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DeepL Translate and *DeepL Write* as Tools for Text Mediation in Plurilingual Workplaces

Abstract

This article discusses how machine translation software can be used in developing users' language and communicative skills in the workplace. The case in point is the neural machine engine *DeepL*, whose primary functionality is text translation; yet when one thinks about modern workplaces, it turns out that professionals other than translators may be in need of urgent text creation in a foreign language. Knowledge of the target language is an indisputable prerequisite for effective specialist communication. Nonetheless, with the use of a machine translator like *DeepL Translator* or machine text composer like *DeepL Write* creating texts in the target language (formal emails, minutes or summaries) may take less time and give a more satisfactory effect both in terms of text quality and authors' foreign language practice.

Keywords: NMT, DeepL Translator, DeepL Write, translation, postediting, plurilingual workplaces

Introduction and Literature Review

Learning and using foreign languages ceased to be predominated by the L2-focus. An almost mythologically fluent command of L2 is no longer a paradigmatic learning objective. Instead, a growing number of foreign language learners want to make their L1 and L2 efficient tools of communicative and cultural mediation (see: the *CEFR* framework companion volume, henceforth as: Council of Europe 2020). Works such as Coste *et al.* (2009) or Piccardo *et al.* (2021) advocate for the notion of *plurilingual competence* - which means contemporary communicators need to skilfully and repeatedly mediate between L1 and L2, predominantly in professional contexts. It is no longer enough for language learners to have L2 reception and production skills, but for them to be able to engage into meaning-making processes across languages and cultures. This practice of L1-L2 communicative mediation is defined in

some sources as *plurilanguaging* (Council of Europe 2020; Piccardo *et al.* 2021). As recommended in the CEFR companion volume (Council of Europe 2020: 31) language learning activities should tend to promote plurilingual and pluricultural competences.

The macrofunctional basis for communicative language activities foreseen in the CEFR framework (Council of Europe 2020: 33) assumes a matrix of four language-related skill areas set against three applicative contexts. Thus, we have reception; production; interaction and mediation skills positioned along the X axis, while creative, interpersonal language use; transactional language use; as well as evaluative, problem-solving language use are positioned along the Y axis. According to the matrix, mediation skills are realised through transactional language use and employ text mediation skills. The matrix is not only devised for language learners, but also for its regular (plurilingual) users because the matrix builds "a link between general purpose language and language for specific purposes." (Council of Europe 2020: 33).

However efficient language learning is, one cannot imagine that complex communicative and problem-solving tasks in contemporary workplaces are unlikely to pose communicative challenges to non-LSP professionals. Even though they may be skilled foreign language users, some urgent or relatively complex communicative tasks may evoke a need for language support. We do not present any direct empirical data concerning such needs reported by non-LSP specialists, which is mostly due to methodological obstacles that – in our view – such research would face (of which we write more below). Yet, we put forward a working presupposition in our article that when contemporary non-LSP professionals are faced with urgent tasks such as writing a formal email, executive summary or minutes, they are likely to seek technological support.

Finding research to confirm this presupposition directly turns out problematic. This is firstly because research seems dominated by reports on machine translation quality or adequacy (*e.g.* Castilho et al. , in print), contextual performance (*e.g.* Castilho 2022; Voita et al. 2019) or contrasts and comparisons with human translation (so called *human parity*) (*e.g.* Läubli et al. 2018; Toral et al. 2018). Even such studies as Lee (2021), which refer to workplace use of machine translation, do not focus on user preferences, rationale or frequency of use, but on translation quality issues.

There is a considerable body of research to prove that machine translation has been in use in language teaching and learning for over three decades, and a comprehensive list of contributions in the field is provided in (Jolley & Maimone 2022). Apart from activity reports and empirical studies on how MT has been applied in formal language education, this latter article also mentions reports on what learners and teachers think about machine translation in their classrooms (Jolley & Maimone 2022: 28). Studies such as (Carré et al. 2022) speak positively of integrating machine translation into language learning, though noting ethical concerns voiced in the literature of the subject, such as higher risk of plagiarism, a tendency to ignore language errors or making learners stray from language tasks for the sake of technology (Carré et al. 2022: 187; also see *e.g.* Goodwin-Jones 2022 or Briggs 2018). Other researchers proved that language learners regularly apply online machine translation when they seek to improve their text comprehension or production skills (see: *e.g.* Jolley & Maimone 2022 or Niño 2020 for literature and discussion). As observed by Nino (Niño 2020), online machine translators become a first-choice method in Computer-Assisted Language Learning (CALL) as they help create a multimodal, integrative learning environment that "can encourage meaningful collaborative language practice interactions with various ILL resources and peer students" (Niño 2020).

