Does prior use of machine translation systems help in post-editing?

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Monolingual post-editing

- Post-editing machine translations is likely to form an even larger part of future translators' work.
- Monolingual post-editing: the editor is assumed to make primarily linguistic corrections without access to source text.
- Is it possible for a post-editor to arrive at the source meaning based on the machine translation alone?
  - Koehn, Philipp (2010). Enabling monolingual translators: Post-editing vs. options. NAACL HLT 2010.
  - Callison-Burch, Chris et al. (2010). Findings of the 2010 joint workshop on statistical machine translation and metrics for machine translation. ACL 2010.

A monolingual post-editing task

- A post-editing assignment carried out during an introductory translation technology course.
- Translation students post-edited English-Finnish MT without access to the source text.
  - Two articles (~700 words) translated by two systems (1 statistical, 1 rule-based).
  - 45 students at Uni of Turku, 3 at Uni of Helsinki.
- Students were also asked how frequently they used MT systems: once a month or more, several times a year, once a year or less, or never.
- Does prior exposure to machine translated texts affect success in post-editing?

Task description

- Students were instructed to edit into grammatical, fluent Finnish according to their understanding of the meaning – options to select "nothing to correct" or “unintelligible”.
- Subjective evaluation of whole text (5-point scale)
  - fluency of language, clarity of meaning
- Suitablity of the MT for

