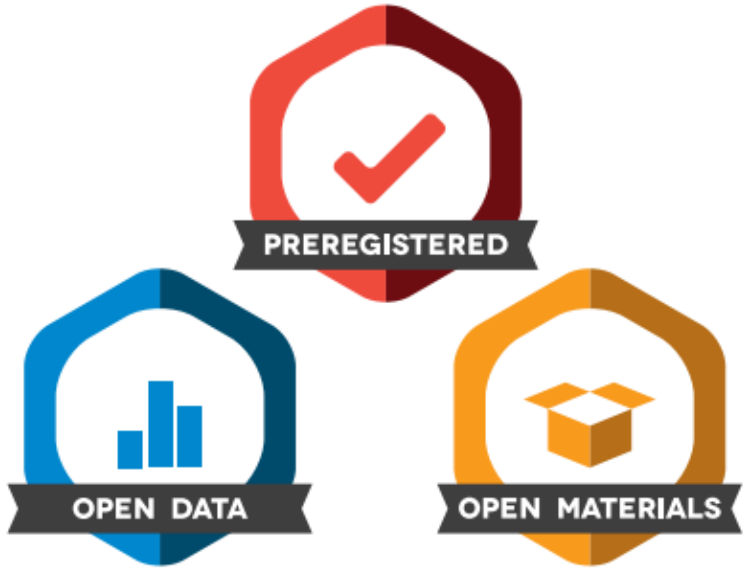
Programme	Design	Focus	Method
Interventions (Trainings, workshops, …)	• Pre, post, and longterm assessement	• Within-person difference	Parallel-Tests
Campaign (Print, Online, …)	• Random rollout	• Between-person difference	Tests
Websites	• Pre, post, and longterm assessement • Reach	• Within-person difference • Between-project difference	Parallel-Tests

6. Motivation: People do not want to participate

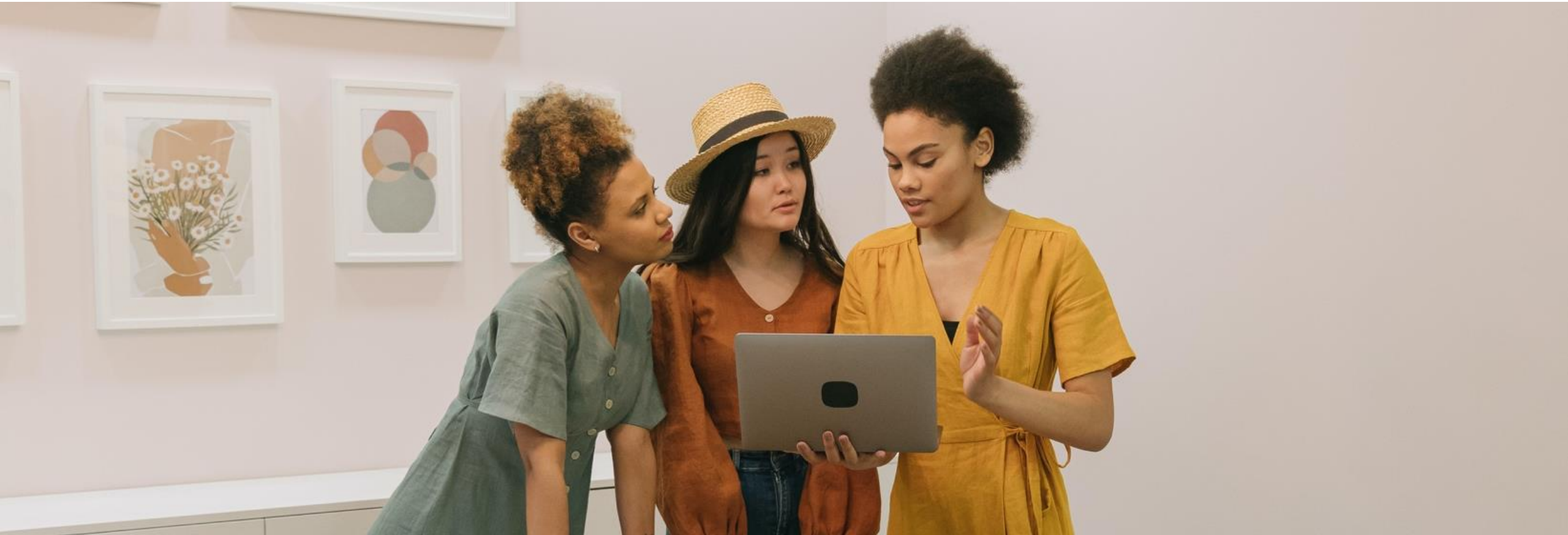


7. Incentives: Projects want to share success stories

- Require the **conducting** of evaluations
- Require the **sharing** of results
- Jump on **open science discourse**
  - Make procedure transparent
  - Share data with others
  - Make findings available for everyone



Conclusion: What are concrete recommendations?