If language learners find it natural to resort to machine translation for enhancing their learning experience, the same can be expected of language users, including non-LSP professionals, who engage in plurilanguaging in multimodal, integrative workplace environments. This latter observation seems consonant with the fact that software companies develop functionalities to support plurilingual text mediation in workplace contexts (*e.g. Meta* with their service *Workplace*). This kind of support is also overtly mentioned in service profiles of language industry providers like *United Language Group* (ULG), or language technology providers like *Omniscien Technologies* (OT) or *DeepL*. In a website article published in 2019, the *ULG* team makes the following claim:

> Many companies already use instantaneous translation engines—Machine Translation (MT)—for technical documentation and large volumes of non-critical, external material. However, MT can now be effectively applied as part of an integrated human and MT workflow to improve many of an organization's language requirements. Great examples of MT application include email, real-time chat, user documentation, and even digital marketing content in cases where the MT engine has been trained effectively and integrated with more traditional human translation processes. (unitedlanguagegroup.com/blog/how-companies-are-using-machine-translation-to-open-the-lines-of-communication)

This statement certainly mirrors tendencies in machine translation support in workplace text mediation, yet they need to be interpreted as part of corporate marketing of their author companies. They offer no insight into the scale or scope of the phenomenon, but they provide crude, orientational evidence to support the working assumption for this article.

The present study employs two solutions from a leading global neural machine translation provider *DeepL*. Originally, the *DeepL* system was dedicated directly to language specialists (*DeepL Translator*). Only recently was the service expanded to cover *DeepL Write* (Beta), offering to enhance users' writing effectiveness through greater control over correctness, fluency, naturalness of expression, creativity and relevance.

This article aims to show how selected functions of *DeepL Translator* (henceforth abbreviated as *DT*) and *DeepL Write* (henceforth abbreviated as *DW*) can authentically enhance users' plurilingual practices. The main point made here is that the *DeepL* text mediation solutions are as good their users' preparedness to mediate rather than automate their language content. Consequently, claims are made concerning a need to design learning activities that employ NMT text mediation tools in educational contexts to train both efficiency and accountability.

DeepL Translator

This section is a short outline of *DT* functionality. For the sake of brevity, we skip the technological background of the service since the concepts such as machine translation or neural machine translation have a wide coverage in the literature of the field (see: *e.g.* Poibeau 2017) or Stahlberg 2020, to mention only most recent insights). Central to our argument is the user and their text mediation experience.

DT is predominantly – as its brand name suggests – a neural machine translation engine. The functionality is available in a number of options. First, a user may enter (copy) a text excerpt to a web browser window running the online service. Second, the same operation can be performed in a dedicated

window of an application installed on a computer drive. Once the text is fed to the service, it starts automatic translation. While the source text is fed into the left-hand window, the translated output is displayed in the right-hand window. Once the target text is displayed (either in the online service or in the app), a user can start modifying the output supported by a dedicated functionality in the service. When a user changes any item in the target text, the service tries to adapt (retranslate) the rest of the altered word, phrase or clause to match one of the meanings and formulations via the reiterative machine translation process.

To illustrate the process, we have produced a short text in Polish to be machine translated to English, which is intended to exemplify a text-type that we have in mind when talking about workplace plurilingual text mediation.

Witaj Jonatanie,

Dziękuję ci za przesłanie listy pytań do oferty i za cierpliwość w oczekiwaniu na nasze odpowiedzi, które zamieszczam poniżej:

Czy możliwa jest instalacja w pomieszczeniach nieklimatyzowanych do 50 m2? Odradzamy instalację w pomieszczeniach nieklimatyzowanych, ale nie oznacza to utraty gwarancji. Przed instalacją musicie ustalić parametry temperatury i wilgotności w budynku klienta. Warto zostawić w docelowym pomieszczeniu termohigrometr na 2-3 doby w najcieplejszej porze roku – jeśli to możliwe. A może klient sam może odpowiedzieć na to pytanie na podstawie własnych obserwacji. W sumie chodzi o to, że sprzęt nie będzie działał w pełni w temperaturze powyżej 40C i 70% wilgotności. Niestety, jeśli ulegnie awarii z tego powodu (uszkodzenie parownika lub grzałki), naprawa nie podlega gwarancji. Urządzenie ma rejestrator warunków pracy i przesyła dane do nas: ustalimy, w jakich warunkach doszło do wyłączenia i to będzie podstawa reklamacji.

