Standards-based Digital Platform for Annotating Translations Seeks Collaborators

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Educating the next generation of professional human translators is at the intersection of language **learning** and language **technology**. Pym (2020) make a case for translation being again incorporated into language **learning**, pointing out that "mediation" (which includes translation) is the fifth language skill in the 2001 Common European Framework of Reference for Languages, after speaking, listening, writing, and reading.

On the **technology** side, in recent years there has correctly been an emphasis on incorporating what is often called "machine translation literacy" into translator education (Kenny 2022).

This project complements language learning and language technology by focusing on compiling a database of errors and making it available for research on a digital platform. One of the principal challenges of translator trainers is that research on translation errors tends to focus on student translators. This project, however, involves translation data from professional translators.

The project began at Kent State University (KSU) when Professor Geoffrey Koby obtained custody of the paper originals of thousands of translator certification exams conducted by the American Translators Association (ATA - https://www.atanet.org/). Translators who participate in ATA translation certification exams are usually professionals with years of experience. Koby currently has over 5,500 ATA exam packets between the years 2006 and 2017. The exams are in 34 languages pairs – all of which include English. The other side of the exams represent major European and Asian languages. One limitation of this study in terms of the languages involved is that they are all relatively high resource languages.

Koby arranged with a professor of computer science at KSU to work with students to develop a prototype system. The online system would be used for storing and accessing machine-processable transcriptions of hand-written exams, along with error annotations by trained ATA graders. See Koby (2016) for a detailed description of the proposed system.

In 2020, a collaboration began between KSU and Brigham Young University (BYU) to develop a proof-of-concept system before submitting a grant proposal. This collaboration has resulted in the transcription of over 300 exam packets. A substantial addition to the KSU design has been a tool to annotate translations using MQM (Marshall / Melby 2022). MQM (Multidimensional Quality Metrics) is a framework for developing and using translation quality metrics that are part of a family of metrics that draw on an extensive translation error typology that resulted from the QT21 project funded by the European Commission. See Lommel et al. (2014) for an early description of MQM. Since 2015, the primary author of this abstract has been involved in the development of MQM, which is being made into an international standard under ASTM (https://www.astm.org/). The annotation of the errors requires a mapping from the ATA error types to an MQM-compliant metric. This annotation process requires considerable intellectual effort on the part of the person entering the error annotations.

The proof-of-concept system is now to the point, thanks to funding from the BYU College of Humanities, that a grant proposal will be submitted to the National Endowment for the Humanities (NEH).

The digital platform is written in a Python framework called Django (https://www.djangoproject.com/). The research team decided to use Django because it is a well-established Python framework and BYU focuses on using Python in Digital Humanities research projects. The user interface of the digital platform is currently in English; however, Django allows for localization of their applications, so if there is a demand for a non-English user interface, one can be developed. During the next phase of the project, the digital platform will be further developed and populated with exam data. Also, an automatic converter is being developed to transform the output of the scorecard app, which is in JSON format (https://www.json.org/json-en.html), into a TEI (https://tei-c.org/) compliant XML representation.

The use of an emerging international standard for annotating translation errors (MQM) and the well-established standard for encoding texts in the humanities (TEI) will greatly facilitate international collaboration beyond the current KSU+BYU partnership. Additional sources of authentic translation errors made by professional translators could use the same digital platform, drawing on the same error typology and the same TEI-based system for representing translation errors. The resulting system will certainly benefit translation teaching and research and could well have other benefits to the translation community world-wide. The end users of these data will be academic researchers or other professionals interested in doing research in translation studies or language pedagogy. Users may also be researchers in Natural Language Processing and, more specifically, in Machine Translation who could benefit from the data.

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