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What counts as useful advice in a university post-editing training context? Report on a case study.

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Abstract

The aim of this paper is to identify post-editing guidelines that need to be highlighted in the context of translation training. The analysis of a corpus of texts post-edited by 10 translation trainees reveals how they intuitively approach post-editing. The corpus shows that stylistic and phraseological changes are kept to a minimum, and that most errors occur in the field of calque or translation loss. On the basis of the intuitive post-editing strategies observed, a number of recommendations are made for teaching purposes, and they include the need for error analysis of MT output.

1 Aims

In this paper, I will deal with post-editing strategies, particularly those that require special attention in a training context. While there is a consensus that post-editing is a topic that needs to be addressed in translation training, in terms of teaching methodology, it is not clear as yet what approaches are best if we want to turn students into good post-editors. This article reports on a project that was carried out at the Applied Languages Department of the University of Lille III with the aim of identifying post-editing problem areas. It involved the analysis of a corpus of texts post-edited by ten translation trainees. The analysis revealed what is problematic when it comes to post-editing strategies and accordingly, what recommendations should be emphasized when teaching post-editing.

2 Rapid and minimal post-editing

The definition of post-editing is well known (cf. e.g. Allen, 2003, Gouadec, 2007). So is the distinction between different levels of post-editing, like that suggested by Allen (2003) between rapid post-editing, minimal post-editing and full post-editing. Rapid post-editing (“strictly minimal editing on texts in order to remove blatant and significant errors and therefore stylistic issues should not be considered”) constitutes one end of what might be called the post-editing continuum or the post-editing cline, and full post-editing (“implies high quality of the resulting texts”) the other end. The vast majority of post-editing jobs involve the intermediate category of minimal post-editing, a category which Allen qualifies as “fuzzy and wide-ranging”. As the term makes it clear, there is reference to a ‘minimum’ number of changes that are applied in order to produce ‘acceptable’ quality. How exactly the ‘minimum’ number and the ‘acceptable’ quality should be defined, is a matter of debate, and a key issue in a production context as well as in a teaching context.

Even though a lot depends on the readership of the target text and on whether the target text will be used for internal or external distribution, several proposals have been made to make explicit the editing that is required for minimal post-editing. Guzmàn (2007), for instance, argues that the linguistic corrections should be limited to ‘fixing’ certain kinds of errors, i.e.

- grammatical and syntax errors (e.g. wrong concordance (number, gender), word order causing grammatical problems),
- misspellings and punctuation errors (e.g. missing accents, wrong capitalization)

- mistranslation (e.g. wrong use of key terminology; correct sentences with a different meaning from the source).

He complements the description with some examples of what he considers to be necessary changes (e.g. the use of an impersonal construction in certain contexts) and unnecessary changes (e.g. changing a passive sentence into an active sentence).

3 Post-editing in a production context

It will be clear that post-editing instructions are important in a production context as they should make it clear that the MT translation *Il n'y a aucun besoin de faire des changements* for *There is no need to make changes* is 'minimally correct' and that *Il n'est pas nécessaire d'apporter des modifications*, no doubt a more fluent translation, does not change anything from the point of view of informational equivalence. While post-editing is, strictly speaking, a linguistic process,¹ it is useful to point out that a successful post-editor also requires a mindset that is not averse to MT. As Allen (2003) quite rightly points out, "experienced translators find it more difficult to accept translations with a level of quality that is lower than what they have done for years", and we can predict, on the basis of this observation, that the focus of attention will not necessarily be on the same post-editing guidelines in a production context as in a teaching context. The MT 'as good as it gets' syndrome will perhaps leave the experienced translator frustrated. While *Par qualité de service nous entendons avant tout les éléments suivants* as a translation for *By quality of service we especially mean the following elements*, sounds more like native French than *Par qualité de service nous voulons dire particulièrement les éléments suivants*, the latter translation is good enough even though it is not perfect from a phraseological point of view.

