

RCT Registration: 2nd Research Phase (Wave 5) of AEARCTR 0008561

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In this update, we add details about the Wave 5 data collection, which includes the consent question for linking our survey data to administrative data from the Institute for Employment Research (IAB), and new primary and secondary outcome variables. We provide an overview of the questions included in our Child Questionnaire (Wave 5) and of our Parental Questionnaire (Wave 5) below.

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Wave 5 of Data Collection (November–December 2025)

Beginning in November 2025, we will re-survey our children and parents (Wave 5). The online survey will be similar to the preceding survey waves (1-4). We will collect our originally registered primary outcome variables of interest and also focus on new and additional longer-term primary and secondary outcome measures, as well as possible mediators. Moreover, we ask children for their consent to merge our survey data with administrative data from the IAB, which has access to the registers of the Federal Employment Agency.

To receive the consent, we will ask the following question:

“We would like to include data that is currently held, or may be held in the future, by the Institute for Employment Research in Nuremberg in the combination with this survey and any potential follow-up surveys. This may include information on career counseling, vocational training, or employment.

We assure you that all data protection regulations will be strictly observed at all times.

We kindly ask for your consent to allow us to combine and analyze your data. Your agreement is entirely voluntary, and you may withdraw your consent at any time with future effect.

Do you agree to this data combination?”

Agreement to this question will allow us to merge important long-term labor-market outcomes (e.g., earnings/wages, employment, occupation, vocational training, career counselling) with our RCT survey data, as originally registered.

This document contains two sections.

- **Section I** describes our primary outcome variables in Wave 5 and briefly reports on related envisaged research projects involving pre-registrations currently in progress. We also briefly discuss potential mediators for longer-term outcomes.
- **Section II** provides an overview of all questions in Wave 5 for children (Child Questionnaire Wave 5) and for parents (Parental Questionnaire Wave 5).

Section 1: Primary and Secondary Outcome Variables

Our additional outcome variables of interest are as follows:

Section 1.1: Research project on reading skills and long-term labor market outcomes.

How important are reading skills for success on the labor market? What are the long-term effects of reading skills developed early in life? This project is part of the German Science Foundation research unit on labor market transformation (speaker: Prof. Peter Haan). We gratefully acknowledge funding from the German Science Foundation (DFG RU Labor Market Transformation, Project 518302089). We plan to upload a pre-analysis plan in 2026.

Section 1.2: Spillover Effects on the Younger Sibling and on Parents' (Reading) Behaviour

In the parental survey, we aim to collect detailed information from families with more than one child on the reading behaviour and reading frequency of the younger sibling – i.e., the child born immediately after the focal child in our RCT households (the next youngest child compared to the target child in both treatment and control groups). Parents will be asked how much time the younger child spends reading outside school (or work) on a typical weekday and weekend day, how many days per week this child reads, how many books this child has read in the last four weeks, and about this child's reading habits in general. Finally, parents will rate how much the younger child enjoys reading on an 11-point scale.

As secondary outcomes for possible spillover effects within the family, we will ask how often the parent engages with this child (e.g., reading books together, playing games together, etc.). Moreover, we will ask parents about their own reading behaviour and reading-related interactions with their children. Parents will be asked about their own reading time on a typical weekday and weekend, number of days they read per week, the number of books read in the last four weeks, their preferred reading format (e-books vs. hardcover books), how much they enjoy reading, and whether they discuss books with their children. We will also ask whether they have borrowed or read a book (electronic or printed) from a public library—either alone or together with their children. Finally, we will include a subset of questions from the parenting stress questionnaire.

Research project on spillover effects.

Based on these registered outcomes, we will soon upload a pre-analysis plan for a study on “Spillover Effects of Reading in the Family”.

Section 1.3: Feedback from Teachers (Math & German)

In Wave 5, we will include a battery of questions on teachers’ assessment and feedback. We will ask separate questions about the math and German teachers. Specifically, the following questions will be asked:

„How much do the following statements apply to the relationship between you and your teacher?

