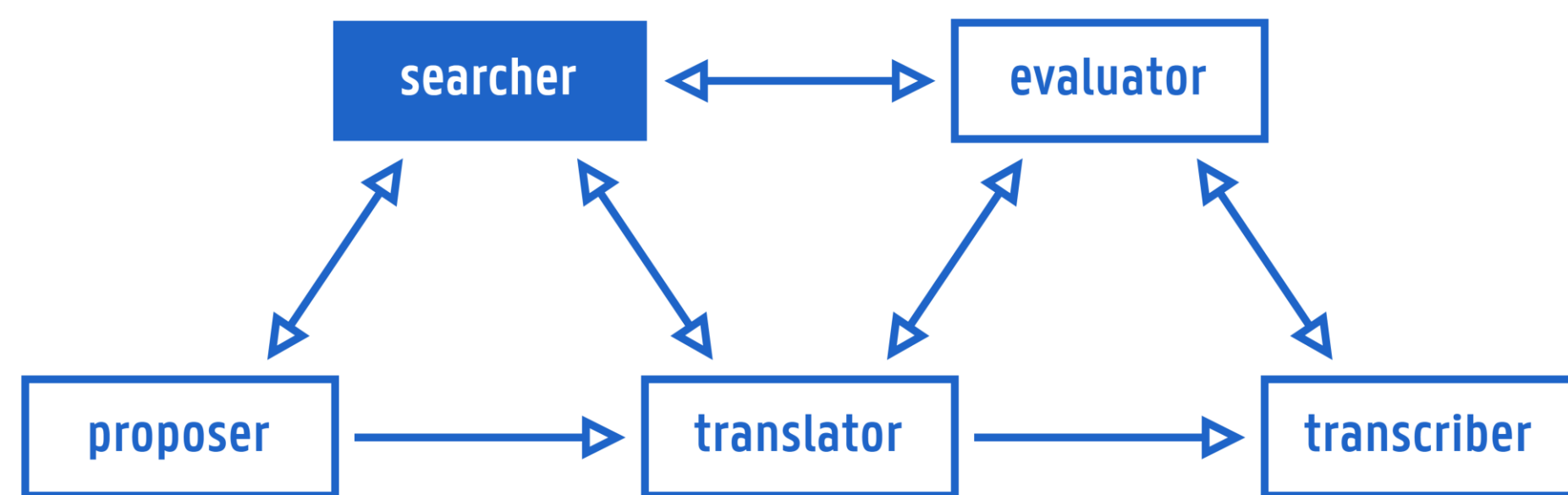


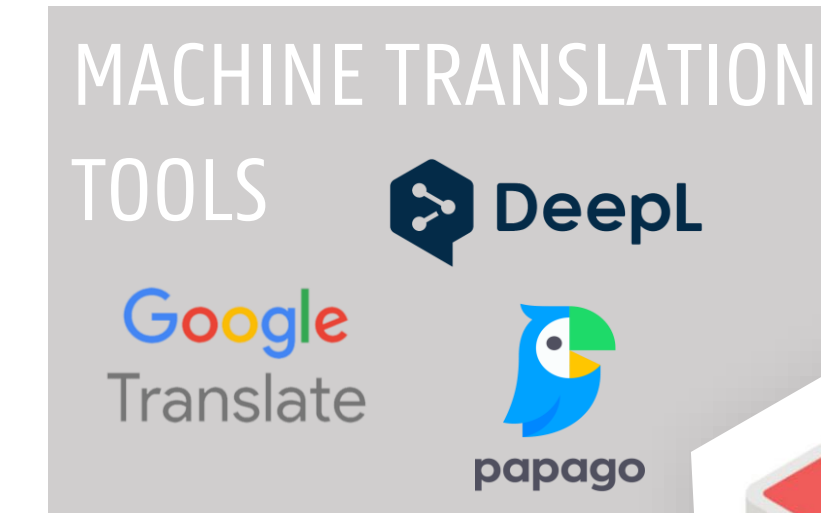


INTRODUCTION

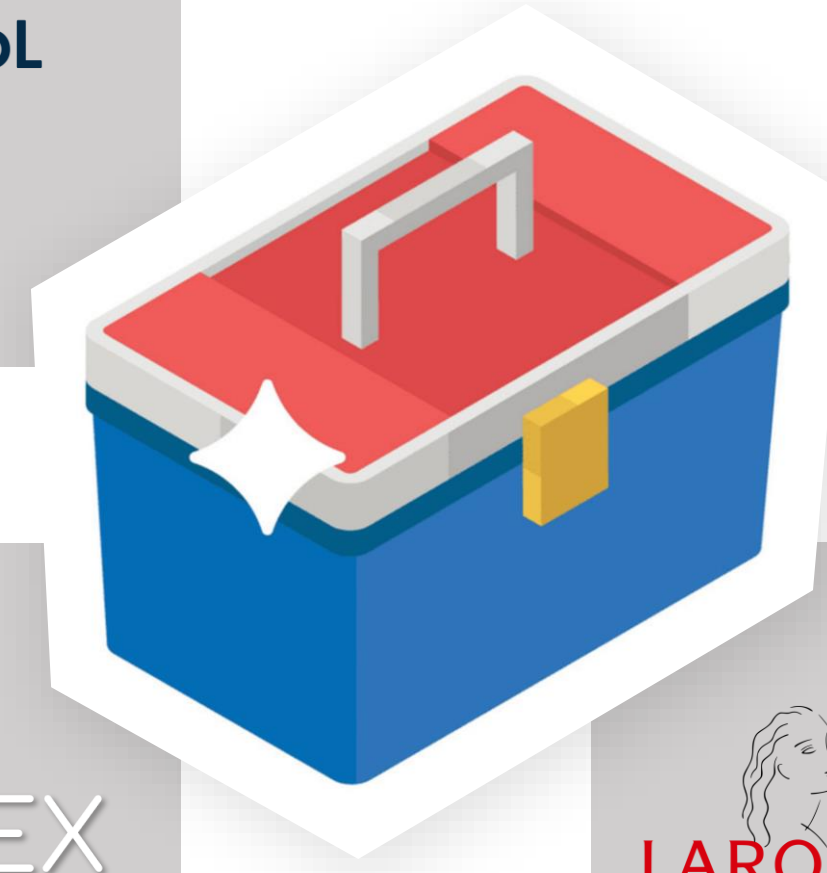
- PhD project of Margot Fonteyne (BOF fellowship, 2021-2024)
- Machine translation (MT) use by second language (L2) learners widespread, especially for writing (Jolley & Maimone, 2022)
- Current research on effects of use mostly product-oriented
- What do we know about the MT-assisted writing process?
 - Access to MT may help learners to handle competing demands on writing subprocesses (Garcia & Pena, 2011; Raído & Torrón, 2020)
 - Learners' consultation behaviour (how they use MT) varies This behaviour....
 - May be related to L2 proficiency (Fredholm, 2015)
 - Likely also affects writing products (Cancino & Panes, 2021)



Writing process model by Leijten et al. (2014)