Here is a draft translation that *DeepL Translator* returned automatically:

Hello Jonathan,

Thank you for sending a list of questions for the quotation and for your patience in waiting for our answers, which I have included below:

Is it possible to install in non-air-conditioned rooms up to 50 m2? We advise against installation in non-air-conditioned rooms, but this does not mean that you will lose your warranty. Before installation, you must establish the temperature and humidity parameters in the customer's building. It is a good idea to leave the thermo-hygrometer in the target room for 2-3 days during the warmest time of the year - if possible. Or perhaps the client himself can answer this question based on his own observations. The bottom line is that the equipment will not function fully in temperatures above 40C and 70% humidity. Unfortunately, if it fails for this reason (damage to the evaporator or heater), the repair is not covered by the warranty. The unit has a recorder of the operating conditions and sends the data to us: we will determine under which conditions the shutdown occurred and this will be the basis for a claim.

This is what the DT screen looks like when the input text is fed, and the machine translation displayed in their dedicated windows:
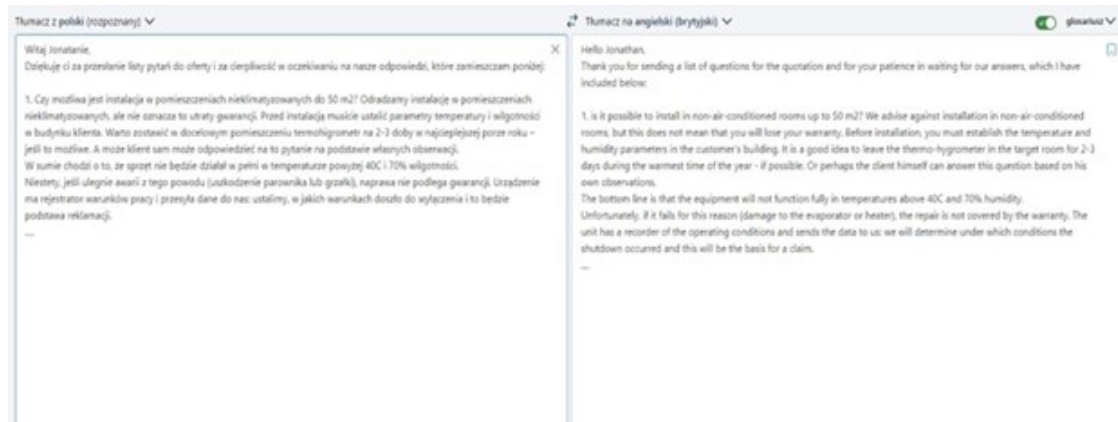
Fig 1. The basic display of DT with the input and output text displayed. Source: www.deepl.com/translator [date of access: 20.04.2023].

It is quite likely that the initial machine translation includes items which a user is dissatisfied with. Let us assume that in this text a user wishes to modify the fragment *for the quotation*, which may not be a contextually *perfect match* (*oferta* in this case is more of *sales information* and not *the quotation*). Then, the fragment *is it possible to install* can be improved to read closer to *is it possible to have the unit installed*. Similarly, *that you will lose your warranty* perhaps needs a fine-tuning, since it is the customer who may lose the warranty, not the direct addressee. Hence a non-personal option like *the warranty is lost* seems a more legitimate choice.