  (1) publication

  (2) post-editing without ST

  (3) post-editing with source text

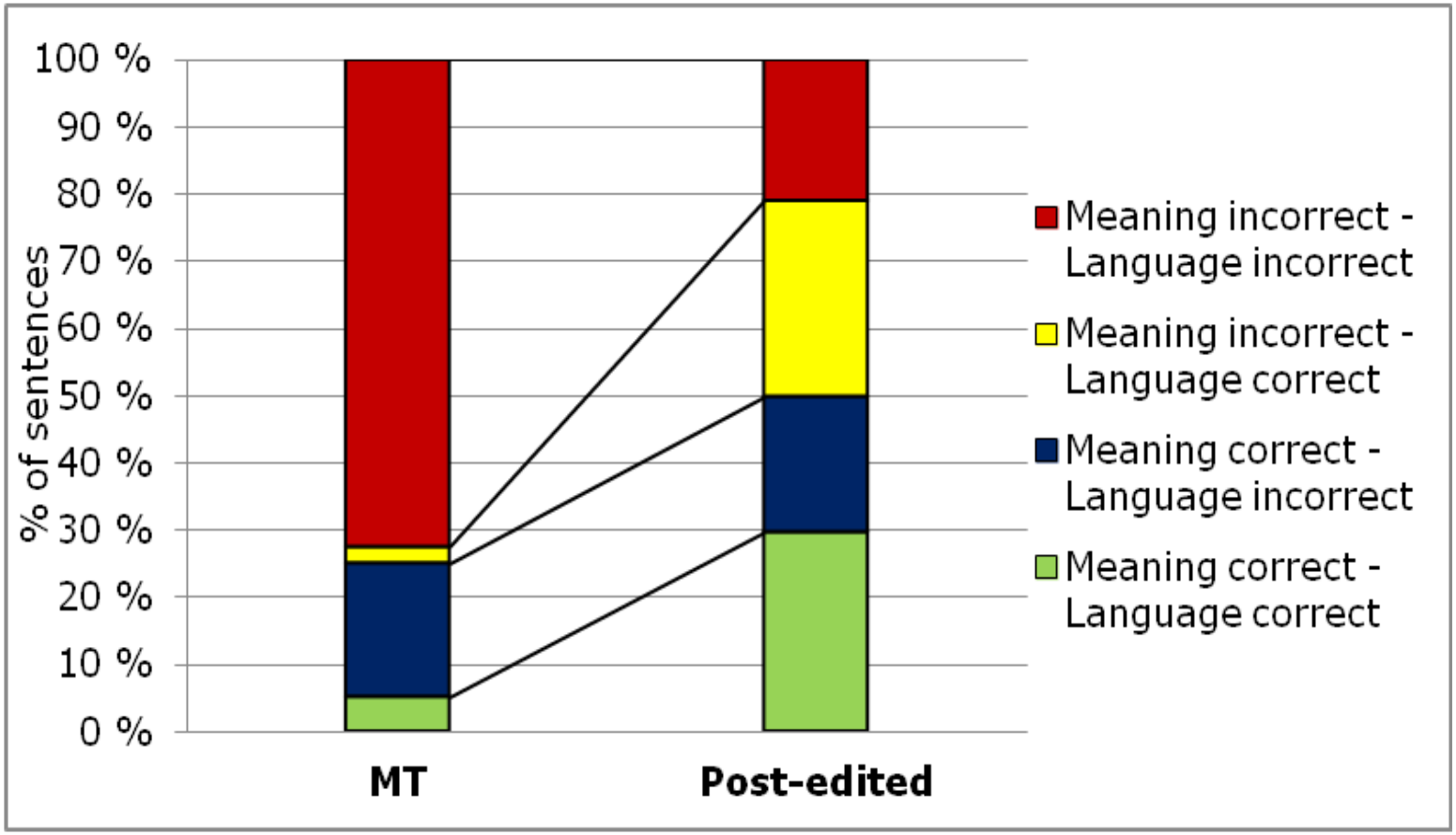
  (4) gisting

  (5) none of the above.
- Comments were also collected.