4 Post-editing in a teaching context

The issues are rather different in a training context. First of all, in order to determine the course contents, it must be decided what skills the post-editor should have. O'Brien 2002, for instance, argues that there is a theoretical as well

as a practical side to the teaching of post-editing. In order to train post-editors, the theoretical component should address

- knowledge of MT,
- terminology management skills,
- controlled language skills,
- programming skills (e.g. students should know how to write macros to automatically clean up texts),
- text linguistic skills (e.g. students should be familiar with language specific text type norms)

Vasconcellos's (1986) observation that the level of comfort with post-editing is greatly increased after post-editing 100,000 words is usually taken to reflect the number of hours of training needed to turn someone into a proficient post-editor. Given that 100,000 words represents a full working month, it will be clear that only a tiny percentage of the training can be achieved during the seminars themselves. O'Brien points out that students should be encouraged to practice post-editing both within and outside course hours. The practical component should involve exercises with several commercially available systems and different levels of post-editing (rapid, minimal) should be practiced. O'Brien's proposal represents an ideal that it may not be easy to achieve given the number of contact hours and the range of topics to be covered in translation training.

Belam (2003) is a report on how the issue referred to above, namely that of determining post-editing rules for rapid post-editing and minimal post-editing, was addressed in a concrete teaching context. She points out that students feel uncomfortable when "there is no one right answer" or "one accepted method of doing things". They indeed do not always appreciate it when there is a grey area, and they feel a need for clear instructions. In order to give them some hands-on experience of the difference between minimal and rapid post-editing, Beelam wrote post-editing rules with her students on the basis of an English MT translation of a German text on Christmas shopping in New York. She arrived at a number of do's and don'ts, both for rapid and minimal post-editing:

Rapid post-editing guidelines:

- Correct any word that has not been translated and does not resemble its target language (TL) equivalent

¹ It will be clear that some errors of an MT system are systematic and can be corrected using scripts. Cf. e.g. Dugast *et al* 2007, Simard *et al* 2007, Lagarda *et al* 2009.

- Retranslate any word which has been translated so wrongly as to make the sentence meaningless
- Delete anything which is confusing, which may take time to correct and which does not add or detract significantly to the meaning
- Do not tidy up the style
- Do not change a word which has been wrongly translated, but which still has a related meaning
- Do not change the word order if the meaning is not affected

Minimal post-editing guidelines:

- Change a startling choice to something more bland or appropriate
- Change the word order to make the text flow more easily
- Change sentence structure where necessary to increase ease of comprehension
- Don't spend a long time deciding on the very best word or phrase
- Don't attempt to make the translation sound like a piece of original writing

Even though the corpus used for the analysis is not a text that is very likely to be MT-translated in a production context, it does serve Belam's purpose: that of formulating post-editing rules and in this way make explicit the distinction between rapid and minimal post-editing.

5 Project settings

In order to find out what post-editing rules need to be highlighted or require special attention, I took an inductive approach: I invited the students (translation trainees, native speakers of French that are in the second year of a Master's in Multilingual Specialized Translation at the University of Lille III) to post-edit a text and I analysed the results of that exercise. The rationale behind the project was that before teaching students do's and don'ts, (and taking into account the time slot available to teach the topic of post-editing,) it is useful to look at what they intuitively get right and where they go wrong and in this way give due attention to potential post-editing pain points. The corpus consisted of a 2,230-word source text that dealt with support options for a Sun operating system. The translation was divided into 110 segments, the first half of which were MT translated with a (customised) rule-based MT system and the second set with a (customised) statistical

MT system. Each segment was post-edited by ten students, and the text was edited with a productivity tool developed by Cross Language (cf. Figure 1): the students had to correct the French MT translation making use of this web-based tool, a printed version of the source text having been made available to them as well.