Introducing modifications like the ones mentioned above is easy and expected by the application interface. When the mouse pointer is placed near the word or phrase that a user wants to change, a drop-down list of options is displayed.
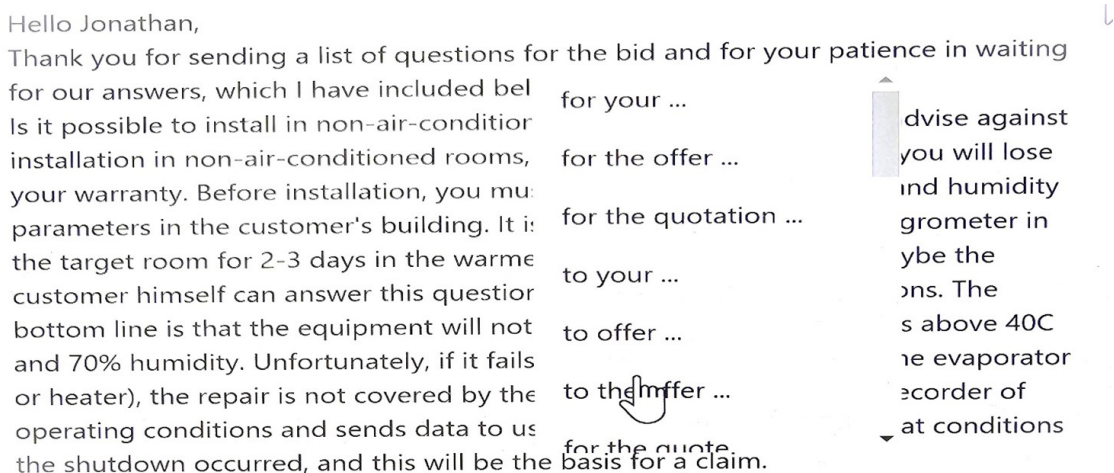

Fig. 2 A drop-down list for translation substitutes. Source: www.deepl.com/translator [date of access: 20.04.2023].

As can be observed, a list displays various options for substituting single lexemes, phrases or clauses. Clicking on a desired option automatically produces a modified text variant.

Modifications can be local (lexical) or may represent more complex operations (phrasal or clausal). The latter is the case when the original clause *that you will lose your warranty* is changed into *that the warranty is lost* - the latter being an option ready to pick from the list.

Hello Jonathan,

Thank you for sending a list of questions for the offer and for your patience in waiting for our answers, which I have included below:

Is it possible to install in non-air-conditioned rooms up to 50 m2? We advise against installation in non-air-conditioned rooms, but this does not mean that you will lose your warranty. Before installation, you must establish the tempera parameters in the customer's building. It is worth leaving the therr the target room for 2-3 days in the warmest season - if possible. C customer himself can answer this question based on his own obse bottom line is that the equipment will not function fully at temper and 70% humidity. Unfortunately, if it fails for this reason (damage or heater), the repair is not covered by the warranty. The device ha operating conditions and sends data to us: we will determine und the shutdown occurred, and this will be the basis for a claim.

the warranty ...

your ...

you lose ...

the guarantee ...

you will not ...

warranty ...

Fig. 3. Clausal modifications suggested by *DeepL Translator* on the pick-up list. Source: www.deepl.com/translator [date of access: 20.04.2023].

That the post-editing process in DeepL is not limited to local (word-for-word) substitutions, but that the service is capable of reconstructing (retranslating) clausal structures represents a huge advantage to language users. Ultimately, after a handful of clicks, a user can get a target text version like the following:

Hello Jonathan,

Thank you for sending a list of questions to the offer and for your patience in waiting for our answers, which I have included below:

Is it possible to have a unit installed in non-air-conditioned rooms up to 50 m2? We advise against installation in non-air-conditioned rooms, but this does not mean the warranty is lost. Before installation, you must determine the temperature and humidity parameters in the customer's building. It is a good idea to leave the thermo-hygrometer in the target room for 2-3 days during the warmest time of the year - if possible. Or perhaps the client themselves can answer this question based on their own observations. The bottom line is that the equipment will not function at its full potential in temperatures above 40C and 70% humidity. Unfortunately, if it fails for this reason (damage to the evaporator or heater), the repair is not covered by the warranty. The unit has a logger of the operating conditions and sends the data to us: we will determine under which conditions the shutdown occurred, and this will be the basis for a claim.

To sum, DeepL Translate offers the following advantages to a non-LSP professional in need to create a text in a foreign language in a situation when they feel a need for language assistance (despite possessing plurilingual competences):

1. Helps transfer into a target text the ideas and nuances of a user's original conceptualisations, which they may find difficult to render into the foreign language as precisely and adequately as they judge is necessary in a given professional situation.

2. The assistance is primarily realized by offering the user the machine translated target text variants, but then essentially expanded by post-editing options (as illustrated above).