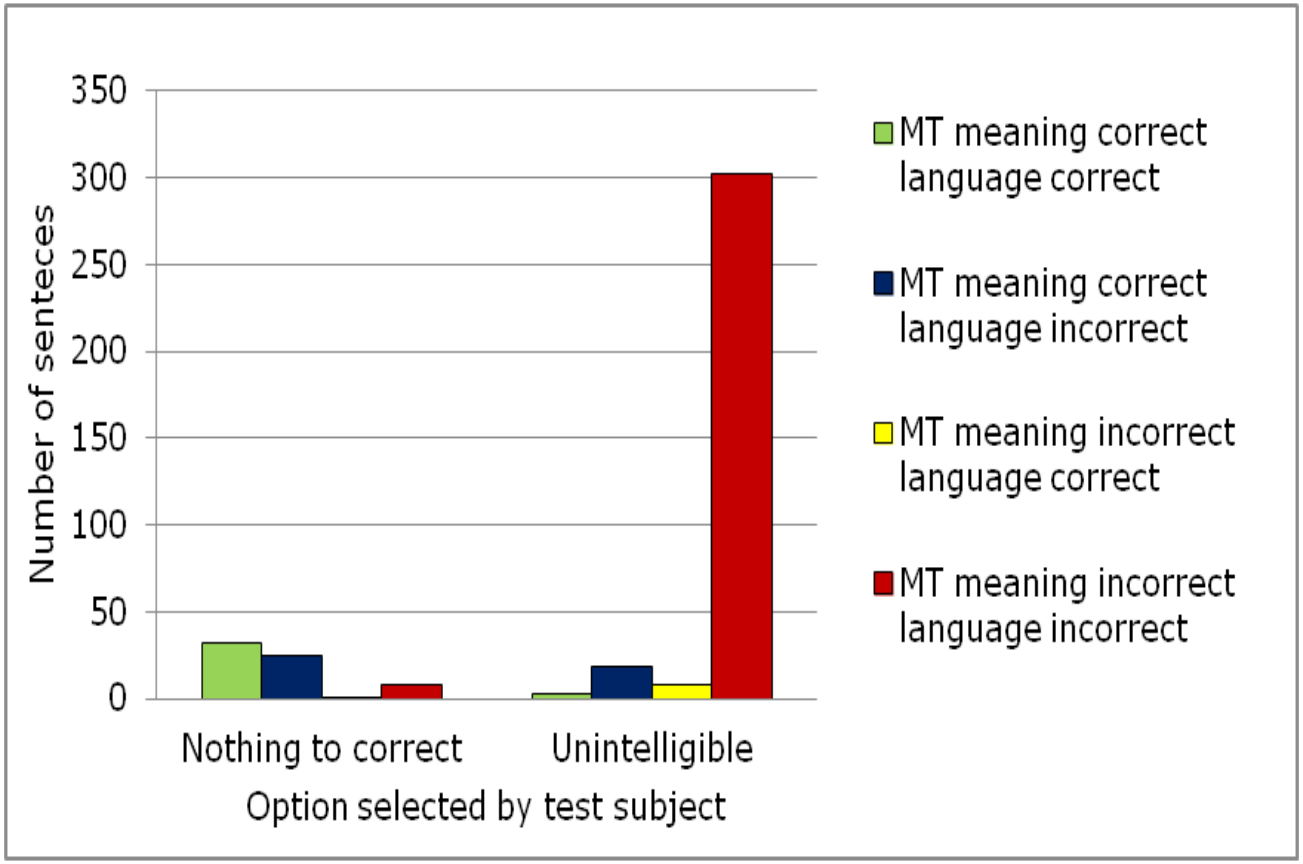
Evaluation of MT and edited sentences

- The machine translated and post-edited versions were evaluated by two annotators.
- Correctness of meaning compared to source text.
- Correctness of language compared to target language grammar and conventions.
- Four categories:
  - Correct meaning and correct language
  - Correct meaning but incorrect language
  - Incorrect meaning but correct language
  - Incorrect meaning and incorrect language