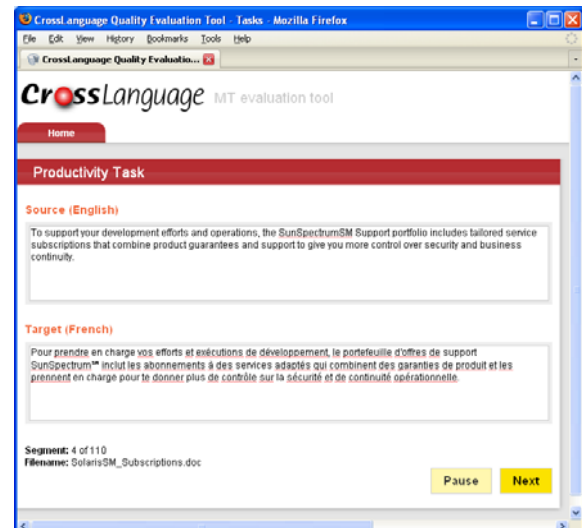


Figure 1: interface post-editing tool developed by Cross Language

The students received minimal instructions: they were instructed to make sure that the source text and the target text were informationally similar and that the target text was grammatically correct. A few examples (English into French) were given (based on Guzmán 2007) of necessary post-editing changes and unnecessary post-editing changes. I was interested to observe how they (relatively) intuitively go about when post-editing: what is intuitively perceived as truly 'broken'? Do they change the phraseology so that the style becomes more distinctly native-speaker like? Do they pay attention to formatting errors? What syntactic changes are considered necessary? How do they deal with terminological issues? It was hoped that their 'intuitive strategies' would pinpoint the rules that should be focussed on in the post-editing seminars. In others words, the idea was to move from 'observations' to 'recommendations'.

6 Observations and recommendations

While it may seem like stating the obvious when dealing with MT, a first observation is that the

post-edited text is closer to the source text structures than a human translation:²

- (1) ST: Solaris Subscriptions *are right for you if you are running the Solaris OS* on x64, x86, or ... (segm 15)
MT: abonnements *sont droite pour Solaris vous si vous exécutez le système d'exploitation Solaris* sur x64, x86 ou ...
HT: les Abonnements Solaris *vous donneront tout ce dont a besoin un environnement Solaris OS* sur serveurs x64, x86 ou ...
PE: les abonnements Solaris *sont faits pour vous si vous travaillez sur le système d'exploitation Solaris* sous x64, x86 ou ... (5)³
- (2) ST: *Features* such as expert technical support, interoperability assistance, and online resources.
MT: *Fonctions telles que* expert support technique, interopérabilité assistance, et ressources en ligne.
HT : Support technique expert, assistance interopérabilité, ressources en ligne
PE: *Fonctions telles que* (7), des fonctionnalités (1), des outils tels que (1), Support technique expert (1)
- (3) ST: Regardless of which system platform *you choose* (segm 14)
MT: Quelle que soit l'plate-forme système *que vous choisissez*
HT: Quelle que soit *votre* plate-forme système
PE: Quelle que soit la plate-forme système *que vous choisissez* (9)
- (4) ST: Get the most value out of (segm 1)
MT: *Obtenir* la plupart de valeur en dehors
HT: Tirez le maximum du
PE: *Obtenir/obtenez* (7) le meilleur du
- (5) ST: What does all this mean to you? (segm 8)
MT: Ce qui signifie tout cela pour vous ?
HT: Votre avantage majeur ?

² In all of the examples, the source text (ST) is followed by the machine translation (MT), a human translation (HT) and the post-edited version (PE) of the segment.

³ The numbers in brackets indicate the number of students who changed the text in the way indicated in the example.

PE: Qu'est-ce que cela signifie pour vous ? (10)

- (6) ST: Sun was named by the majority of those surveyed as the best overall performer related to product support.
MT: Sun a été nommé par la majorité des ces vérifié que la meilleure cohérence globale performer liées à des produits.
HT: Pour la majorité des personnes interrogées, Sun offrait les meilleures performances pour ce qui concerne le support produit.
PE: Sun a été nommé par la majorité meilleur fournisseur quant à l'assistance commerciale. (passive sentence: 10)

Examples like this show that the trainees did not reformulate the text in order to render it more fluent or did not feel the urge to rewrite it. Within the context of the post-editing project, students did as instructed and did not make all-out efforts to make the text flow. If the meaning was clear, they didn't rephrase the text. To echo Belam's rules, they did not attempt to make the translation sound like a piece of original writing and most of them did not spend a long time deciding on the very best word or phrase. The examples just listed show that the literal MT translation is accepted, even in cases where a more elegant or target language-oriented alternative is possible (as is clear from the human translation). The phrasing suggested by the machine is accepted provided it is informationally equivalent even though it may not be 100% idiomatic, as in the following example:

