THEORETICAL FRAMEWORK

- The PIAAC study (OECD, 2013) provides, among others, international statistical data on literacy skills of adults (more precisely: people aged 16-65 years residing in the country), for which five proficiency levels are described. Like in all countries, in Germany there is a substantial number of adults (17.5 %) with low literacy proficiency (level1 or below; cf. OECD, 2013, p. 257).

- Adults with a lower literacy can be defined as a subgroup of adults that "can read or write single sentences, but not continuous text – even if it is brief" (Grotlüschen & Riekmann, 2011).

- In Germany there are about 6,2 millions of adults assigned to Alpha-Levels 1-3 (vgl. Grotlüschen et al. 2018, 5), 62,3% of low literate adults are employed (vgl. Grotlüschen et al. 2018, 12)

- The increasing mediatization (Couldry & Hepp, 2016) brings with it an increasing use of digital technologies. In 2018, 89.4% of the total population and 78% of the less literalised had an Internet-enabled mobile phone or smartphone (vgl. Grotlüschen et. al, 2018, 32).

- At the same time, the demands on media-related skills are also growing (vgl. Wolf/Koppel 2017). Both everyday practices (e.g. making appointments with authorities, banking transactions or looking for jobs) and work-related practices (e.g. controlling machines or using digital assistants) are increasingly being offered exclusively in digital form.

- The share of self-directed learning with digital media remains rather low according to IW trends (2019). For employees with low literality, digital media are hardly used specifically for learning at the workplace (Schöpper-Grabe/Vahlhaus, 2019, p.52f.). This may be due to a lack of suitable offers.

SELECTION OF RELEVANT OCCUPATIONAL AREAS FOR A MOBILE LEARNING APP IN ADULT LITERACY EDUCATION

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RESEARCH DESIGN

- explorative approach with Mixed Methods Design (cf. Döring et. al , 2016)

- two steps of Research (cf. charts below)
  - first step: Meta-Interpretation (cf. Weed, 2005)
    - two criteria selection and applying in the analysis for the selection of occupational areas (for a mobile learning app in adult literacy education):
      a) characterization of the target group / boundaries
      b) occupational boundaries and opportunities of the target group

- second step: Qualitative content analysis (cfl. Mayring, 2017)

FORECAST/PREVIEW

Problems resulting from low literality: "some of them make it easy for themselves then but also from the time red light flashes I would have to do something ne i do acknowledge the error and continue editing (.) but do not know what error occurred" (060619_B_GD)

Results of the research will be used for the development of further learning material for a/ the mobile learning app in adult literacy education with the focus on basic literacy education on workplace

FIRST STEPS

Research objectives
Which studies make statements about low literacy persons and the labour market? Which occupational areas are relevant for a digital learning app to improve workplace basic education/ literacy?
Selection of occupational fields. The occupational fields were selected as part of a Meta Interpretation with a systematic review.

Research method
a) Data collection: Cross- case comparison as a method of Meta Interpretation (cf. Weed, 2005)
b) Data analysis: Systematic Review (cf. ibid)

Analyzed documents
Studies:
· Forecasts of labour market developments in Germany up to 2030
· Analyzed quantitative studies:
 - Ehmig et al., 2015;
 - leo. - Level One, 2010;
 - LEO, 2018;
 - Stuckatz/Badel, 2016

The purpose of the studies is the common area, here: people with low literacy in occupational areas

Applied Criteria
- unskilled and semi-skilled activities
- 2-year vocational training with a disproportionate number of illiterates in the occupational field
- 3-year vocational training with a disproportionately high number of illiterates in the occupational field
- at least 15% illiterates in the occupational field
- bottleneck jobs
- proportional proportions of illiterates by occupational groups
- Employment growth until 2030
- Demand Labour force up to 2030
- Activities that involve reading and writing and can lead to hazards.

Outcome
Applying the criteria described to occupations in the low-threshold sector of employment, three sectors emerged that were considered most relevant for the project's purposes:
1. food sectors,
2. technical professions (manufacturing), and
3. public health and caring sector

SECOND STEPS

Research objective
Validation of the selected occupational fields and identification of relevant task content

Research method
a) Data Collection: Expert Interviews with Training masters, Vocational school teachers and Course instructors
b) Data Analysis: Qualitative Content Analysis (cf. Mayring, 2017)

relevant dimensions for the task development
relevant dimensions of task content for the app
- reading
- writing
- arithmetic
- speech perception

The tasks in the four dimensions should include the following contents from the (daily) work routine:
- reading
- independent working
- with the most common errors
- problems resulting from low literality
- written activities
- Situations where they need help
- Help through differentiation (i.e. tasks are adapted individually)
- Help from a third person
- Delegation to others

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