L2 WRITING TOOL KIT

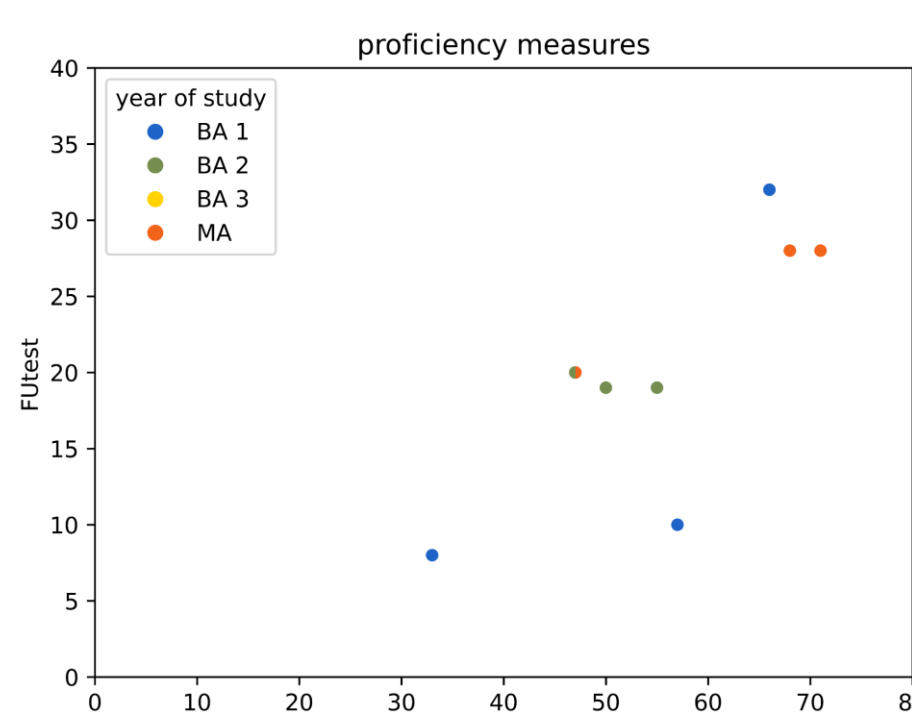


RESEARCH QUESTIONS

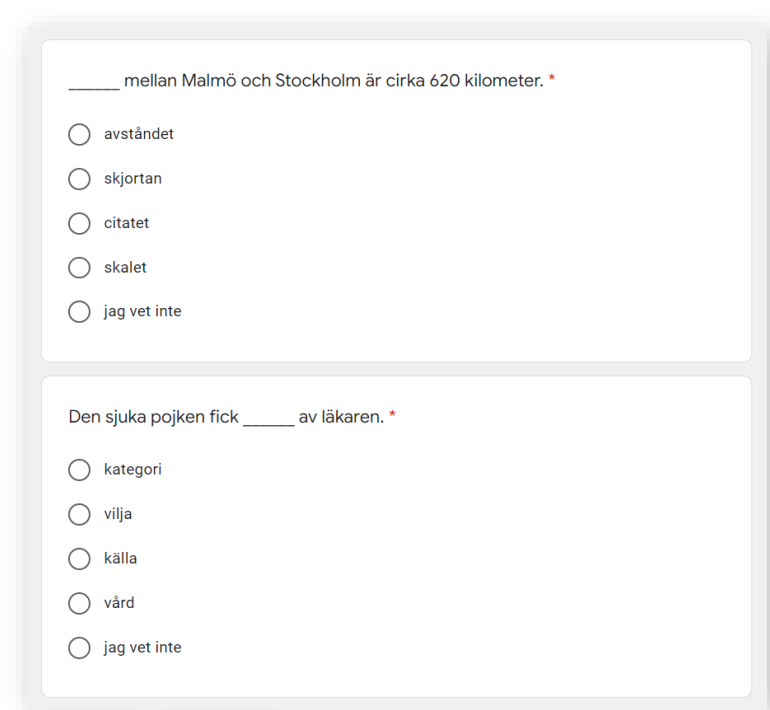
- Does having access to MT affect L2 learners' writing process in terms of...
 - Their online writing behaviours?
 - The cognitive processes underlying these behaviours?
- Does learners' L2 proficiency level moderate the effect of having access to MT on the writing process?
- Does learners' consultation behaviour...
 - Differ from when they use more traditional writing tools (such as dictionaries)?
 - Correlate with learners' L2 proficiency level?
 - Affect the L2 writing product?