Please think now about your math teacher and select one answer for each line.

- 1. My math teacher supports me by telling me what I do well and what I do poorly.*
- 2. My math teacher explains what I need to do to improve my work.*
- 3. The feedback from my math teacher motivates me to keep going, even when the work is hard.*
- 4. The feedback from my math teacher is mostly positive.*
- 5. My math teacher points out my mistakes more often than my good performance.*
- 6. The feedback from my math teacher gives me a good feeling about my progress.”*

We will ask children the same questions on their German teacher.

Research project on feedback from teachers.

This project will address the following questions: Does a “Matthew effect” exist in schools? Does reading for pleasure reinforce positive feedback from teachers? The Matthew effect refers to the phenomenon whereby early advantages in learning—especially in reading—tend to accumulate over time, while early disadvantages compound and become harder to overcome. We will soon upload a pre-analysis plan on the Matthew effect and reinforcing behaviour from teachers related to reading.

Section 1.4: Mental Health and Well-Being

In Wave 5, we ask children a set of questions on their mental health and well-being. First, we include the Strength and Difficulty Questionnaire (as originally registered and similar to

previous waves). In addition, we include new questions on children's well-being, mindfulness, optimism, depression, anxiety, and experience with bullying. Specifically, to capture bullying we include the following question:

"How often have the following things happened to you during the past four weeks?", including the following items:

- 1. Someone insulted me, made fun of me, or annoyed me.*
- 2. Other young people deliberately excluded me from activities or groups, or completely ignored me.*
- 3. I was hit, kicked, pushed, shoved, or locked up.*
- 4. Other young people spread lies or rumors about me so that others would no longer like me.*
- 5. Money or my belongings were stolen from me, or my things were damaged.*
- 6. I was threatened or forced to do things I did not want to do."*

In addition, we ask children a battery of questions on mindfulness and include items on depression and anxiety, using a standard question from the German Socio-Economic Panel (SOEP).

Research project on mental health.

Based on these registered outcomes on mental health, we plan to write a study on the causal effects of reading on children's mental health. Does reading for pleasure improve mindfulness, optimism, and overall mental well-being? While there is extensive literature on associations between reading and mental well-being, there is little evidence of a causal relationship. We aim to fill this gap and will soon upload a detailed pre-analysis plan on reading and mental health.

Section 1.5: Disengagement from School

In Wave 5, we will ask children how often they were absent from school. The exact question reads:

“How many days in the past two months have you not been at school? This refers to full days of absence. If you no longer remember exactly how many days you missed school in the past two months, please try to give an estimate.”

We also elicit their (dis)engagement with school using the following battery of questions on a five-point Likert scale:

“How much do you agree with the following statements?

- 1. I often skip classes or parts of the school day.*
- 2. I give up quickly when schoolwork gets difficult.*
- 3. I do just enough to get by in school.*
- 4. I often don't do my homework.*
- 5. I spend class time doing things unrelated to school (e.g., daydreaming, using my phone).*
- 6. I don't feel like I belong at this school.*
- 7. What we learn rarely interests or excites me.*
- 8. I don't feel supported or taken seriously by the teachers at this school.*
- 9. I'm usually bored in class.*
- 10. I don't like being at school.*
- 11. I don't see the point of what we learn at school.*
- 12. I rarely try to connect what we learn in school to things outside of school.*
- 13. I don't think working hard at school matters for my future.*
- 14. I often catch myself doing only the bare minimum in class.*
- 15. I don't set learning goals for myself.*
- 16. I feel like my opinion doesn't matter at school.*
- 17. I don't have many positive relationships with my classmates.*
- 18. I often feel like an outsider at this school.*
- 19. I don't participate in extracurricular activities.”*

Research project on disengagement from school.

The key research question here is: Are children with poorer reading skills at greater risk of disengaging from school?