However powerful the tool is, its limitations also need to be highlighted. The most evident limitation concerns the users. It can be argued that while LSP professionals are unlikely to accept the initial text output by DeepL as ultimate target text variants, the same cannot be guaranteed when non-LSP professionals apply the tool. It is natural for LSP professionals to post-edit what they get from *DeepL Translator* (and they are taught to do so). Yet, it cannot be asserted so strongly that non-LSP professionals are equally likely to take a responsible approach to the initial machine translation output. In other words, what is a key advantage of the app (a growing degree of translation quality) can turn into its grave disadvantage. If non-LSP professionals take the initial target variant for granted, it will very likely be at the detriment to text quality. Last but not least, some potential negative consequences can also be foreseen for non-LSP professionals' foreign language skills or learning motivation ("I do not have to master the foreign language, NMT will do it all for me").

As noted by (Briggs 2018: 6), no one can reasonably expect contemporary language learners and users to evade NMT or other similar language-assistance IT solutions, irrespective of the risks behind the falsely inferred promise of a world without foreign language learning. To averts the risks in a constructive manner, IT tools like *DeepL Translator* can become part of language learning curricula (LSP in particular). Educational interventions can empower learners to authentically benefit from these tools for efficient language and mediation skills advancement. In this way, not only language competence, but also accountable language use and plurilingual mediation is catered for.

1. DeepL Write

A recent development by *DeepL* is called *DeepL Write*. The system is designed to support plurilingual language users in writing their texts directly in the foreign language, with no translation phase involved. The functionality is available as a Beta variant and is only accessible as a browser service. Also limited is the number of input languages (American and British English as well as German), which must be due to the early stage of system development. The interface layout is parallel to *DeepL Translator*, with the left-hand window designed for either typing or copying the input text.
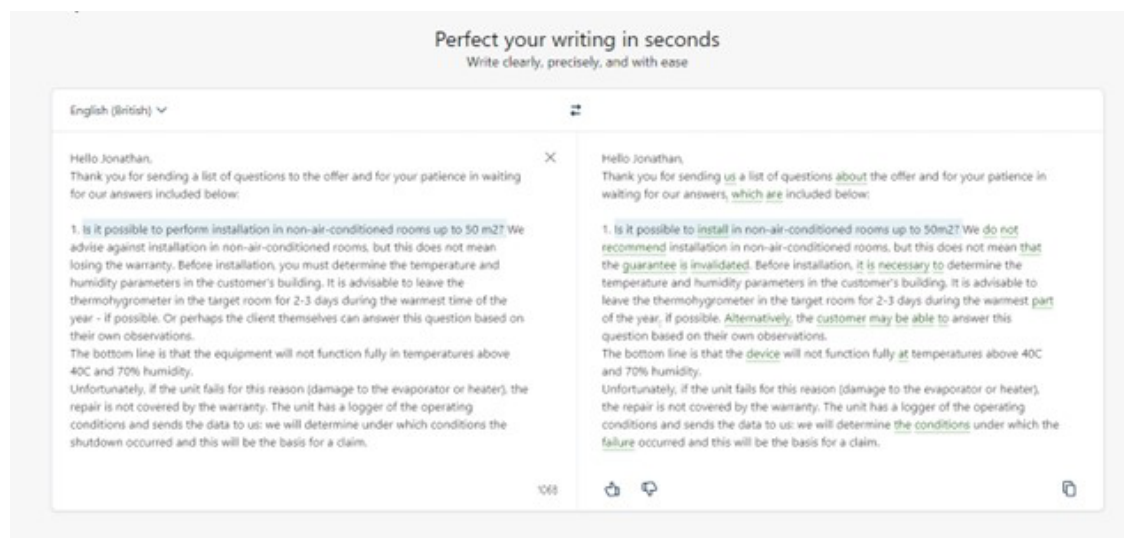
Fig. 4. *DeepL Write* interface on feeding input text. Source: www.deepl.com/write [date of access: 20.04.2023].

The figure above illustrates the *DW* interface on feeding our previously machine translated English text variant. The right-hand window features the *DW* output text. Selected items in the right-hand window are underlined, which signals that *DW* is ready to provide the user with alternative choices for these items.

Fig. 5. Picking from alternatives in *DeepL Write*: the entire sentence option. Source: www.deepl.com/write [date of access: 20.04.2023].

