UiO : Center for Multilingualism in Society across the Lifespan
University of Oslo

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LAMBA: Latvian language in monolingual and bilingual acquisition

norway grants
MultiLing
Established by the Research Council of Norway
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What is the project all about?

- Systematic and comprehensive investigation of monolingual and bilingual acquisition of the Latvian language
- Challenges addressed:
  - lack of early language assessment instruments
  - lack of developmental norms and population studies
  - lack of resources: child corpora, experimental data…
  - lack of studies focusing on early bilingual acquisition of Latvian
  - poor visibility of Latvian in the international academic arena
  - lack of international collaboration in language acquisition

Goals of the project

- **Developing tools:**
  - *MacArthur-Bates Communicative Development Inventory (CDI)* – Latvian adaptation: CDI-I (8-16 months) and CDI-II (16-36 months)
  - *Latvian Phoneme Accuracy Test* (3;0-6;0 years) expanded and adapted for use with Russian-dominant children and normed for both languages
- **Developing research resources:**
  - Longitudinal corpora of child language of two Latvian monolingual and two Latvian-Russian bilingual children: recorded, transcribed, coded and annotated
  - Normative dataset of phoneme accuracy of Latvian- and Russian-speaking children
  - Normative dataset of CDI-I and CDI-II for Latvian monolinguals
  - Experimental data on phonological and morphosyntactic development for mono- and bilinguals

Goals of the project

- **Developing knowledge:**
  - Generate new knowledge on early language development of Latvian-speaking children, monolingual and bilingual
  - increase understanding of factors involved in language acquisition in general
- **Sharing research results & increasing awareness:**
  - Dissemination and information targeting different groups to attract attention of researchers, practitioners, parents and the wider community to the importance of child language studies and recent developments
- **Developing expertise:**
  - through training of research staff
  - through developing research-based course modules (Synergy with Scholarship Activity)

Funding & Duration

- Program LV05 “Bilateral Research Cooperation” under the EEA and Norway Grants: **EUR 501 021**
- Self co-financing contributed by the UiT the Arctic University of Norway and the University of Oslo: **EUR 138 673**

- TOTAL BUDGET**: EUR 639 694**

- Duration**: 26** months (March 2015 – April 2017)

- Research & technical staff directly involved: **27 people**

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The Team

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Structure of the Project

- **WP1**: Latvian adaptation and norming of MacArthur-Bates Communicative Development Inventories (CDI)

- **WP2**: Development and norming of Latvian and Russian phoneme tests

- **WP3**: Development of 4 dense longitudinal child speech corpora with 2 monolingual Latvian children and 2 Latvian-Russian bilingual children orthographically transcribed and morphologically annotated

- **WP4**: Experimental study of phonological and morphological aspects of monolingual and bilingual acquisition of Latvian

WP1 What is MacArthur-Bates CDI?

- Tool assessing communicative development in children 8 months–3 years:
  - vocabulary
  - communicative gestures
  - grammatical development
- Parental report tool:
  - not affected by performance limitations in the child
  - reliable information on child's linguistic competence
  - time & cost efficient
- Developed originally for children speaking American English (Fenson et al. 1994; Fenson et al. 2007)
- Adapted to over 60 languages – both spoken and signed, including Norwegian, Danish, Finnish, Estonian, Russian etc.

WP1 What is CDI used for?

- **Typical populations:**
  - norm-referenced assessment tool for mono- and bilingual children
  - cross-linguistic comparisons (Bleses et al. 2008)
- **Atypical populations: evaluation, screening and monitoring tool:**
  - Specific language impairment (Thal et al. 1999)
  - Down syndrome (Berglund, Eriksson & Johansson 2001)
  - Autism (Charman et al. 2003)
  - Cochlear implants (Thal et al. 2007)
- **Populations at risk of developing language impairment: monitoring**
  - otitis media (Feldman et al. 2003)
  - healthy preterm children (Magill-Evans & Harrison 1999)
  - familial risk of dyslexia (Koster et al. 2005)

WP1 Latvian CDI: outputs

For parents & practitioners:

- Two electronic forms, available online:
  - CDI I: Words & Gestures (for children aged 8 to 16 months)
  - CDI II: Words & Sentences (for children aged 16 to 36 months)
  - scores calculated automatically
  - convenient comparison with population norms (based on a sample of 2320 children, assuming 35% response rate)

For scholars:

- Normative data available through open-access Wordbank database (http://wordbank.stanford.edu/): cross-linguistic comparisons, statistics, visualizations, etc.

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WP1 Latvian adaptation of CDI

- First language assessment tool normed with Latvian population
- First tool to provide a comprehensive overview of lexical and grammatical development of Latvian children
- First tool that does not require specialized training to administer, score & evaluate

WP1 Timeline

2015

- **Develop Latvian adaptation of CDI:WG and CDI:WS**
- **Pilot adaptations with a sample of parents**
- **Get approval of the CDI Advisory Board**

2016

- **Develop electronic CDI forms: http://cdi.lamba.lv/ (first version)**
- Implement a large-scale web-based data collection
- Test Latvian CDI for validity & reliability
- Analyze the results quantitatively and qualitatively
- Create a detailed user manual

2017

- Make all resources freely available: Wordbank, CHILDES, downloads from partners' websites