PILOT STUDY (PT 1): ASSESSING L2 PROFICIENCY

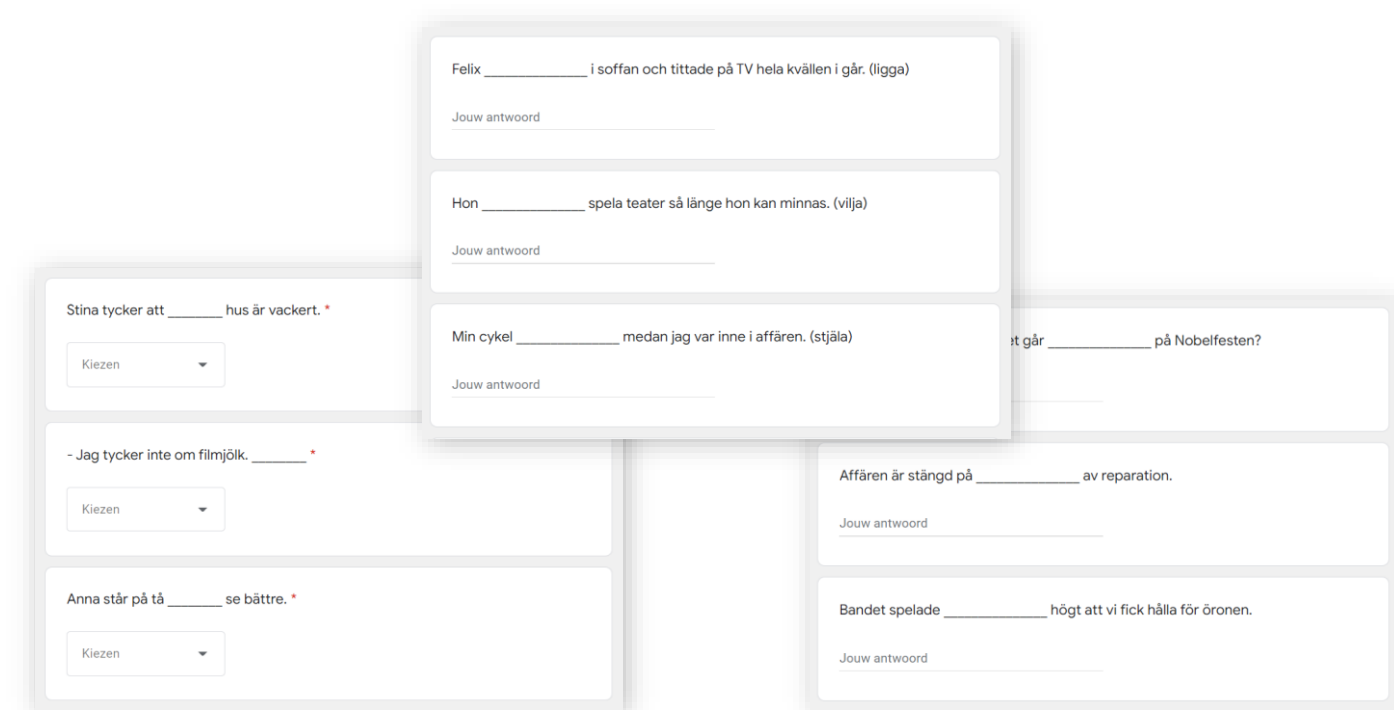
- To study the L2 writing process (including consultation behaviour) across L2 proficiencies, we need a reliable & valid L2 proficiency test
- → Comparison of two L2 Swedish tests in pilot
 - Swedish Levels Test (SLT) (Bokander, 2016)
 - Standardized placement test by Folkuniversitetet (FUtest)
- 9 Dutch (L1) learners of Swedish (L2) completed both tests
- Results
 - Reliability: internal consistency of tests is high
 - (Criterion) validity: correlation between scores on both tests is high



ID	Perceived as least difficult		Perceived as most difficult	
4	C	B	D	A
7	B	D	A	C
8	B	C	A	D
9	D	A	C	B
10	A	D	C	B



