



Universiteit
Leiden
The Netherlands

Professional translators' and project managers' perceptions of machine translation and post-editing: a survey study

Dorst, A.G.; Valdez, S.; Jongste, D.; Castilho, S.; Caro Quintana, R.; Stasimioti, M.; Sosoni, V.

Citation

Dorst, A. G., Valdez, S., & Jongste, D. (2023). Professional translators' and project managers' perceptions of machine translation and post-editing: a survey study. *Proceedings Of The New Trends In Translation And Technology Conference - Nettt 2022*, 50-59. Retrieved from <https://hdl.handle.net/1887/3590063>

Version: Publisher's Version

License: [Creative Commons CC BY-NC-ND 4.0 license](https://creativecommons.org/licenses/by-nc-nd/4.0/)

Downloaded from: <https://hdl.handle.net/1887/3590063>

Note: To cite this publication please use the final published version (if applicable).



**Proceedings of the Conference
New Trends in Translation and Technology 2022**

4 - 6 July, 2022
Rhodes Island, Greece

The papers published in this proceedings are —unless indicated otherwise— covered by the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0). You may copy, distribute, and transmit the work, provided that you attribute it (authorship, proceedings, publisher) in the manner specified by the author(s) or licensor(s), and that you do not use it for commercial purposes. The full text of the licence may be found at <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

©The authors

Cite as: Castilho, S., Caro Quintana, R., Stasimioti, M., and Sosoni, V. 2023. Proceedings of the New Trends in Translation and Technology Conference - NeTTT 2022. 4-6 July 2022, Rhodes Island, Greece.

Proceedings of the Conference New Trends in Translation and Technology 2022

The New Trends in Translation and Technology conference, NeTTT 2022, took place on Rhodes Island, Greece, 4-6 July 2022. It was organised by Dr Sheila Castilho from Dublin City University (DCU), Dr Vilemini Sisoni from Ionian University, Ms Maria Sgourou from Dimetra Academy and Prof Ruslan Mitkov from University of Wolverhampton. The conference was preceded by a two-day Summer school in Neural Machine Translation, a workshop on Translation Technology for Creative Domains, and followed by a full day of tutorials on Teaching Subtitling on the Cloud, Keylogging the whole Translation Process, and Machine Translation Post-editing for Media and Subtitles.

On its first ever edition, the NeTTT conference was greatly successful in its aim of bringing together academics in Linguistics, Translation Studies, Machine Translation and Natural Language Processing, as well as developers, practitioners and language service providers (LSPs). Our keynote speakers brought the audience together with timely topics. On day one, Prof Sharon O'Brien (DCU) opened the conference with her insightful talk "Augmented Translation: New Trend, Future Trend or Just Trendy?" leaving the audience with much food for thought. On the same day, Mr Valter Mavrič (DGTRAD, European Parliament) presented the audience with "The evolution of the role of the translator in the European Parliament: all about becoming a versatile language professional". The second day of the conference saw Dr Marcello Federico (AWS AI Labs) talking about "Machine Translation using Context Information" and the ways context might determine desired traits of the MT output. The last day of the conference saw two keynote speakers: in the morning, Merit-Ene Ilja (DGT, European Commission) presented "The power of people and technology in DGT's translation ecosystem" showing the audience how the demand for translation has been increasing and how the DGT has been open to embrace translation technologies. To close the conference, Prof Mikel Forcada (Universitat d'Alacant) gave an insightful talk on "Usage rights of language data in Machine Translation".

The conference research and user tracks received a great number of submissions, covering topics on Corpora and Terminology, Translator Training, Translation Workflows, Translation Platforms, Translation Reception, Machine Translation, Post-editing, Ethics in Machine Translation, Machine Translation Evaluation, Gender Bias, Inclusive Machine Translation, Speech Translation, and Audiovisual Translation. These works were presented throughout the conference either in oral or poster presentations.

Finally, we could not have made NeTTT as special without our sponsors, so it is also with great pleasure that we thank them all: Co-organiser: Region of South Aegean; Supporter: European Commission; Diamond Sponsor: Wordfast; Gold Sponsors: Mitra Translations, OOOona, Welocalize, Pangeanic, Sketch Engine; Silver Sponsors, Slator, Keytio; Bronze Sponsors: Vistatec, TM Serve, ORCO, Juremy; Experience Sponsor: TradICT.

These proceedings are just a sub-product of all the work the organising committee has put into the conference, and the work of all authors and reviewers. We are very thankful to everyone who was part of NeTTT 2022 and we hope to see you all in the next edition.

Dr Sheila Castilho
Assistant Professor
ADAPT/SALIS, Dublin City University

Rocío Caro Quintana
University of Wolverhampton

Maria Stasimioti
Department of Foreign Languages, Translation and Interpreting, Ionian University
Slator

Dr Vilelmini Sosoni
Assistant Professor
Department of Foreign Languages, Translation and Interpreting, Ionian University

Editors of the Proceedings

Sheila Castilho, Rocío Caro Quintana, Maria Stasimioti and Vilelmini Sosoni

Conference Chairs

Sheila Castilho (Dublin City University, Ireland)

Vilelmini Sosoni (Ionian University, Greece)

Maria Sgourou (Dimetra Academy, Greece)

Ruslan Mitkov (University of Wolverhampton, UK)

Organising Committee

Vilelmini Sosoni (Ionian University, Greece)

Sheila Castilho (Dublin City University, Ireland)

Joss Moorkens (Dublin City University, Ireland)

Anestis Karastargiou (Ionian University, Greece)

Maria Sgourou (Dimetra Academy, Greece)

Maria Stasimioti (Ionian University, Greece)

Rocío Caro Quintana (University of Wolverhampton, UK)

Nikolai Nikolov (Association for Computational Linguistics, Bulgaria)

Anna Iliadeli and Konstantinos Sevdinoglou (Local Partners – Polyglot Language Services, Rhodes, Greece)



