The ALOUD Study:
Adult Learning Open University Determinants Study
Influence of biological determinants on academic achievement in formal lifelong learning in adults

Jérôme Gijselaers, Renate de Groot, Paul Kirschner
Open University of the Netherlands
Overview

• Introduction

• Determinants

• Methods

• Procedures

• Ultimate goal
Problem definition

• Relation between cognitive neuroscience and education is strengthening

• No insights are gained with the adult education

• OU serves this group of learners, therefore this is the goal of the project
Background

• Cognitive functions develop until late adolescence
• Cognitive decline begins in early adulthood
• However, the ability to learn hardly declines until far into old age
Limitations previous research

• Implementation of new neuroscientific insights in primary and secondary education

• Implementation only in children and adolescents

• Research not oriented towards adults and elderly
Research questions

• What characterizes persons participating in formal lifelong learning?

• Which factors are age and sex dependent?

• What are the associations between the respective determinants?

• Which factors determine academic achievement?
Independent variables

• Biological determinants
  – Nutrition
  – Sleep
  – Vitality
  – Physical activity
  – Correlates such as weight, height, etc.
Outcome variables

- Academic achievement
- Successful vs. drop-outs
- Quality of life
- Life satisfaction
- Possibly in the longitudinal study
  - Long-term achievement (promotion, salary raise)
Covariates/Background variables

- Age
- Sex
- Weight
- Height
- Level of education
- Ethnicity
- Family situation/marital status
- Health status
- Previous GPA
- Current working hours
- Computer skills
- Mood
- Personality
- Job information
- Cognitive status
Methods

• Cross-sectional observational study (pilot)

• Longitudinal observational study

• 2000 OU students

• Master courses Psychology and Learning Sciences
Procedures

• Biological determinants:
  – Questionnaires
  – Physical activity (subpopulation):
    • Accelerometers

• Outcome variables:
  – Questionnaires
  – Examination registration office

• Covariates:
  – Questionnaires
Ultimate goal

- Developing an intervention which leads to a better study performance and overall long-term efficacy