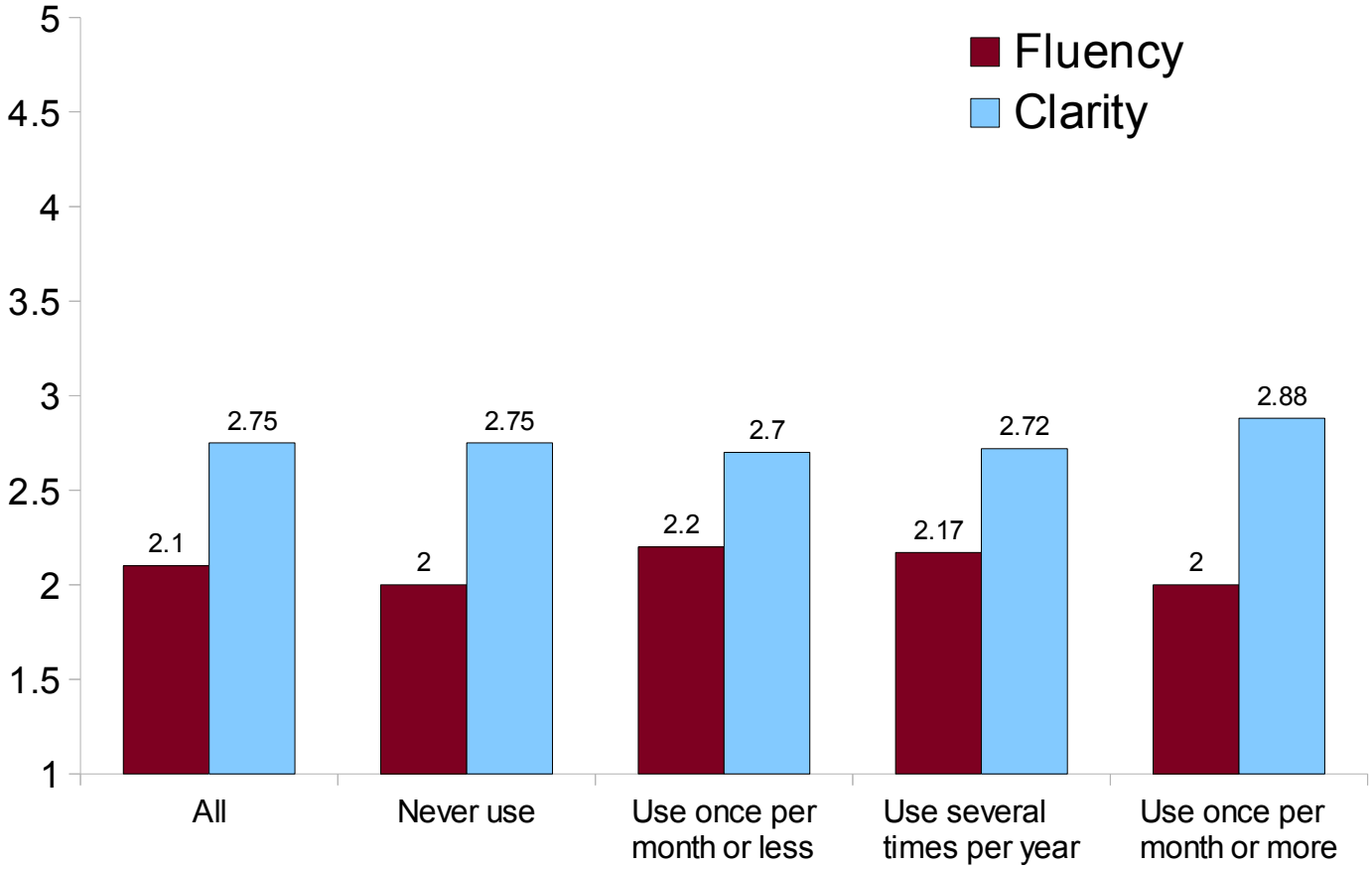
Results: overall success in editing



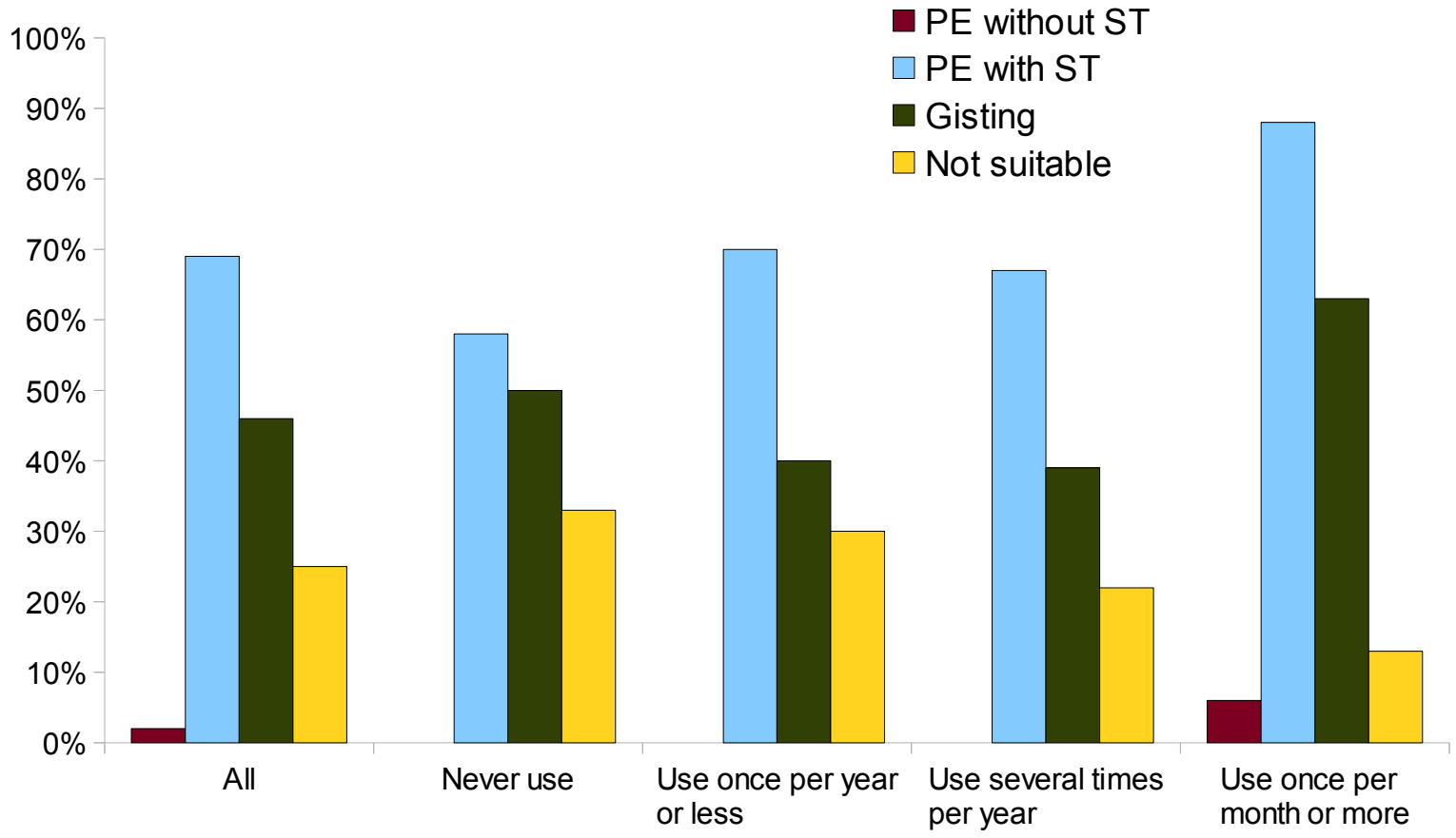
Results: selections of “nothing to correct” or “unintelligible”