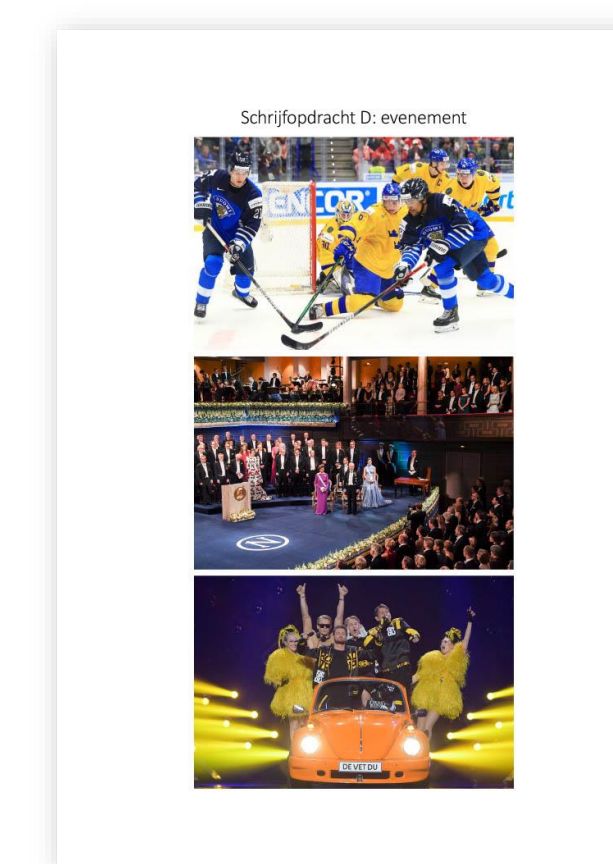
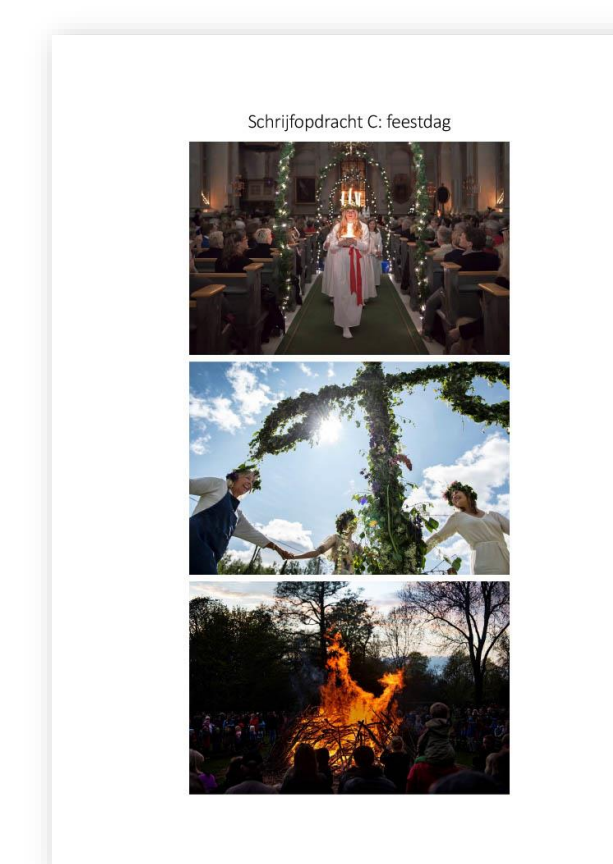
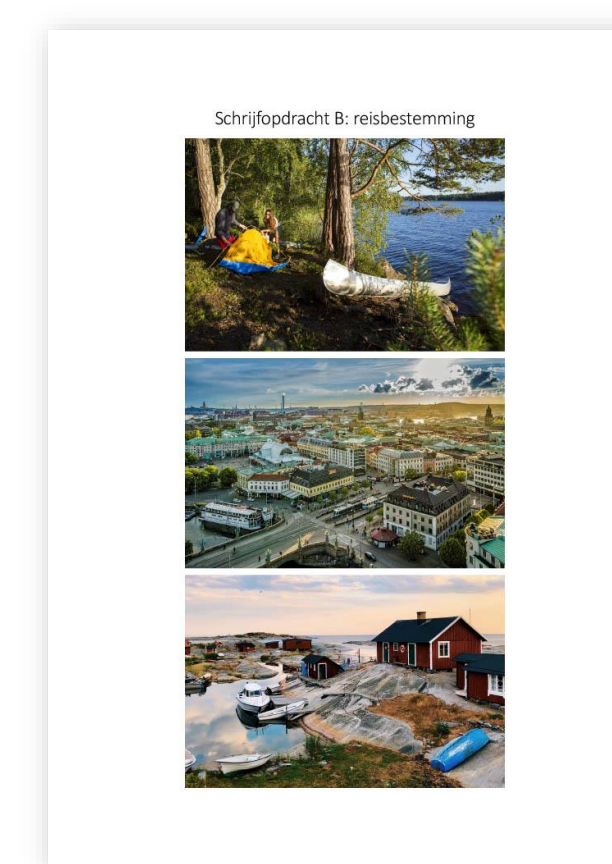
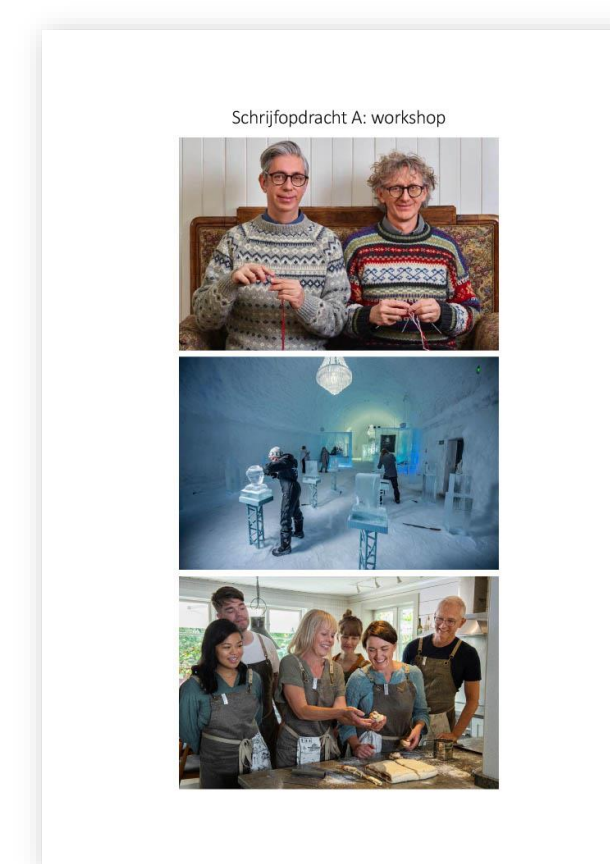
Swedish Levels Test