Section 1.6: Possible Mediators for Long-Term Outcomes (Reading Habit, Intrinsic Motivation, and Joy of Reading)

In our first study, *“A Library in the Palm of Your Hand? A Randomized Field Experiment with Low-Income Children”* (2025, IZA DP No. 17322), we find positive and statistically significant causal effects of the e-book reader intervention on children’s reading behaviour and reading comprehension. In Wave 5, we aim to collect information on possible mediators for long-term educational and labour-market outcomes. In particular, we will gather information on children’s reading habits and joy of reading.

We measure reading habit with the following battery of questions on a four-point Likert scale:

1. *I only read when I have to.*
2. *Reading is one of my favourite activities.*
3. *I enjoy talking with other people about books.*
4. *I find it hard to finish books.*
5. *I’m happy when I get a book as a gift.*
6. *For me, reading is a waste of time.*
7. *I only read to get the information I need.*
8. *I can’t sit still and read for more than a few minutes.*
9. *When I read, I sometimes get completely absorbed.*
10. *I’m a poor reader.*

Finally, we also measure children’s intrinsic reading motivation with the following items:

“To what extent do you think the following statements apply to you?”

1. *I really enjoy reading.*
2. *Reading is fun for me.*
3. *Reading is boring.*
4. *Reading isn’t worth the effort.*
5. *In my opinion, reading is very interesting.*
6. *I find reading very entertaining.*
7. *While I was reading, I thought about how much I enjoyed it.”*

Answers can be given on a seven-point Likert scale ranging from “Does not apply at all” to “Fully applies.”

Research projects.

When studying long-term labour-market outcomes in the near future using administrative data from the IAB, we will examine reading habit, joy of reading, and reading motivation as possible mediators. We will also explore the following research question: *How large are the economic returns to motivation?* In this project, we aim to use using randomization as exogenous variation for children’s reading motivation. We are currently preparing the pre-analysis plan.

Section II: Child Questionnaire & Parental Questionnaire (Wave 5)

Overview of Child Questionnaire (Wave 5)

1. **Introduction** (welcome text and introduction to the CoDu survey).
2. **Background:**
 - Gender.
 - Month of birth.
 - Year of birth.
3. **Data Linkage Consent:**
 - Age validation.
 - Consent to access and use administrative data from the IAB database.
4. **Education & Training:**
 - Being currently in education or training.
 - Type of current education or training.
 - Current school type (*if attending a general school*).
 - Current school grade (*if attending a general school*).
 - Whether and when a general school was left.
 - Final qualification (*if a general school was left*).
5. **Reading Habits & Attitudes:**
 - Reading time on a typical school/workday and weekend day.
 - Number of days per week spent reading outside school/work.
 - Agreement with reading attitude statements.
 - Number of e-books and printed books read in the past four weeks.
 - Borrowing books or e-books from public or school libraries.
 - Usual reading formats (e.g., paper books, e-books).
 - Enjoyment of reading.
 - Frequency of talking with friends about books.
 - Frequency of talking with parents about books.
6. **E-Reader Usage:**
 - Treatment group: Continued use of the e-reader provided during the study.
7. **Reading Comprehension Test** (PISA reading comprehension test "[Chicken Forum](#)").
8. **School Experience & Learning Motivation:**
 - Grades in German and mathematics in the last school year (2024/25).
 - Time spent on homework or studying per day.
 - Relation with German and mathematics teachers (e.g., feedback, support).
 - Motivation for learning German and mathematics.
 - Days absent from school in the past two months.

9. Educational Aspirations:

- Desired school qualification.
- Expected school qualification.
- Desired occupational qualifications (vocational training and/or university degree).
- Career certainty (i.e. if an occupation has been already chosen).
- Chosen occupation (*if an occupation has been already chosen*).
- Open question: description of reasons for choosing a given occupation (*if an occupation has been already chosen*).
- Open question: naming interesting occupations and backing up one's opinion (*if an occupation has not been chosen yet*).

10. Friends & Social Context:

- Attitudes and ambitions of best friends regarding education and career.

