Symposium V

Symposium: Adult reading and numeracy skills and practices

Chair
Anke Grotlüschen (Hamburg University, Germany)

Room: Joseph Haydn

Abstract
The symposium aims at a better understanding of adult reading and numeracy competences as well as the related practices. Even at low performance levels, literacy and numeracy practices are relevant (Grotlüschen, Mallows, Reder, & Sabatini, 2016). But while the “New Literacy Studies” lead to qualitative studies (Thériault, 2016, Euringer, 2016), it has seldom been addressed to large scale assessments. However, PIAAC allows study skills uses which can be understood as practices. This symposium focuses adults with low literacy competences. New results indicate, an increase of competences can not only take place via non-formal learning but also informally, with literacy supporters (Buddeberg, 2015) or mediators (Theriault 2016) in a literate environment (Mallows & Litster, 2016). Longitudinal studies show how practices improve while competences stay at the same level for a long time (Reder, 2011). Earlier research also states that numeracy practices often are not understood as having something to do with mathematics anymore (Lave, 1988). This asks for more attention on practices and environment when searching for adequate support strategies for adults.

Presentations

- Title: Skill use. Engagement in reading, writing and numeracy practices.
  Author: Stephen Reder (Portland State University, USA)
- Title: Numeracy skills, numeracy skills use and numerate environment.
  Author: Jeff Evans (Middlesex University, UK)
- Title: A better understanding of adults with lower literacy skills – use of reading components and skill use data.
  Authors: Britta Gauly (GESIS – Leibniz-Institute for the Social Sciences, Mannheim, Germany) & Barbara Nienkemper (Hamburg University, Germany)
- Title: German adult literacy level one survey 2017/18: Concept and methodological approach.
  Authors: Klaus Buddeberg, Caroline Euringer & Anke Grotlüschen (Hamburg University, Germany)

Title: Skill use. Engagement in reading, writing and numeracy practices.

Author
Stephen Reder (Portland State University, USA)

Abstract
“Although proponents of the social practices approach have offered strong critiques of the interpretive and policy frameworks that rely on standardised test scores alone (e.g. Barton & Hamilton, 2003), alternatives have not been proposed that are practical for use on a large scale. Initial analyses of ALLS data about skill use in the workplace (Desjardins and Rubenson,
2011) and in PIAAC (OECD, 2013a) demonstrate how useful skill use data can be in the context of large-scale assessments. Analyses of the skill use data in both surveys showed substantially increased earnings for workers at higher levels of skill use. In the case of their more in-depth analyses of ALLS, Desjardins and Rubenson (2011) estimated 32%, 20% and 10% increased earnings for high levels of reading, writing and numeracy skill use at work, respectively, compared to low levels of skill use after controlling for proficiencies, demographics, education, work experience, occupation and industry. With the more sophisticated measurement of skill use now available in the Survey of Adult Skills, more comprehensive understandings of the relationship between skill use proficiency and a range of social and economic variables become possible. The potential impact of skill use, of course, is not limited to economic outcomes. OECD (2013a) estimated the likelihood of positive social outcomes of adults with high levels of literacy proficiency (Level 4 or 5) compared with adults with low literacy proficiency (at or below Level 1). For each of these outcomes, individuals with high levels of assessed literacy proficiency were more likely to have positive social outcomes, even after controlling for demographic and educational attainment variables.

Neither of these analyses looked closely at the role played by skill use in social outcomes as we will do in this presentation, especially by comparing the importance of practices in the U.S. general population and the U.S. incarcerated population (PIAAC data for the latter to be released in November): a case of practice-constrained development.


Title: Numeracy skills, numeracy skills use and numerate environment.

Author

Jeff Evans (Middlesex University, UK)

Abstract

"In the UK Country Note (OECD, 2013a), one of the headlines is that "There are particularly large proportions of adults in England and Northern Ireland with poor numeracy skills" (p1). (This confirmed a finding in the UK Skills for Life survey, done in 2011 (BIS, 2012).) Fortunately the survey provides a wealth of variables that may offer at least a partial explanation. Some of these variables are (relatively fixed) socio-demographic characteristics, but others appear to be more amenable to policy responses or to social interventions.