WP2 Pronunciation accuracy tests

- **What is it?**
  - a picture-based tool to assess the development of pronunciation in children from 3 to 6 years of age
  - pilot-tested for picture recognizability
  - available in Latvian and in Russian
  - assesses consonants in three positions in the word (initial, medial, final)
  - assesses a range of consonant clusters (initial and medial);
  - modeled after Norsk Fonemtest
  - **complete with developmental norms** (n = 500 in each population)

WP2 Pronunciation accuracy tests

- **Why do educators, speech therapists and parents need it?**
  - the **only** norm-referenced tool of its kind for Latvian
  - quick & easy to administer (full test takes 10 to 20 min.)
  - easy to score (comes with user-friendly scoring sheets & detailed manual)
  - easy to interpret the score (comes with developmental norms)
  - two comparable versions – Latvian and Russian – enable evaluation of bilinguals
  - available for download **free** of charge
- **Why do scholars need it?**
  - full recorded normative dataset available: wealth of data on phonemic development
  - convenient tool for matching children on phonological skills & pre-selection of children with specific characteristics

WP2 Timeline

2015

- **Develop Latvian phoneme test**
- **Develop an equivalent tool in Russian so that bilingual children can be tested in both languages**
- **Pilot all picture stimuli to ensure they elicit target words and are easy to identify; & all target words are familiar to the children of target age**

2016

- **Obtain developmental norms (recording and assessment, n =1000 total)**
- Analyze data quantitatively & qualitatively
- Develop detailed user manuals

2017

- Make full normative dataset, tools & manuals freely available through partners' websites

WP3 Longitudinal Latvian child speech corpora

- **What is it?**
  - 4 dense recorded longitudinal corpora (naturalistic setting)
  - 2 Latvian monolinguals & 2 Latvian-Russian bilinguals
  - recorded 30 minutes per week, for 16 months (ca. 20 to 36 months of age)
  - total of **192** hours of spoken interaction
  - orthographically transcribed
  - coded using CHAT – the standard transcription system utilized in Child Language Data Exchange System (CHILDES; MacWhinney 1987, 2000, 2014)
  - audio recordings and transcriptions linked and synchronized
  - automatic morphological tagging using MOR program
  - MOR grammar developed for the Latvian language
  - **available for free** through CHILDES database

WP3 Longitudinal Latvian child speech corpora

- **Why is it needed?**
  - there are currently no recorded longitudinal data of Latvian child language (diary studies: Rūķe-Draviņa 1982, 1993, Markus 2003)
  - glimpse into bilingual language development as it unfolds
  - wealth of information on language development
    - error rates; type & token frequencies of lexical & grammatical categories; omission errors; developmental tendencies; phonological development
    - child-directed speech; parent-child interactions; conversational turn-taking; etc.
    - cross-linguistic comparisons
    - validation of formal assessment tools

WP3 Timeline

- **2015**
  - **Recording & transcription of corpora**
- **2016**
  - **Recording & transcription of corpora**
  - **Coding corpora in CHAT format**
  - Development of MOR grammar for Latvian & adaptation of existing morphological taggers
- **2017**
  - Analysis of the results
  - corpora are submitted to CHILDES database and made available to everyone

WP4 Experimental study of (morpho)phonological acquisition of Latvian

- **What is it?**
  - Three experiments targeting Latvian-Russian **bilinguals**:
    - *Acquisition of morphosyntactic properties: adjectival gender agreement*
    - *Acquisition of morphophonological alternations in nominal inflection*
    - *Aquisition of segmental contrasts: accuracy of production and complexity of inventories*
- **Why is it needed?**
  - Unique bilingual situation with a sizeable Russian-speaking minority, and efforts towards bilingual preschool and school education
  - Early bilingual acquisition of Latvian is poorly understood
    - E.g. Kušķe (2013b) lists bilingualism as a reason for language delays in school-aged children
  - Bilingual children – a vulnerable group; bilingualism is often seen as a liability, not an advantage

WP4 Timeline

- **2015**
  - **Develop & pilot methodology and stimuli**
  - **Adapt Utrecht Bilingual Exposure Calculator to Latvian and Russian;**
- **2016**
  - **Recording sessions in Latvian kindergartens (n = 120 children, 400 sessions)**
  - Transcription of experimental data
  - Qualitative & quantitative analysis
- **2017**
  - Publishing the results
  - Sharing experimental datasets via Tromsø Repository of Language and Linguistics

Sharing the Results

- **All** tools, norms & datasets will be **open access**.
- Assessment tools with related manuals and norms - available for free download from the project webpage.
- Longitudinal corpora of child speech - donated to the Child Language Data Exchange System (CHILDES - http://childes.psy.cmu.edu/).
- CDI data shared through Wordbank (web-based cross-linguistic database for lexical data from adaptations of CDI -http://wordbank.stanford.edu), the full normative dataset - made available via CHILDES.
- Experimental datasets and statistical analyses - made available via the Tromsø Repository of Language and Linguistics (TROLLing - http://opendata.uit.no/).

What's next?

- Massive open-access research resources created = sustainability:
  - joint publications
  - student projects
  - research-based course modules (synergy with Scholarship Activity)
  - new research projects & grant applications
- Comparable resources across countries
  - Basis for cross-linguistic comparisons and joint international projects
- Summer School in linguistics in Latvia?
  - use of new tools & resources;
  - theory & methodology of language acquisition
- **Go global?**
  - research network uniting scholars working on Baltic linguistics in the Baltic States and beyond

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Thank you