Programme Committee

Pierrette Bouillon, University of Geneva, Switzerland
Lynne Bowker, University of Ottawa, Canada
Kristine Bundgaard, Alborg University, Denmark
Michael Carl, Kent State University, USA
Sheila Castilho, Dublin City University, Ireland
João Lucas Cavalheiro Camargo, Dublin City University
Yves Champollion, Wordfast, France/USA
Parthena Charalampidou, Aristotle University of Thessaloniki, Greece
Wiliam Chen, UCF
Gloria Corpas, University of Malaga, Spain
Helle Dam Jensen, Aarhus University, Denmark
Elena Davitti, University of Surrey, UK
Christophe Declercq, University of Utrecht, the Netherlands
Jorge Diaz-Cintas, University College London, UK
Joao Esteves-Ferreira, Asling, Switzerland
Maria Fernandez-Parra, University of Swansea, UK
Georgios Floros, University of Cyprus, Cyprus
Federico Gaspari, Dublin City University, Ireland
Yota Georgakopoulou, Independent consultant, Greece
Harris Ghinos, Elit Language Services, Greece
Lukasz Grabowski, University of Opole, Poland; University of Ostrava, Czech Republic
Ana Guerberof, University of Surrey, UK
Silvia Hansen-Schirra, University of Mainz, Germany
Manuel Herranz, Pangeanic, Spain
Jochen Hummel, Coreon, Germany
Kristian Hvelplund, University of Copenhagen, Denmark
Mina Ilieva, Mitra Translations, Bulgaria
Miloš Jakubíček, Lexical Computing, Czech Republic
Miguel Jiménez-Crespo, Rutgers University, USA
Dorothy Kenny, Dublin City University, Ireland
Katia-Lida Kermanidou, Ionian University, Greece
Maarit Koponen, University of Turku, Finland
Kyriaki Kourouni, University of Thessaloniki, Greece
Maria Kunilovskaya, University of Wolverhampton, UK
Todor Lazarov, New Bulgarian University, Bulgaria
Defeng Li, University of Macau, Macau
Elpida Loupaki, Aristotle University of Thessaloniki, Greece
Elizabeth Marshman, University of Ottawa, Canada
Julie McDonough-Dolmaya, York University, United Kingdom
George Mikros, Hamad Bin Khalifa University, UAE
Joss Moorkens, Dublin City University, Ireland
Sara Moze, University of Wolverhampton, UK
Ricardo Muñoz, University of Bologna, Italy
Costas Nadalis, TMServe, Greece
Jean Nitzke, University of Agder, Norway
Lucas Nunes-Vieira, University of Bristol, UK
Sharon O'Brien, Dublin City University, Ireland
Constantin Orasan, University of Surrey, UK
John Ortega, New York University, USA
Jun (Janice) Pan, Hong Kong Baptist University, Hong Kong

Anastasia Parianou, Ionian University, Greece
Stelios Piperidis, ILSP, Greece
Maja Popovic, Dublin City University, Ireland
Rozane Rebechi, University Rio Grande do Sur, Brazil
Natalia Resende, Dublin City University, Ireland
Celia Rico, Universidad Complutense, Spain
Pilar Sánchez Gijón, Universitat Autònoma de Barcelona, Spain
Moritz Schaeffer, University of Mainz, Germany
Anne Schjoldager, Aarhus University, Denmark
Jean Senellart, Systran, France
Serge Sharoff, University of Leeds, UK
Mark Shuttleworth, Hong Kong Baptist University, Hong Kong
Stavroula Sokoli, Open University, Greece
Vilemini Sosoni, Ionian University, Greece
Maria Stasimioti, Ionian University, Greece
Olaf-Michael Stefanov, Asling, Switzerland
Olga Torres Hostench, Universitat Autònoma de Barcelona, Spain
Vicenta Ten-Soriano, SDL, UK
Marco Turchi, FBK, Italy
Eleni Tziafa, National and Kapodistrian University of Athens, Greece
Eva Vanmassenhove, Tilburg University, The Netherlands
Anna Zaretskaya, TransPerfect, Spain
Federico Zanettin, Università di Perugia, Italy
Eleni Zissi, EL-Translations, Greece

Invited Speakers

Sharon O'Brien, Dublin City University, Ireland
Mikel Forcada, Universitat d'Alacant, Spain
Marcello Federico, AWS AI Labs, USA
Merit-Ene Ilja, Directorate-Generate for Translation, European Commission
Valter Mavrič, DG TRAD, European Parliament

Sponsors

Diamond Sponsor



Gold Sponsors



Silver Sponsors



Bronze Sponsors



Experience Sponsors



Supporter



Table of Contents

Oral Presentations

<i>Productivity Evaluation in MT Post-Editing and Fuzzy Matches Ed-iting. Setting the Threshold.</i> Elena Murgolo	1
<i>An Empirical Study on Many-to-Many Simultaneous Machine Translation</i> Erenay Dayanik, Ran Xue and Ching-Yun Chang	9
<i>The Impact of Training on the Post-Editing Productivity of Language Professionals: What Are The Benefits?</i> Viveta Gene	17
<i>Evaluating NMT: superior, inferior, or equivalent to texts originally written by humans</i> María do Campo Bayón and Pilar Sánchez-Gijón	27
<i>Baking a Bilingual Restaurant Review Termbase: a Class-based Test as the Entrée</i> Rozane Rebechi, Nathalia Oliva Marcon, Leonardo Foschiera, Patricia Helena Freitag and Guilherme Faller	37
<i>Professional Translators' and Project Managers' Perceptions of Machine Translation and Post-Editing: A Survey Study</i> Aletta Dorst, Susana Valdez and Demi Jongste	50
<i>The OPTIMICE project: Optimising Translation Quality of Metadata in the Editorial Process of HSS Journals</i> Franck Barbin and Katell Hernandez Morin	60
<i>A Review of AVT Training in Saudi Arabia: Riyadh-based Universities as a Case Study</i> Eithar Alangari	68
<i>Is Generic Machine Translation Useful for Translating Domain-specific Texts? A Productivity Study in the Ophthalmology Domain</i> Marianna Carlucci and Samuel Läubli	75
<i>Computational Approaches to Register as a Factor in English-to-Spanish Translation</i> Maria Kunilovskaya and Kateryna Poltorak	82
<i>Teaching machine translation on a translation MA: some recommendations regarding course content</i> Mark Shuttleworth	91
<i>Observing Glossary Usage in Translation Projects</i> Oriane Nédey, Loic Dugast, Maria Afara and Randy Scansani	102
<i>Using Error Annotation to Support Post-Editing in the Context of Translator Training</i> Justus Brockmann, Claudia Wiesinger, Alina Secară and Dragoş Ciobanu	113
<i>Neutralising for equality All-Inclusive Games Machine Translation: The All-inGMT project</i> María Isabel Rivas Ginel and Sarah Theroine	125
<i>Machine Translation and Terminology: The Experience of the European Commission</i> Karolina Stefaniak	134

