The ALOUD Study:
Adult Learning Open University Determinants Study
Influence of biological and psychological determinants on study success in formal lifelong learning in adults

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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 study success?
### Independent variables

<table>
<thead>
<tr>
<th>Biological Determinants</th>
<th>Cognitive Determinants</th>
<th>Motivational / Affective Determinants</th>
<th>Social Determinants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition</td>
<td>Learning strategies</td>
<td>Affect</td>
<td>Social support</td>
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<td>Sleep</td>
<td>Cognitive abilities</td>
<td>Anxiety</td>
<td>Social climate</td>
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<td>Vitality</td>
<td>Self-regulation</td>
<td>Goal orientation</td>
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<td>Physical activity</td>
<td>Self-directed learning</td>
<td>Implicit beliefs</td>
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<td>Correlates such as weight, height, etc.</td>
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<td>Intent to persist</td>
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<td>Self-efficacy</td>
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<td>Stress</td>
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<td>Coping behavior</td>
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</tbody>
</table>
Outcome variables

- Study success
- Successful vs. drop-outs
- Quality of life
- Life satisfaction
- Long-term efficacy (promotion, salary raise)
Covariates

- Age
- Sex
- Weight
- Height
- Level of education
- Ethnicity
- Previous GPA
- Current working hours
- Computer skills
Methods

• Cross-sectional observational study (pilot)

• Longitudinal observational study

• 2000 OU students

• Master course Psychology and Learning Sciences
Procedures

• Psychological determinants:
  – Questionnaires
  – Neuropsychological tests

• Biological determinants:
  – Accelerometers
  – Questionnaires

• In general:
  – Self-report medical data
  – Study success
  – Specific study performance
Ultimate goal

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