- ST: Telephone and Online Technical Support (segm 27)
MT: Support technique téléphonique et en ligne
HT : Assistance téléphonique et support technique en ligne
PE: Support technique téléphonique et en ligne (8)

The corpus also shows that the terminology is not usually changed even if there is a (slightly) better alternative available:

- (7) ST: The SunSpectrum Support portfolio also includes (segm 16)
MT: *comprend* également
HT: prévoit également
PE: *comprend* également (8)

A certain degree of sloppiness was taken stock of when it comes to purely formal, formatting

issues: the superscript characters were not converted into normal script and most students failed to notice the capitalisation errors:

- (8) ST: Solaris™ 10 (segm 3)
MT: Solaris™ 10
PE: Solaris™ 10 (10)
- (9) ST: Configuration and Administration
MT: Configuration and administration
PE: Configuration and administration (7)
- (10) ST: 1) Fully supported
MT: 1) entièrement pris en charge
PE: 1) entièrement (7), 1) Entièrement (2)

There was only one verbal concord error in the translation. Six students failed to spot it:

- (11) ST: Configuration and administration covers ...
MT: La configuration et l'administration *couvre*
HT: Le service de configuration et d'administration *couvre*
PE: La configuration et l'administration couvre (6), couvrent (2) - Le dispositif Configuration et Administration couvre (2)

The most striking observation is no doubt that most errors involve an insufficient degree of editing. Even though 'adequate' use of MT in a minimal post-editing context presupposes minimal changes, at times the trainee translators tend not to be sufficiently critical of the (literal) MT translation and the dangers that calque may imply. Even though they are familiar with false friends as an error category (the latter receive adequate attention in the translation seminars), if mistakes occur in the post-edited texts, they often involve the acceptance of literal translations that are not informationally equivalent, as in the examples that follow:

- (12) ST: *business continuity* (segm 4)
MT: continuité d'*entreprise*
HT: la continuité d'*activité*
PE: continuité d'*entreprise* (4)
- (13) ST: allow you to focus on your *business* (segm 5)
MT: de vous focaliser sur votre *entreprise*
HT: de vous concentrer sur votre *activité*
PE: ... sur votre *entreprise* (5)
- (14) ST: This level of control helps you manage cost while also providing you with

services that match *your unique needs*. (segm 90)

MT: qui correspondent à *vos seuls besoins*.

HT: à vos besoins.

PE: à *vos seuls besoins* (6), à vos besoins spécifiques (1), à vos propres besoins (1), à vos besoins précis (1), à vos besoins personnels (1)

- (15) ST: to support your development efforts and *operations* (segm 4)

MT: Pour prendre en charge les efforts de développement et *opérations*

HT: Pour vous aider dans vos efforts de développement et *sur le plan opérationnel*

PE: à fin de vous aider dans vos efforts de développement et *opérations* (6)

Sometimes, the machine fails to translate part of the source text. On a number of occasions, the majority of students failed to notice information loss:

- (16) ST: Sun is committed to your evolution to and management of one of *the world's* most powerful operating systems. (segm 3)

MT: Sun est déterminée à votre qu' Evolution et gestion de l'une des plus puissants systèmes d'exploitation. ('du monde' not translated)

HT: Sun veut vous accompagner dans votre évolution et la gestion d'un système d'exploitation qui compte parmi les plus puissants *du monde*

PE: 'du monde' not added to translation in 6 post-edited versions (6)

Another observation that may well result in a recommendation is that post-editing guidelines concerning particular syntactic forms (not) to be used are required. For instance, relative clauses with finite verbs were not always MT translated with a finite verb in the target text. Students kept the form suggested by the machine in the majority of cases, but in others, they changed it into a (non-)finite form. A random selection of examples shows that there is no clear post-editing strategy:

Segment	MT	Finite	Non-finite	Other
23	Finite	9	1	
45	Finite	7		3

	(error)			
49	Finite (error)	9	1	
20	Non- finite	4	6	

- ST: For customers *who* want support for leading-edge technology (segm 23)
MT: Pour les clients *qui* effectuent
PE: Pour les clients *qui* souhaitent de l'assistance (9) / Pour les clients désirant un support (1)