<i>Comparative Evaluation of Neural Machine Translation Quality in Arabic<>English Translation</i>	
Khaled Ben Milad	142
<i>Neutralising Spanish dialects for localisation purposes: A collocational focus</i>	
Rene Garcia Taboada, Maria Kunilovskaya and Gloria Corpas Pastor	152
<i>A case of application of a new human MT Quality Evaluation Metric in the EMT classroom</i>	
Parthena Charalampidou and Serge Gladkoff	161
<i>Gender-Fair (Machine) Translation</i>	
Manuel Lardelli and Dagmar Gromann	166
<i>Human-Adapted MT for Literary Texts: Reality or Fantasy?</i>	
Damien Hansen and Emmanuelle Esperanca-Rodier	178
<i>From ‘Unknown Unknowns’ to ‘Known Unknowns’: What Non-Translation Students Tell Us They Have Learned About Machine Translation</i>	
Lynne Bowker	191
<i>Weird, Wonderful, Worthy, and Worrying: Use Cases for MT as Described in Canadian Newspapers</i>	
Elizabeth Marshman	196
<i>Inclusive Language In Translation Technology: Theory And Practice; the case of Greek</i>	
Valentini Kalfadopoulou and Maria Tsigou	206
<i>A review of the Integration of Machine Translation in CAT tools</i>	
Rocío Caro Quintana and Sheila Castilho	214

Poster Presentations

<i>MTUOC: a complete toolkit for training and integrating neural machine translation</i>	
Antoni Oliver	222
<i>Expanding Horizons: Adding Phraseological Functionality to CAT Tools</i>	
Maria Fernandez-Parra	227
<i>Visualizing Information in a Specialized Translating Dictionary: Plant Names</i>	
Silga Sviķe and Karina Šķirmante	232
<i>Mapping Translation Technology Provision in Saudi University Degrees: Two Different Pathways</i>	
Abdelalah Alsolami	237
<i>Veiga: a Multimedia Corpus of Film Subtitling for Multimodal Analysis</i>	
Patricia Sotelo Dios	243
<i>Quantitative and Qualitative Evaluation of Human and Machine-Translated EU Economic Texts in the English-Greek Language Pair</i>	
Dimitrios Boumparis and Christos Giannoutsos	248
<i>Assessing Quality and Use of MT by Professional Freelance Translators in the Medical Field</i>	
Magali Vidrequin	254
<i>Pre-editing for the Translation of Life-Science Texts from Russian into English via Google Translate</i>	
Valentina Simonova and Emmanouela Patiniotaki	259

Professional Translators' and Project Managers' Perceptions of Machine Translation and Post-Editing: A Survey Study

Aletta G. Dorst

Leiden University Centre for Linguistics
Arsenaalstraat 1, 2311 CT Leiden, the
Netherlands
a.g.dorst@hum.leidenuniv.nl

Susana Valdez

Leiden University Centre for Linguistics
Arsenaalstraat 1, 2311 CT Leiden, the
Netherlands
s.valdez@hum.leidenuniv.nl

Demi Jongste

Leiden University Centre for Linguistics
Arsenaalstraat 1, 2311 CT Leiden, the Netherlands
d.jongste@umail.leidenuniv.nl

Abstract

Intending to explore the experiences with and perceptions of the use of machine translation and post-editing in professional practice, this paper examines quantitative and qualitative data from two questionnaires targeted at professional translators and project managers with experience in working with post-editing assignments and based in the Netherlands. Results suggest that trust in the technology, in the translation company, and/or the project manager are at the center of translators' decisions on whether or not to accept a post-editing task. The current study supports previous claims that more attention needs to be paid to the pivotal role project managers play in the translation workflow, especially in creating and maintaining relations of mutual appreciation and trust between stakeholders, and argues that future research should focus more specifically on determining project managers' MT and PE training and machine translation literacy.

1 Introduction

Post-editing can be defined as “the activity of fixing errors in MT output so that the target text meets an expected level of quality” (O'Brien, 2005, p. 40) or “to review a pre-translated text generated by an MT engine against an original source text, correcting possible errors to comply with specific

quality criteria” (Guerberof-Arenas, 2020, p. 338). It has also been characterized as the “crudest form of collaboration between machine and human” (Koehn, 2020, p. 21). Thanks to recent advances in the quality of Machine Translation (MT) systems, especially since the launch of neural machine translation (NMT) in 2015 (Castilho, Moorkens, Gaspari, et al., 2017), post-editing (PE) has become an increasingly common task and in certain domains has been integrated in Computer-Assisted Translation workflows. The efficacy of PE when compared to translation ‘from scratch’ has been suggested and, in some cases, demonstrated in studies spanning various language pairs and types of texts (e.g., Daems et al., 2017; Green et al., 2013; Guerberof-Arenas, 2009; Läubli et al., 2013; Moorkens & O'Brien, 2015; Plitt & Masselot, 2010). Nevertheless, post-editing poor MT output in conditions where software integration has not been fully thought through can be unproductive, frustrating and lead to low job satisfaction as well as tensions between translators and Language Service Providers (LSPs) (cf., for instance, Koponen, 2016; Romero-Fresco, 2022). From the perspective of the translator asked to post-edit MT (post-editor), the integration of MT in the translation workflow has not been without (strong) resistance and concern. To put it

succinctly, despite the reported benefits of using MT in productivity, “translators are still strongly resistant to adopting MT as an aid and have a considerable number of concerns about the impact it might have on their long-term work practices and skills” (Cadwell et al., 2018, p. 301).