11. Personal Traits & Emotional Well-Being:

- Short strengths and difficulties questionnaire (SDQ).
- Experiences with bullying and aggression in the last four weeks.
- Delay of gratification and time orientation.
- Mindfulness and attention.
- Depression and anxiety symptoms in the last four weeks.
- Self-control and discipline.
- School (dis)engagement and belonging.

12. Beliefs & Attitudes about Learning:

- Growth mindset.
- Locus of control.

13. Time Use:

- Time spent on various activities on the last Sunday (time use question).

14. Life Satisfaction:

- Overall life satisfaction.

15. Personal Information & Contact Details:

- Name for personalized contact in future waves.
- Surname for the data linkage (*if consent for data linkage provided*).
- Optional email address for recontact in future waves.

16. Closure (thank-you and closing message).

Overview of Parental Questionnaire (Wave 5)

1. **Introduction** (welcome text and introduction to the CoDu survey).
2. **Background:**
 - Gender.
 - Month of birth.
 - Year of birth.
 - Participation in previous CoDu survey.
3. **Employment Status:**
 - Current employment situation.
4. **Data Linkage Consent:**
 - Consent to access and use administrative data from the IAB database.
5. **Home Environment & Family Context:**
 - Number of books at home.
 - Frequency of shared parent–child activities.
 - Parenting strain (stress) regarding child’s behavior.
6. **Child’s Reading Behavior (reported by parent):**
 - Time child spends reading on a typical school/workday.
 - Time child spends reading on a typical weekend day.
 - Number of days per week child reads outside school/work.
 - Assessment of child’s reading ability.
 - Number of e-books and printed books read by the child in the last four weeks.
 - Preferred reading formats (e.g., paper books, e-books).
 - Enjoyment of reading.
7. **Screen Time:**
 - Whether screen time is limited for the child.
 - Maximum daily screen time allowed (*if screen time is limited*).
8. **Reading-Related Interaction:**
 - Borrowing or reading books from a public library together.
 - Whether parent and child talk about books or e-books the child reads.
9. **Education & Schooling:**
 - Whether child attended a general school in the previous school year (2024/25).
 - Child’s grades in German and mathematics in the previous school year (2024/2025).
 - Whether child currently attends a general school (2025/26).
 - Desired school qualification for the child.
 - Expected school qualification for the child.
 - Desired future educational path for the child.
10. **Child’s Broader Activities:**
 - Time spent on various activities on the last Sunday (time use question).

11. Parent's Own Reading Behavior:

- Time spent reading on a typical workday.
- Time spent reading on a typical weekend day.
- Number of days per week parent reads outside work.
- Number of e-books and printed books read in the last four weeks.
- Preferred reading formats (e.g., paper books, e-books).
- Enjoyment of reading.

12. Digital Reading Technology in the Household:

- Ownership of an e-book reader (e.g., Kindle/Tolino).
- Whether a new e-reader was bought for a child in the last 12 months.
- Treatment group: Whether the e-reader provided during the study is still used.
- Treatment group: Who in the household uses the e-reader provided during the study.
- Purchase of e-books or subscriptions for the child in the last 12 months.
- Likelihood of buying e-books or subscriptions for the child in the next 12 months.

13. Household Composition:

- Relationship of respondent to the focal child.
- Presence of younger children in the household.

14. Household Composition (Next-Youngest Child):

- Frequency of shared activities with the next-youngest child.
- Time the next-youngest child spends reading on a typical school/workdays.
- Time the next-youngest child spends on reading on a typical weekend day.
- Number of days per week the next-younger child reads outside school/work.
- Assessment of the next-younger child's reading ability.
- Number of e-books and printed books read by the next-younger child in the last four weeks.
- Preferred reading formats of the next-younger child (e.g. paper books, e-readers).
- Enjoyment of reading of the next-younger child.

15. Contact Details:

- Optional email address for recontact in future waves.

16. Closure (thank-you and closing message).