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7 Concrete recommendations

1. **Good enough:** Don't let perfect be the enemy of good!
2. **Begin with the end in mind:** Designing evaluations improves interventions!
3. **Outcome optimization:** Developing concrete measures helps define MIL!
4. **Team-up:** Collaborate with empirical social scientists. They want your data!
5. **Supersize-me:** Campaigns produce small but often relevant effects. Large samples needed!
6. **Gamify:** People like taking quizzes!
7. **Open Science:** Share per default improves general system!

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Thank you for your attention

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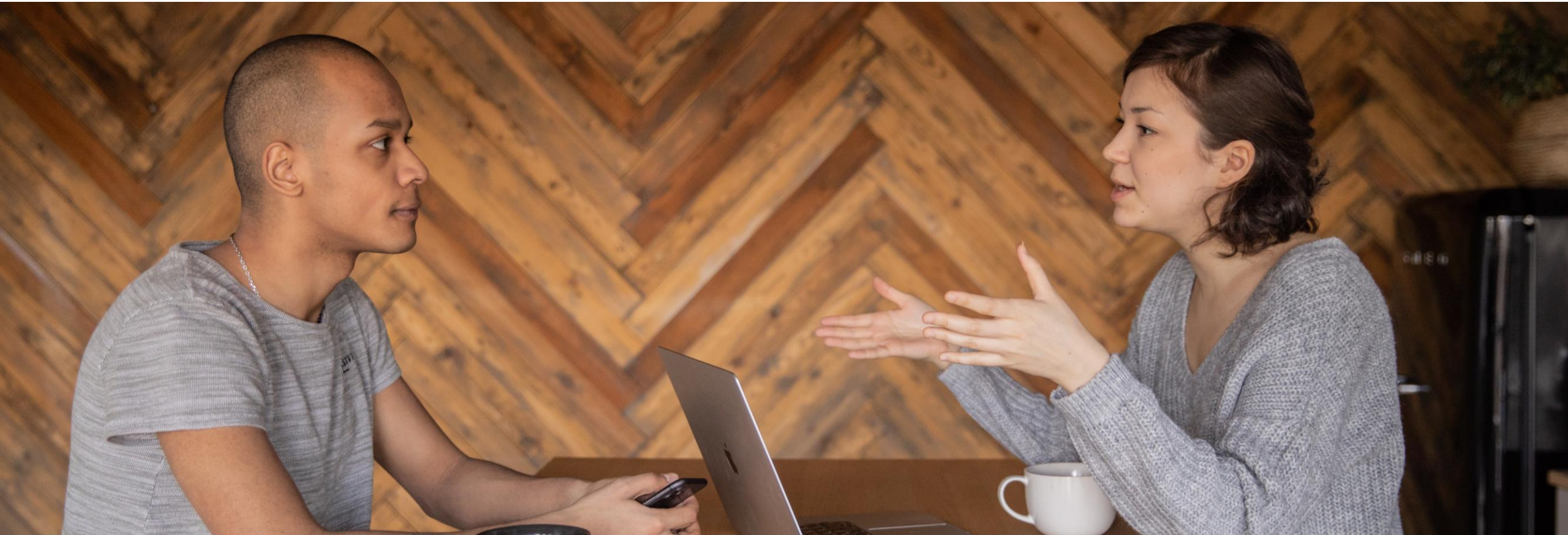

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2. What are measures of effects?

Type	Dimension	Example
Self-Reports (Quantitative)	Attitudes Behaviors	“How did you like the intervention?” “When was the last time you deleted your browser’s cache?”
Self-Reports (Qualitative)	Experiences	“I would prefer more interactive elements.”
Knowledge	Objective tests	“What does GDPR stand for?”
Reach	Data on intervention	Page visits
Behavior	Communication	”User has shared news story that turned out to be fake”