Different studies have elicited or gauged translators’ and other stakeholders’ perceptions of MT using questionnaires, interviews, focus groups and social media data. Focusing on experiences with and perceptions of the use of machine translation and post-editing in professional practice, this paper describes the results of two online questionnaires aimed at professional translators and project managers with experience in working with post-editing assignments and based in the Netherlands. Our main interest lay in determining whether the responses provided by the professional translators and project managers reveal whether miscommunication and trust issues can be related to either party’s (perceived) Machine Translation Literacy (Bowker & Buitrago-Ciro, 2019).

Before reporting the results, the following section will review and summarize related work on MT and PE, focusing on the perceptions of different stakeholders. This is followed by the adopted methods and the results of the survey. In the concluding remarks we will reflect on implications, limitations, and avenues for future research.

2 Related Work

The use of MT and PE has only been increasing (Gaspari et al., 2015), and several studies have reported high(er) levels of translation quality for NMT than its predecessors in many language combinations and text types (Castilho et al., 2018; Castilho, Moorkens, & Gaspari, 2017; Castilho, Moorkens, Gaspari, et al., 2017; Klubička et al., 2017, 2018; Popović, 2017, 2018; Toral & Sánchez-Cartagena, 2017; Toral & Way, 2018).

In certain domains, MT is now promoted by LSPs as a productivity boost to translating from scratch, even though recent studies (e.g., Läubli and Orrego-Carmona, 2017) have suggested that professional translators generally have rather negative opinions about MT and PE.

Voicing translators’ concerns regarding the use of MT, the International Federation of Translators (FIT) has published two position papers on MT (FIT, 2016, 2019) and one on post-editing (FIT, 2021). These include lower quality in comparison to human translation, lack of creativity and lack of common sense.

Translators mostly express negative opinions about MT, focusing on the important role of professional translators even in MT-centered workflows, on the low efficiency of post-editing and on the poor quality of the MT output, according to Läubli and Orrego-Carmona’s (2017) study that analyzed posts on social media (Facebook, LinkedIn, and Twitter). But are these negative opinions based on a resistance to technology? The answer is not clear. While some studies suggest that it might be, such as Läubli and Orrego-Carmona’s (2017), others suggest the opposite. In Guerberof-Arena’s (2013) study participants’ (translators and reviewers) experiences were mixed and negative views regarding post-editing were not necessarily related to misinformation or reluctance but to previous experience “with various degrees of output quality and to the characteristics of this type of projects” (n.p.). Besides poor quality, trust is among the reasons not to use MT. In a focus group study with 70 translators from DGT and 20 in-house translators of a UK-based LSP, Cadwell, O’Brien and Teixeira (2018) suggest that translators trust more other human translators (in varying degrees depending on if they are direct colleagues, freelancers or interns) than MT output.

Until this point, we have focused mainly on translators and their perspectives. However, there is also research on the perspectives of other stakeholders. Presas, Cid-Leal and Torres-Hostench (2016) looked at the

implementation of MT and PE by 55 Spanish LSPs, including their motivations for choosing MT over human translation, and the procedures they adopted to include MT into their workflow. They found that almost half of the participating businesses used MT, and almost half of these used MT in only 10% of their total projects. LSPs' motivations for adopting MT included the business's financial and technological capacity, but importantly the knowledge and attitude of the human resources also played a role.

Sakamoto's (2019) data from focus groups with 16 project managers (PMs) from 15 UK-based LSPs suggested that the lack of information about regulations and legal requirements caused a lot of uncertainty surrounding the use of MT for these PMs, especially given the current "don't ask, don't tell" atmosphere (p. 63). Interestingly, these PMs expressed concerns that their translators were using MT against company regulations without telling the PM. Sakamoto's study also points to a need to reconceptualize the concepts of translation and the translator, as "the definitional boundaries of translators and post-editors are becoming blurry" and "PM's own role as gatekeepers of translation is also being threatened" (p. 69).

Complementarily, Nunes Vieira and Alonso (2020) show challenges and uncertainty surrounding the use of MT are aggravated by the way in which LSPs "restric[t] translators' field of influence to the text while alienating them from wider aspects of a project's business strategy" (p. 178). They argue in favour of involving translators in project management decisions, including cost estimation and client communication and addressing the many "misguided perceptions and mismatched expectations" that currently characterize the translation supply chain (p. 163).

As pointed out by Olohan and Davitti (2017), PMs are pivotal in establishing and maintaining a relationship of honest communication and trust with both the client on the one hand and the translator on the other.

The client and the translator normally only communicate indirectly via the PM, which "seems to increase the opportunities for misunderstanding and misconception" (p. 413) and causes a need for PMs to "'educate' both parties" (p. 413). One important question, however, is whether it is not the PMs who may also need to be educated, and who may need to (further) develop MT literacy and a better understanding of the effort involved in PE. A potential mismatch between the perspectives of professional translators and project managers may indeed be a catalyst for situations of miscommunication, misunderstanding and distrust.

3 Methods

This study aimed to compare and contrast the experiences and perceptions regarding MT and PE of professional translators and project managers with experience in working with post-editing assignments and based in the Netherlands. For this purpose, we elicited the experiences and perceptions of freelancer professional translators (hereinafter referred to as PTs) working for a specific LSP based in Rotterdam (Netherlands), the Translation Bureau Vertalingen.nl. These data were then compared and contrasted with the experiences and perceptions of project managers (hereinafter referred to as PMs) based in the Netherlands working for the same and other LSPs.

Having in mind the related literature (see section 2), we aimed to address the following two main research questions:

RQ1: Which factors influence whether or not professional translators accept PE tasks?

RQ2: Which factors do project managers take into consideration when assigning PE tasks?

In our analysis, we then related these factors to the professional translators' and project managers' machine translation literacy.

Considering the aim of this study, and in line with previous studies on stakeholders' perceptions of MT and PE, we opted for two online and self-administered questionnaires, each one aimed at professional translators or project managers, and with comparable questions. Both questionnaires were designed in Qualtrics, and focused on the professional backgrounds of the participants; their experience with PE assignments; and their personal perspectives on the use of MT and PE in professional practice. The best practices associated with using online questionnaires and data collection methods were considered during the design and data collection phases, and these were based mainly on Matthews and Ross (2010), and Mellinger and Baer (2020), including pilot testing. The questionnaire aimed at PTs consisted of 16 questions, and the one aimed at PMs had 13 questions. Both questionnaires included open and closed-ended questions (multiple choice) and were designed in English. For the sake of inclusivity, respondents could answer in Dutch.

