【Grant-in-Aid for Scientific Research (S)】

**Broad Section J**

# Title of Project : Developing a translation process model and constructing an integrated translation environment through detailed descriptions of translation norms and competences

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Research Project Number：19H05660　Researcher Number：00211152
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## 【Purpose and Background of the Research】

We are witnessing an ever-increasing demand for translation. Many graduate-level translation schools have been established. Neural machine translation recently caused a social sensation. Translation theories provide translation norms and competence lists. Quality assurance schemes have been established for industrial translation.

These developments notwithstanding, translation practice as a whole has not advanced as much as expected because these developments have not been fully integrated with one another. One of the most fundamental problems is that the concept of translation has not been shared among different players. This reflects the lack of granularity in the descriptions of translation process, translation competences and norms.

Against this backdrop, our project answers the following questions: (a) what sort of actions to what kind of items by which actors constitute translation process? (b) what sort of norms and competences are related to these actions? By answering these questions, our project defines a translation process model in which each step in the detailed process descriptions is linked to relevant norms and competences.

We define a meta-language set used for describing the model and facilitating communications in translation training and practice. We also automatise what can be automatised among the process steps. The model, the meta-language and the automatic methods are to be evaluated in terms of their effects on translation training and translation practice.

## 【Research Methods】

The research consists of four main stages: (a) the construction of a translation process model; (b) the development of automatic methods, (c) the development of an integrated translation environment, and (d) the evaluation of models and other elements.

While we put more emphasis on (a) and (b) in the first half of the project period and on (c) and (d) in the second half, these four phases are to be carried out simultaneously throughout the project; we need to construct the model by repeating the cycle of model construction, validation and improvement as the translation process model attains a normative nature.

We use literature review and interviews with qualitative analysis for constructing the translation process model. We describe and model the process while at the same time developing a meta-language. We assign to each step in the translation process due translation norms and competences.

The core tasks to be automatised are identification of constituent elements/items of the source language texts, construction of translation hypotheses and resources, and evaluation and correction of MT results. We use supervised machine learning and knowledge-based methods.

The integrated environment is to be developed based on the systems we have developed so far, i.e. Minna no Hon'yaku and Minna no Hon'yaku for Translator Training.

To evaluate the models and related elements, we use participant-based empirical evaluation. We evaluate the automatic methods by using evaluation data sets and also through participant-based evaluation of their effectiveness in the translation process.

## 【Expected Research Achievements and Scientific Significance】

This project connects the fruit of translation theories to translation practice and teaching, making the norms and competences objectively sharable among different players involved in translation. It contributes to solving practical problems involved in translation such as the mismatches between clients' requirements and the translation quality.

It also clarifies the role of MT in the real-world translation workflow and takes MT and related technologies out from in vitro to in vivo.

The model, the meta-language, the integrated environment and the data will be made publicly available and/or accessible. This will help further promote research in translation and translation technologies.

## 【Publications Relevant to the Project】

Kyo Kageura (2019) "Assessing the status of technical documents as textual materials for translation training in terms of technical terms," *Meta* 63(3), pp. 765-784.

Kyo Kageura and Piao Hui (2018) "The status of explanation and the role of meta-language in translation training and translation," *Ewha GTSI Conference*, Seoul, Korea, November 17, 2018. (Keynote Talk)

## 【Term of Project】

FY2019-2023

## 【Budget Allocation】

136,700 Thousand Yen

## 【Homepage Address and Other Contact Information】

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