Evans et al. discussed what they called the 'numerate environment' (NE), following the EU High Level Group on Literacy's (2012) discussion of the 'literate environment', and the way that the NE might provide 'affordances' for the development of numeracy in numerate practices used by adult citizens both at work and in the wider culture. For them, these affordances would include opportunities to use numeracy, supports for doing so, and indeed demands for doing so (in particular, at work; cf. OECD's comment on French PIAAC results (2013b). This work suggests considering explanations which focus on the numeracy practices in which adults are engaged (Reder, 2009). The PIAAC Background Questionnaire Provides questions on the frequency with which the adult respondent participates in six numeracy (or mathematical) practices, at work and in everyday life. Results will be presented of empirical
analysis relevant to the concepts of numeracy practices, and the numerate environment.

References

Title: A better understanding of adults with lower literacy skills – use of reading components and skill use data.

Author
Britta Gauly (GESIS – Leibniz-Institute for the Social Sciences, Mannheim, Germany) & Barbara Nienkemper (Hamburg University, Germany)

Abstract
"The present work discusses two approaches to gain a better understanding of the German adult population with lower literacy skills. The first approach draws on data from the paper-based reading component assessment that was implemented in PIAAC 2012. It was intended to give a more detailed picture on the skills of adults with very low reading proficiency and comprises three dimensions of basic reading skills: print vocabulary, sentence processing and passage comprehension (Sabatini 2015). Not only is the percentage of correct responses measured, but also the time taken by respondents to complete the tasks. Using this information, we suggest that four groups of readers can be differentiated for further analyses: efficient readers, readers with some difficulties, speed-accuracy-trade-offs and readers with severe difficulties. A major limitation regarding this approach is the fact that the sample is not representative for the population of adults with lower literacy skills and difficulties in the routing procedure led to the inclusion of adults with higher literacy skills.

The second research approach makes use of an understanding of literacy as a ‘social practice’ (Barton & Hamilton 2012) and focuses primarily on the PIAAC skill use data. A subset of ‘skill use variables’ was chosen: the use of literacy, numeracy and ICT at work as well as in everyday life. For the purpose of differentiating subgroups by their skill use, a latent class analysis (LCA) was carried out. LCA is a statistical procedure by which individuals are organised into groups, based on their response patterns. As a result of this LCA procedure, three groups can be distinguished in terms of the frequency that they use selected skill-related activities: Surprisingly, the individual literacy level does not clearly predict the group membership. Two out of the three groups contain a significant number of adults with lower literacy skills. A further interesting result is that participants in one of the groups seem to compensate for the few chances they have to use their skills at
work by using them more often in their everyday life. Those results contribute to a more differentiated picture of adults with lower literacy skills.

References

Title: German adult literacy level one survey 2017/18: Concept and methodological approach.

Authors
Klaus Buddeberg, Caroline Euringer & Anke Grotlüschen (Hamburg University, Germany)

Abstract
"The German Level One Survey (LEO, Grotlüschen/Rieckmann, 2011) provides data on adult literacy with a differentiated focus on the lowest level. In this contribution we will discuss the concept and methodological design of the second LEO survey 2017/18 which won’t be a mere replication of the first one. First of all, the data won’t be limited to reading and writing but will consider a broader concept of adult basic education. Grotlüschen and Euringer show, that German policy makers do not longer limit adult basic education to reading and writing skills but also take into consideration further content and skills, e.g. health literacy, digital literacy, political literacy, financial literacy (Euringer 2016; Grotlüschen 2016).
Secondly, there will be a stronger emphasis on skill use in everyday life and work. While the New Literacy Studies have coined a theoretical approach to literacy as social practice (Hamilton et al. 2015), the PIAAC study took a first step in implementing background questions about skill use within the context of large scale assessment (OECD 2013).
LEO 2017/18 will gather information on further basic skills, their use in everyday life and at the workplace as well as their relevance for social participation and inclusion. Therefore, the literacy scale (Alpha-Levels) is complemented by an enlarged background questionnaire. This contribution will focus on the innovative aspects of the second leo.-survey 2017/18. Methodological issues concerning the development of background questions regarding skill use, participation and social inclusion are going to be addressed.

References