The questionnaire was opened for a period of two months, between April and May of 2021. The call took place via e-mail by contacting directly the pool of PTs and PMs that, at the time, worked for the company Translation Bureau Vertalingen.nl. Additionally, the questionnaire aimed at PMs was distributed on social media, specifically on the closed Facebook group of Dutch translators *De Vertalerskoffiehoek*.

3.1 Respondents and their Profile

Excluding incomplete answers, we received 23 answers from PTs and 16 answers from PMs.

The participating PTs and PMs reported working experience ranging from 1-5 years to more than 15 years (see Fig. 1). Most PTs (12) had more than 15 years of experience. In the case of PMs, most (10) had between 1 and 5 years of experience in project management at their current company.

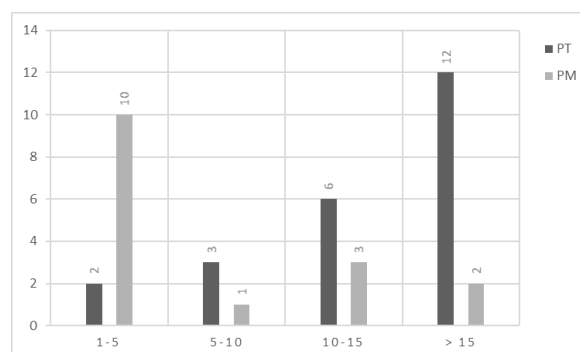


Figure 1. Work experience of PTs and PMs in years

Regarding the PTs' main working languages for translation and post-editing, most participants translate from Dutch into English (13) or from English into Dutch (7). There were also 6 participants who translated from either Dutch or English into German, and vice versa. Less frequent combinations included Dutch into Polish, Chinese, Italian, French, or Russian.

4 Results

4.1 Frequency of PE Tasks and Suitable Texts

Table 1 provides an overview of the frequency with which PTs receive PE requests, and the frequency with which PMs send PE requests. It indicates that most PTs (12 out of 23) receive PE tasks once a month and most PMs (12 out of 15) assign PE tasks also on a monthly basis. A small number of participants, both PTs and PMs, receive and send PE tasks more frequently. This is interesting because it suggests that the translation agencies these PTs and PMs are working for are perhaps not actively incorporating MT into their translation services yet.

	PT		PM
Never	2	Never	0
Once a month	12	Monthly	12
Once a week	4	Weekly	2
2-3 times a week	5	Daily	1

Table 1. Frequency of PE tasks for PTs and PMs. Note that one of the PMs did not answer this question.

On the other hand, it may also be that professional translators are in fact asked to use

MT (or they may even use it without informing the PM) but not in the form of post-editing MT output that was generated by the PM, LSP or client. Our findings suggest that we need to distinguish more systematically between ‘using MT’ and ‘doing PE’, and we may need to define more precisely what we mean by post-editing when asking stakeholders about their experiences. It may turn out that the use of MT is on the rise without an increase in PE assignments, for instance if translators are asked to use MT plugins in their preferred CAT tool, or if they use MT as a stand-alone resource during translation.

Since certain text types are considered more suitable for post-editing than others (see section 2), we were interested in understanding whether our respondents found the same and which text types they considered more suitable for PE.

Technical texts and manuals (mentioned 6 times) and standardized legal texts (mentioned 5 times) were the most common text types reported by PTs when asked which types of text they considered to be easier to post-edit than translate from scratch. Responses of our respondent translators are aligned with research on the topic (e.g., Aymerich, 2005; Bojar et al., 2016; Kirchhoff et al., 2011), suggesting that standardized, repetitive texts are the most suitable to post-edit. For example, one respondent wrote “Texts of technical nature, sometimes legal (depending on the text: can work well with contracts, but it doesn’t when it comes to documents from criminal proceeding for example), general news, general/informal texts” (PT13) and another indicated “Articles of association. They are very standard, even with changes there is probably little difference in production between post-editing and translating from scratch” (PT21). Similarly, most PMs indicated legal (11 mentions) and technical texts (9 mentions) as being the most suitable for this type of task. PMs also reported as suitable texts from IT, finance, business, and general.

4.2 Reasons for Accepting or not Accepting PE Tasks

To answer our first research question, we analyzed the answers to the following questions from the questionnaire aimed at PTs: “How often do you accept post-editing requests?”, “How do you evaluate whether the quality of the MT output is worth the effort involved in post-editing?”, “Are you more likely to accept MTPE requests when they come from a specific agency?”, “Please explain why you are more likely to accept MTPE requests from certain agencies over others.” And “Do project managers state explicitly whether the assignment concerns post-editing of machine translation or regular editing?”. From the questionnaire aimed at PMs, we focus on the questions “What are the main reasons translators have mentioned for not accepting MTPE requests?”, “Have you ever sent a translator MT output to post-edit without making explicit that the assignment concerned MT output rather than human translation?” and “Please explain why.”

Regarding the “How often do you accept post-editing requests?”, answers vary and there isn’t a clear consensus on the main reason to decline an assignment. For some (7) it depends on the text type, for others (6) it depends on the deadline, and there were also some (4) that accept post-editing tasks depending on the rate. The remaining PTs were equally divided between always accepting these assignments (3 PTs) and never again accepting them (3 PTs), regardless of the deadline, text type and word rate. All three that reported that they do not accept any PE tasks indicated that this was because the quality was simply too low. The PMs in our study listed several reasons why translators decline PE tasks. The answer most often given (11 out of 16) was that the translators decline because they generally don’t work with MT. This is interesting because it suggests a potential mismatch with the PTs’ responses (above) and the literature on the topic (see section 2). However, this is of course the perception of only a small group of PMs. The second most-

often given reason according to the PMs was that PTs consider the source text unsuitable (8 out of 16), followed by the word rate being too low (6 out of 16). One PM referred to not being able to meet the deadline as a reason why PTs decline, and 3 PMs pointed to unspecified “other reasons”.