(17) ST: within the coverage hours *you choose* (segm 45)

MT: heures de couverture vous choisissez

PE: *que* vous choisissiez/avez choisies (7)

(18) ST: If you encounter an issue *that* you believe *involves* a Sun product,... (segm 49)

MT: Si vous rencontrez un problème que vous êtes certain implique un produit Sun

PE: que vous pensez dû (1) - qui, selon vous, (4) – dont vous êtes certain qu'il implique (2) – qui implique (2) – lié à un produit (1)

(19) ST: Specialized services *you need* to support the Solaris OS so you can run your applications with confidence. (segm 20)

MT: Services spécialisés *devant être pris en charge* le système d'exploitation Solaris.

PE: Services spécialisés *devant être pris en charge* par le système d'exploitation Solaris. (6) / dont vous avez besoin (4)

The corpus reveals a similar need for clear instructions when it comes to the translation of the imperative form:

(20) ST: *Get* the most value out of the Solaris™ Operating System (segm 1)

MT: *Obtenir* la plupart de valeur en dehors du système d'exploitation Solaris™

PE: 5 post-edited segments with an infinitive (*tirer, obtenir*), 5 post-edited segments with an imperative (*obtenez, optimisez, tirez*)

(21) ST: *Track* and deploy the latest Solaris enhancements (segm 71)

MT: *Repérer* et déployer les derniers perfectionnements

PE: 3 post-edited segments with an infinitive, 5 post-edited segments with an imperative

(22) ST: *Gain* the necessary skills to keep pace with changing technology. (segm 74)

MT: *Gagner* les qualifications nécessaires pour

PE: 3 post-edited segments with an infinitive, 5 post-edited segments with an imperative

It should be added that the students who opted for the imperative in segment 71 did not necessarily do so in segment 74.

The translation options in the next set of examples show that it is also necessary to provide a terminology list:

(23) ST: *Processor sockets* (segm 10)

MT: interface de connexion

PE: interface, interface processeur, prise pour processeur

(24) ST: Freeware Component *Support* (segm 37)

MT: Composant Freeware prise en charge

PE: assistance, support, prise en charge

(25) ST: *Freeware components* (segm 76)

MT: Des composants freeware

PE: Des composants gratuits (1), des composants freeware (6), des composants libres (1), des logiciels libres (1), des composants gratuits (1)

The terminology does not only differ from post-editor to post-editor, repeated items are not necessarily post-edited in the same way.

7 Conclusion

By way of a conclusion, the corpus shows that, when teaching post-editing to translation trainees, there is no need to (over-)emphasize the lack of need for stylistic changes or rephrasing. Students do not seem to experience problems keeping in translations that are less than perfect, and this is no doubt indicative of a striking difference in mindset between translation trainees and experienced translators. While students have been taught how to translate, and while their translation seminars are geared towards achieving perfect quality, it remains a fact that students have no year long professional

experience in working towards the highest quality level.

One should neither lose sight of the fact that students are in the habit of and have been trained to follow the teacher's instructions. Carrying out assignments within a clearly structured context obviously also contributes to a specific mindset.

On top of that, if MT is part of the course contents, students are perfectly aware of the possibilities, limitations and contexts of use of this kind of technology. The job of post-editor is not necessarily number one in the list of professions they aspire to. Even so, it is unlikely that they will be upset or frustrated by MT quality issues and will get the notion of 'minimal quality' completely wrong when asked to post-edit.

The analysis shows that there is a distinct need to raise the students' awareness of typical MT errors, such as calque, mistranslation and untranslated ST. It therefore seems very useful to carry out MT error analyses, if possible with some attention for the differences in typical errors of rule-based systems and statistical MT systems. The danger involved in post-editing at this level is not that too much will be changed, but rather that there is at times too much trust in the translation engine.

A final recommendation is that of highlighting the importance of consistency and formal accuracy. While the machine is less likely to make consistency errors, they do occur and students should be aware that sticking closely to the post-editing (terminological and syntactic) guidelines is as important as following the styleguide when translating with a translation memory.

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