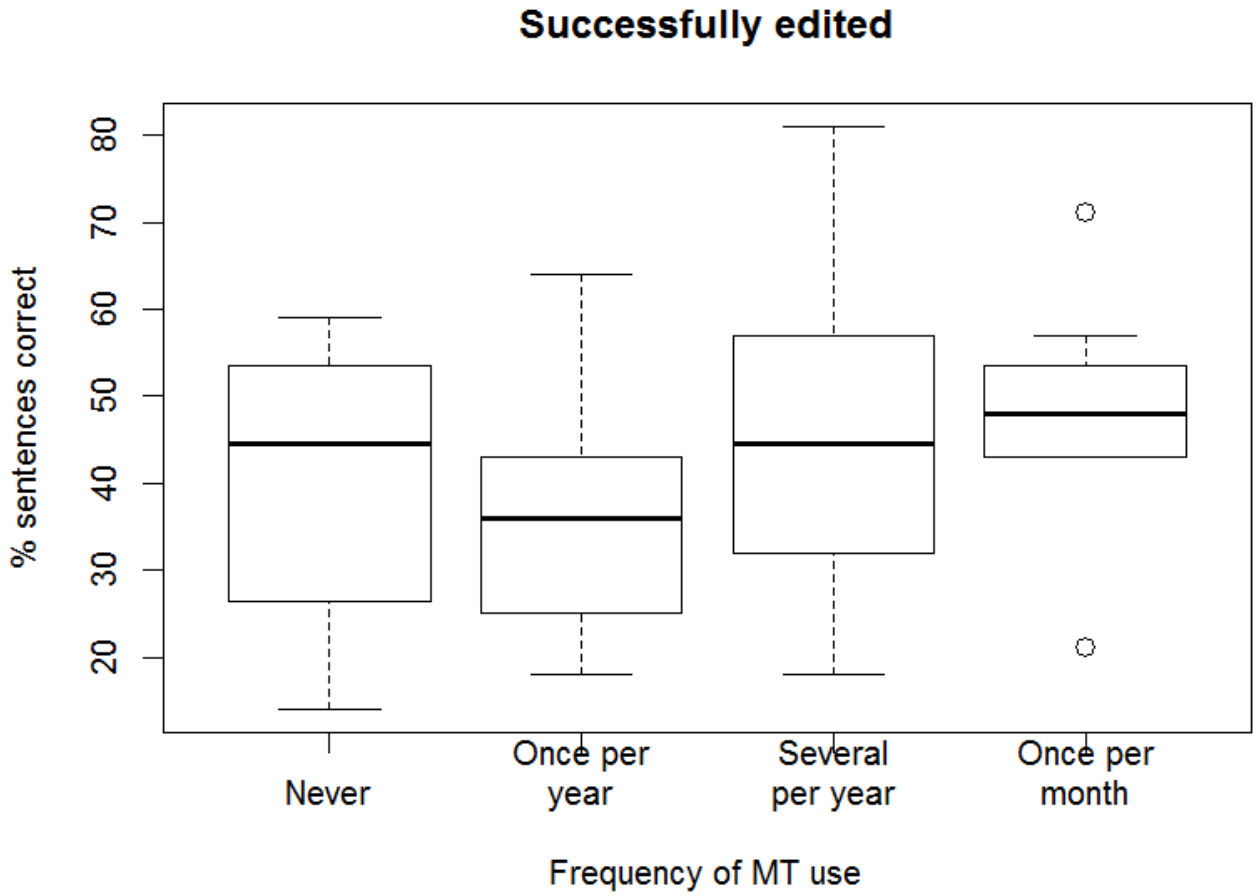
Average fluency and clarity by MT use



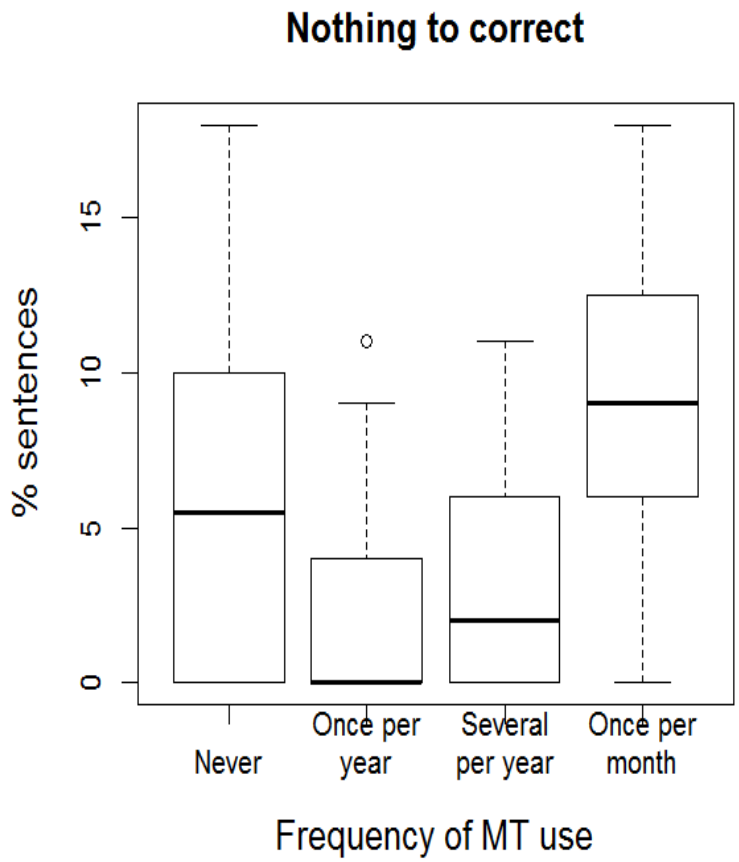
Usability selections by MT use

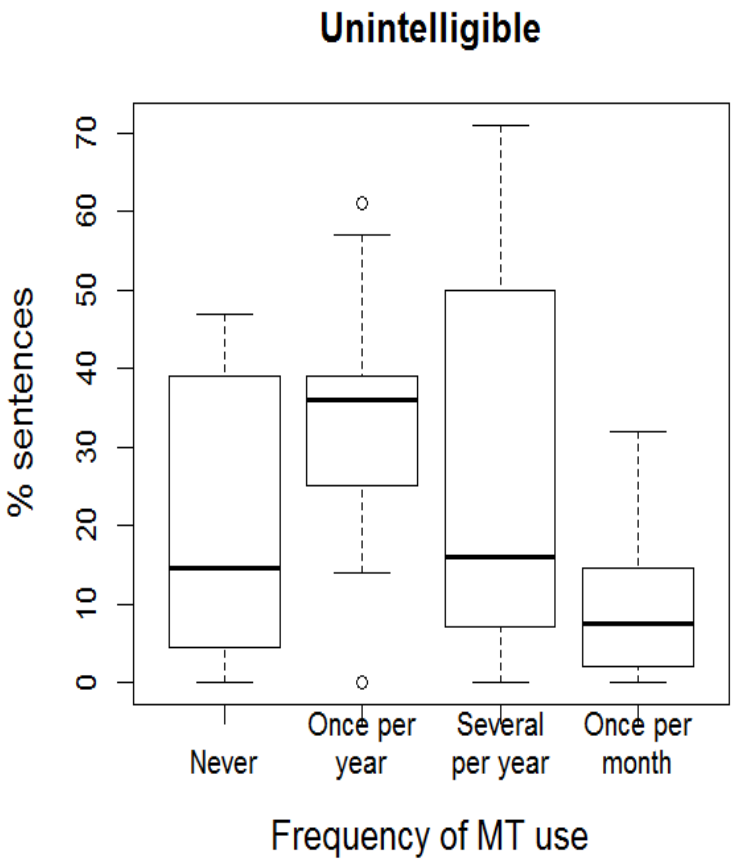


Percentage of successfully edited sentences (correct meaning)



Selections of “nothing to correct” and “unintelligible”





Conclusions and Future directions

- Students were able to get meaning correct about half the time. Language errors remained common.
- Success and approaches to post-editing varied.
  - Editing only if certain of meaning vs trying to edit everything even if guessing meaning.
- Some differences may be connected to frequency of MT use
  - assessment of usability
  - success in correcting meaning
  - willingness to correct (use of “unintelligible”).
- Further experiments comparing PE practices and success between editors with differing levels of experience using MT.