We also asked our PT respondents “Are you more likely to accept MTPE requests when they come from a specific agency?” and “Please explain why you are more likely to accept MTPE requests from certain agencies over others.” Regarding the first question, 13 answered “No” and 10 answered “Yes”. Interestingly, the reasons listed by those PTs that gave a positive response were directly or indirectly associated to trust in the MT system (mentioned 6 times) and/or in the translation company or the PM (mentioned 4 times), as illustrated in the following answer: “I am more inclined to work on MTPE projects for agencies with whom I collaborate on a regular basis and have a good work relationship, whose professionalism I know I can trust (this way I can trust that, for example, they are using a good MT and not just charging a low rate for a PE of Google Translate).” (PT13) This suggests that the PTs do not object in principle against the use of MT, but they object to it being used at the expense of quality and fair working conditions.

The PTs were also asked, “How do you evaluate whether the quality of the MT output is worth the effort involved in post-editing?” Most translators refer to a reading strategy of the target text that can range from a quick scan to a careful close reading of the entire document, as evident from these illustrative answers:

- By reading the provided translation carefully and making a judgement (PT9)
- Review the text before accepting (PT20)
- I read the translation (PT19)
- I read some paragraphs (PT18)
- Taking an example paragraph from each page (PT2)

- By quickly reviewing (PT10)
- Quick skim read (PT4)

Some of the respondents indicate that they focus on grammar, tone and use of terminology, making thus explicit the characteristics of the translation they check. Commenting on this, one respondent wrote: “by looking at the syntax, grammar and tone of the MT output: if there’s a correct/good base to work on, then it is worth the effort of adjusting it stylistically/terminologically” (PT13).

There were other translators (2), however, that expressed the belief that it is not possible to evaluate the effort beforehand. For example, one translator wrote: “I do not. This is something you find out after you have started editing” (PT1).

One of the respondents commented that they cannot evaluate whether PE will be worth the effort, because “half the time you don’t get the chance to assess it: it’s take it or leave it. And a quick glance doesn’t help much: most of the words are correct and it tends to look OK until you actually get down to work” (PT22). None of the other PTs mentions this kind of “take it or leave it” attitude, although another PT does mention explicitly that this kind of effort and suitability checking is not the job of the translator but of the agency, meaning the project manager: “This is the translation agency’s task, I trust their capacity in this” (PT17). This view is aligned with the answer of another respondent that commented that “[a PE assignment] should involve some previous work from the agency side and sometimes they send MTPE work without this kind of prework” (PT18).

Interestingly, one of the PT’s responses suggests that project managers may not actually tell the translator that the document is MT output: “Before accepting the post-editing job I read the entire text to get a feeling for the quality of the text and then ask whether it is a MT text if that was not stated beforehand” (PT5). When asked whether their project managers explicitly tell them that the assignment concerns post-editing, only 11 said

“Yes”; nine said “Most of the time”, and two even said “No”. This raises serious concerns about the trust between the PT and PM.

Regarding the PMs positioning on the same matter, of the 16 PMs in the study, 13 stated that they never send PE requests to translators without making explicit that the task concerns MT output rather than editing a human translation. Nevertheless, three PMs indicated that they have sent out requests without making explicit that the text was MT output. In response to the follow-up question whether this was because they considered (a) the quality to be the same, (b) the work involved to be the same, or (c) because they thought the translator would be more likely to accept the assignment if they believed it was a human translation, two of these PMs opted for option (c) indicating that they had done so because they believed the translators would be more likely to accept the assignment. The third PM said that they had only done so “in the beginning [because] we wanted to try it out so the revisor would not be influenced[;] nowadays we always tell” (PM11). This touches upon a crucial ethical concern in the trust relationship between PMs and PTs. It raises all sorts of questions, including whether PMs understand that the work involved in PE is fundamentally different from revising human translations.

5 Discussion and Conclusions

Although the current study is limited in scope, and the 23 professional translators and 16 project managers that participated have diverging profiles in terms of years of experience, working language combinations and domain specializations, some interesting trends can be observed in their answers and these support the findings of earlier studies on the perspectives of PTs and PMs on machine translation and post-editing.

Similar to Nunes Vieira and Alonso (2020), Olohan and Davitti (2017) and Sakamoto (2019), trust and honesty are central to translators’ decision of accepting or declining

MTPE assignments. This trust encompasses trusting that the PM will only use MT for suitable projects and trusting that the PM will tell the PT explicitly that the assignment concerns MTPE. The results indicated that PTs felt that PMs were not always honest about the nature of the assignments and that they also felt that PMs sent them fewer assignments after having declined MTPE work. Even though most of the PMs in our study said they do not do this, and even if it is perception rather than actual practice, this emphasizes how transparent communication can affect translators’ perceptions. Interestingly, Sakamoto’s (2019) study showed that sometimes it is the PMs who worry that PTs are using MT despite a ban on its use due to confidentiality. While our study did not ask translators about their use of MT outside from PE assignments, the results do support earlier research findings that the use of machine translation creates uncertainty and puts a strain on the PT-PM relationship.

One additional finding that has not been explored systematically yet is to what degree PTs’ trust in PMs is justified when it comes to only sending out MTPE assignments for suitable language combinations, domains and text types, and using a high-quality MT engine. As pointed out before, Olohan and Davitti (2017) note the pivotal role of PMs in “educating” both the translator and the client, but the truth is that we know very little about PMs’ machine translation literacy, their education, and whether they have received any formal training in machine translation and/or post-editing. We were surprised to find that when the PMs were asked which MT engine they use, four answered “Trados” and one “Smartling”, both of which are CAT tools and not MT engines. Unfortunately, based on the current questionnaires, we could not determine whether this was short-hand for “an MT plug-in in Trados” or a genuine lack of knowledge about the difference between a TM and MT.

It may well be worth exploring more in depth what kind of MT and PE experience PMs have and whether they have received any

training in the use of MT or doing PE. The current results show that PTs are more likely to accept MTPE assignments from PMs that know what they are doing and this may well depend on the PMs' MT literacy. At present we do not know what skills and knowledge are involved in PMs' MT literacy or how they demonstrate this literacy to the translators they recruit or the clients who commission them. In our study, only one PM mirrored the kind of 'MT euphoria' that is common in the media, describing MT as "an amazing transformation of the translation industry" (PM1). The other PMs showed a clear awareness that the quality is often barely sufficient to the clients' needs. Two explicitly stated that they only send out MTPE assignments at the request of the client; one said they only propose MTPE when they cannot meet the client's deadline when opting for human translation.