Folkuniversitetets Placement Test

PILOT STUDY (PT 2): DESIGNING WRITING PROMPTS

- To compare the L2 writing process, we need...
 - Comparison across conditions: comparable writing prompts
 - Comparison across levels: prompts suited for use with multilevel learners
- → Assessment of prompt comparability & 'multilevelness' in pilot
- Method
 - 5 Dutch learners of Swedish (varying proficiency) responded to 4 prompts
 - Each prompt = 3 images (see below)
 - Task: describe them, choose the one they prefer most & explain why
 - Analysis: linguistic features of texts (with computational tools), keystrokes (with Inputlog (Leijten & Van Waes, 2013)) & perceptions (interviews)
- Results
 - Comparability
 - Text complexity, text length, time used, pausing & repair patterns, consultation frequency & duration all similar across prompts
 - No patterns found in how difficult the learners perceived the prompts
 - Suitability for use with multilevel learners
 - Least proficient learners still managed to comfortably exceed the minimum word count needed to perform reliable analyses
 - Even most proficient learners relied heavily on tools provided, indicating that the tasks were also challenging for them



FUTURE WORK

- Collect writing process data of learners responding to piloted prompts in two conditions: with access to *DeepL* (MT) & with access to *Van Dale* (dictionary)
 - Online writing behaviours (including consultation behaviour) will be registered with screen capture, keystroke logging & eye-tracking
 - Underlying cognitive processes will be captured with stimulated recall
- Objectives: use process data to...
 - Find a (partial) explanation as to why MT-assisted writing products turn out to be different from products for which MT was not allowed
 - Identify best practices for MT use by L2 learners of varying proficiency