A second layer to the issue of honesty and trust is related to the PTs' concerns about rates and deadlines. The results show that PTs were offered varying word rates and only a few were offered hourly rates, which most PTs expressed are much fairer given the effort involved in MTPE and the complexity of calculating this effort. This is in line with other studies that show that there is little consensus on suitable MTPE rates, and this is exacerbated by a lack of transparent communication about rates. If agreements about MTPE rates are predominantly the result of negotiations between individual PTs and PMs this may inadvertently also create tensions amongst translators, who may feel that some of their colleagues are 'ruining the industry' by working for unacceptably low rates. PTs do not only blame the PMs for the current low MTPE rates but also their colleagues, as illustrated by the following quote from one of the translators in the study: "It is staggering how people who call themselves text professionals refuse to see how much time, effort and money is lost when using machine translations [...] It is no less staggering to see co-workers accept the ridiculous notion that a job will pay less while

it is more time-consuming and much more of an effort" (PT23).

The results make clear that researchers need to be more specific when investigating translators' and project managers' experiences with and perceptions of machine translation and post-editing. The results suggest that the same translator may accept one MTPE assignment but decline another based on the rate offered, the deadline, the PM/LSP that sends the assignment, the language combination involved, the domain and type of text involved, and the quality of the MT engine that was used. MTPE is not a unified process, and the situation is clearly far more complex than translators simply either rejecting or accepting MTPE as a professional practice. Researchers also need to distinguish more systematically between using MT and doing PE. Translators may very well object to post-editing MT output sent to them as a separate document to correct, but have no objections to using a trusted MT plugin in a preferred CAT-tool environment. As found in previous studies, the results suggest that it is often not the technology of MT or the practice of PE that translators have problems with, but the working conditions surrounding the use of MT and the process of PE and how these working conditions are created by – and, ideally, negotiated with – the project manager. Many translators seem frustrated by the general disregard on the side of PMs, LSPs and clients for the effort involved in doing post-editing and their unwillingness to offer fair rates and reasonable deadlines. Moreover, it is at present unclear whether professional translators should put their trust in project managers so easily, as it is often unclear whether PMs have sufficient machine translation literacy to determine whether a project is suitable for MTPE. In the end, it boils down not to a fear of being replaced by an all-knowing machine, but a fear of being exploited by well-meaning but uninformed fellow human beings.

Aymerich, J. (2005). Using Machine Translation for Fast, Inexpensive, and Accurate Health Information Assimilation and Dissemination: Experiences at the Pan American Health Organization. 9th World Congress on Health Information and Libraries. Salvador - Bahia, Brazil. Accessed 17 June 2022, <http://www.icml9.org/program/track3/public/documents/Julia%20Aymerich-174140.pdf>

Bojar, O., Chatterjee, R., Federmann, C., Graham, Y., Haddow, B., Huck, M., Jimeno Yepes, A., Koehn, P., Logacheva, V., Monz, C., Negri, M., N  v  ol, A., Neves, M., Popel, M., Post, M., Rubino, R., Scarton, C., Specia, L., Turchi, M., ... Zampieri, M. (2016). Findings of the 2016 Conference on Machine Translation (WMT16). In Proceedings of the First Conference on Machine Translation: Berlin, Germany, August 11-12, 2016 (Vol. 2, pp. 131-198). Association for Computational Linguistics.
<https://doi.org/10.18653/v1/W16-2301>

Bowker, L., & Buitrago-Ciro, J. (2019). Machine Translation and Global Research: Towards Improved Machine Translation Literacy in the Scholarly Community. Bingley, UK: Emerald Publishing.

Cadwell, P., O'Brien, S., & Teixeira, C. S. C. (2018). Resistance and accommodation: Factors for the (non-) adoption of machine translation among professional translators. *Perspectives*, 26(3), 301–321.
<https://doi.org/10.1080/0907676X.2017.1337210>

Castilho, S., Moorkens, J., & Gaspari, F. (2017). A Comparative Quality Evaluation of PBSMT and NMT using Professional Translators. 116–131.

Castilho, S., Moorkens, J., Gaspari, F., Calixto, I., Tinsley, J., & Way, A. (2017). Is Neural Machine Translation the New State of the Art? The Prague Bulletin of Mathematical Linguistics, 108(1), 109–120. <https://doi.org/10.1515/pralin-2017-0013>

Castilho, S., Moorkens, J., Gaspari, F., Sennrich, R., Way, A., & Georgakopoulou, P. (2018). Evaluating MT for massive open online courses. *Machine Translation*, 32(3), 255–278. <https://doi.org/10.1007/s10590-018-9221-y>

Daems, J., Vandepitte, S., Hartsuiker, R., & Macken, L. (2017). Translation Methods and Experience: A Comparative Analysis of Human Translation and Post-editing with Students and Professional Translators. *Meta*, 62(2), 245–270. <https://doi.org/10.7202/1041023ar>

FIT. (2016). FIT Position Paper on Machine Translation. https://wa1.fit-ift.org/wp-content/uploads/2016/09/MT_pospaper_exit2.pdf

FIT. (2019). FIT Position Paper on Machine Translation. <https://fitift-misc.s3.eu-central-1.amazonaws.com/Position+paper+on+Machine+Translation+updated+2019+EN-FR.pdf>

FIT. (2021). FIT Position Paper on Post-Editing.
https://wa1.fit-ift.org/wp-content/uploads/2021/05/Position-Paper-on-Post-Editing_EN-FR.pdf

Gaspari, F., Almaghout, H., & Doherty, S. (2015). A survey of machine translation competences: Insights for translation technology educators and practitioners. *Perspectives*, 23(3), 333–358. <https://doi.org/10.1080/0907676X.2014.979842>

Green, S., Heer, J., & Manning, C. D. (2013). The Efficacy of Human Post-Editing for Language Translation. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 439–448. <https://doi.org/10.1145/2470654.2470718>

Guerberof-Arenas, A. (2009). Productivity and quality in the post-editing of outputs from translation memories and machine translation. *The International Journal of Localisation*, 7(1), 11–21.

Guerberof-Arenas, A. (2013). What do professional translators think about post-editing? *The Journal of Specialised Translation*, 19, 75–95.

Guerberof-Arenas, A. (2020). Pre-editing and post-editing. In E. Angelone, M. Ehrensberger-Dow, & G. Massey (Eds.), *The Bloomsbury Companion to Language Industry Studies* (1st ed., pp. 333–360). Bloomsbury Academic; Bloomsbury Collections. <http://www.bloomsburycollections.com/book/the-bloomsbury-companion-to-language-industry-studies/ch15-pre-editing-and-post-editing/>

Kirchhoff, K., Turner, A.M., Axelrod, A., & Saavedra, F. (2011). Application of Statistical Machine Translation to Public Health Information: A Feasibility Study. *Journal of the American Medical Information Association* 18 (4), 473-478. Accessed 17 June 2022.
<https://academic.oup.com/jamia/article/18/4/473/735055>

Klubička, F., Toral, A., & Sánchez-Cartagena, V. M. (2017). Fine-grained human evaluation of neural versus phrase-based machine translation. *The Prague Bulletin of Mathematical Linguistics*, 108(1), 121–132. <https://doi.org/10.1515/pralin-2017-0014>

Klubička, F., Toral, A., & Sánchez-Cartagena, V. M. (2018). Quantitative fine-grained human evaluation of machine translation systems: A case study on English to Croatian. *Machine Translation*, 32(3), 195–215.

- Koehn, P. (2020). *Neural Machine Translation*. Cambridge University Press; Cambridge Core. <https://doi.org/10.1017/9781108608480>
- Koponen, M. (2016). Is machine translation post-editing worth the effort? A survey of research into post-editing and effort. *The Journal of Specialised Translation*, 25, 131–148.
- Läubli, S., Fishel, M., Massey, G., Ehrensberger-Dow, M., & Volk, M. (2013). Assessing Post-Editing Efficiency in a Realistic Translation Environment. In *Proceedings of Workshop on Post-editing Technology and Practice*. European Association for Machine Translation (pp. 83–91).
- Läubli, S., & Orrego-Carmona, D. (2017). When Google Translate is better than Some Human Colleagues, those People are no longer Colleagues. In *Translating and the Computer*, London, 16 November 2017—17 November 2017 (pp. 59–69). AsLing. <https://www.asling.org/tc39/wp-content/uploads/TC39-proceedings-final-1Nov-4.20pm.pdf>
- Matthews, B., & Ross, L. (2010). *Research Methods: A Practical Guide for the Social Sciences*. Pearson Education Ltd.
- Mellinger, C. D., & Hanson, T. A. (2020). Methodological considerations for survey research: Validity, reliability, and quantitative analysis. *Linguistica Antverpiensia, New Series – Themes in Translation Studies*, 19, 172–190. <https://doi.org/10.52034/lanstts.v19i0.549>
- Moorkens, J., & O'Brien, S. (2015). Post-Editing Evaluations: Trade-offs between Novice and Professional Participants. *Proceedings of the 18th Annual Conference of the European Association for Machine Translation*, 75–81. <https://aclanthology.org/W15-4910>
- Nunes Vieira, L., & Alonso, E. (2020). Translating perceptions and managing expectations: An analysis of management and production perspectives on machine translation. *Perspectives*, 28(2), 163–184. <https://doi.org/10.1080/0907676X.2019.1646776>
- O'Brien, S. (2005). Methodologies for Measuring the Correlations between Post-Editing Effort and Machine Translatability. *Machine Translation*, 19(1), 37–58. <https://doi.org/10.1007/s10590-005-2467-1>
- Olohan, M., & Davitti, E. (2017). Dynamics of Trusting in Translation Project Management: Leaps of Faith and Balancing Acts. *Journal of Contemporary Ethnography*, 46(4), 391–416. <https://doi.org/10.1177/0891241615603449>
- Plitt, M., & Masselot, F. (2010). A Productivity Test of Statistical Machine Translation Post-Editing in a Typical Localisation Context. *The Prague Bulletin of Mathematical Linguistics*, 93(1), 7–16. <https://doi.org/10.2478/v10108-010-0010-x>
- Popović, M. (2017). Comparing Language Related Issues for NMT and PBMT between German and English. *The Prague Bulletin of Mathematical Linguistics*, 108(1), 209–220. <https://doi.org/10.1515/pralin-2017-0021>
- Popović, M. (2018). Language-related issues for NMT and PBMT for English–German and English–Serbian. *Machine Translation*, 32(3), 237–253. <https://doi.org/10.1007/s10590-018-9219-5>
- Presas, M., Cid-Leal, P., & Torres-Hostench, O. (2016). Machine translation implementation among language service providers in Spain: A mixed methods study. *Journal of Research Design and Statistics in Linguistics and Communication Science*, 3(1), 126–144. <https://doi.org/10.1558/jrds.30331>
- Romero-Fresco, P. (moderator). (2022). Round table—AVT workflows and the role of automation. From Translation To Accessibility. EMT Train The Trainer Summer School. <https://www.youtube.com/watch?v=usjype0javg&list=PLLqIRaiVCGCSD9Z3ek8Y-12Ti9O9vvWW&index=6>
- Sakamoto, A. (2019). Unintended consequences of translation technologies: From project managers' perspectives. *Perspectives*, 27(1), 58–73. <https://doi.org/10.1080/0907676X.2018.1473452>
- Toral, A., & Sánchez-Cartagena, V. M. (2017). A Multifaceted Evaluation of Neural versus Phrase-Based Machine Translation for 9 Language Directions. *Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics: Volume 1, Long Papers*, 1063–1073. <https://aclanthology.org/E17-1100>
- Toral, A., & Way, A. (2018). What Level of Quality Can Neural Machine Translation Attain on Literary Text? In J. Moorkens, S. Castilho, F. Gaspari, & S. Doherty (Eds.), *Translation Quality Assessment: From Principles to Practice* (pp. 263–287). Springer International Publishing. https://doi.org/10.1007/978-3-319-91241-7_12