The case illustrated in the figure above is the lexeme *install*, provided by *DW* to substitute the input phrase *perform installation*. On clicking the former in the right-hand (output) window, we are redirected to a list of potential substitutes, like a phrasal variant *to carry out the installation*, or more advanced clausal constructions like *Is installation possible…* or *Can installation be carried out…* This list of options is displayed when a user predefines the search to cover an entire sentence: as visible in the upper part of

the post-edition window ('alternatives: Entire sentence - Word'). When a user picks the Word option, the suggested substitutes only focus on the word *installation* and its collocational variants (*e.g. perform installation, make the installation* or *fit the unit*).

Summing, up *DW* offers an array of advantages which is distinct from *DT*. Firstly, it depends more than *DT* on the language resources of a user. In this sense, *DW* does run a smaller risk of hindering the writing or text mediation skills of plurilingual users. Even though the output can be subject to considerable improvement, the author of the text is not "substituted" by the machine translator engine. The role of *DeepL Write* can be compared to that of a "working memory" of a text writer, granting them access to constructions that may be familiar to them, but hard to elicit on situational demand without support.

Irrespective of the aforementioned, indisputable advantage, an obvious question arises about how advanced a foreign language user needs to be for *DW* to perform as a learning tool to improve foreign language practice or plurilingual functioning, to avoid treating the app's suggestions uncritically as the "correct" version of the target text. As in the case of *DT*, our argument here is that to effectively address the dilemma that users may naturally experience when using both solutions by *DeepL* is to make them part of foreign language learning curricula, LSP in particular.

Educational interventions (activities) to address the challenge are relatively easy to design and perform, either in group or individual learning environments. Below are presented two simple activity scenarios for training with *DT* and *DW* in an ESP classroom.

Scenario I: *DeepL Translator* in an ESP classroom
Objectives:
1. To improve situational plurilingual text mediation skills;
2. To enhance learners' self-educational potential in foreign language learning by expanding the framework of options to express themselves;
3. To enhance learners' accountability in using neural machine translators;

Prerequisites:
1. Individual access to *DeepL Translator* online or app on computers, tablets or smartphones.
2. Options for students to display their screens on the classroom projector to share results and variants.

Procedure:
1. Students are divided into groups of 2-4 (depending on how long the activity is planned to take).
2. With the teacher's help they decide on the source version of the text to translate.
3. Each student in a group feeds the same text into *DeepL Translator* and then works out their preferred target variant.
4. The students discuss the differences between variants of their choice, giving arguments in favour. Arguments should take into account linguistic, but also communicative (situational) diversity that may underlie different choices by group members.

5. The group makes a report to the other groups on what they decided to keep in common in their translation, and what they decided to preserve as individual solutions. Grounds are provided for both (though more emphasis on disparities is likely and can be inspired by the teacher).

Feedback session:

It is highly recommended that a peer feedback session (in the form of discussion) follows each group presentation since this variant of formative assessment is most informative for learners. Yet, to keep the discussion to the point, the teacher is advised to structure feedback discussion by making precise points on which peers are expected to focus. Apart from language issues, these could include message accuracy and precision/clarity (in a professional context), register and politeness, authors' intentions and expected response (operative function of the text).

Scenario II: *DeepL Write* in an ESP classroom

Objectives:
1. To improve foreign language text writing skills;
2. To enhance learners' self-educational potential as regards the above, also by expanding the framework of options to express themselves;
3. To enhance learners' accountability in using neural machine learning tools for writing.

Prerequisites:
1. Individual access to *DeepL Write* online or app on computers, tablets or smartphones.
2. Options for students to display their screens on the classroom projector to share results and variants.

Procedure:
1. Students are divided into groups of 2-4 (depending on how long the activity is planned to take).
2. With the teacher's help they decide on the text to compose.
3. Each student in a group feeds their text on a topic decided by in the group into *DeepL Write* and then works out their preferred target variant.
4. The students discuss the differences between variants of their choice. They use communicative contextualisation ("I meant…, I thought that…., I wanted him to tell me….") to explain diverse textual solutions.
5. The group makes a report to the other groups on their variants. They explain what happens to be similar in their texts, and highlight reasons for diversities.

Feedback session:

It is highly recommended that a peer feedback session (in the form of discussion) follows each group presentation since this variant of formative assessment is most informative for learners. Yet, to keep the discussion to the point, the teacher is advised to structure feedback discussion by making precise points on which peers are expected to focus. Apart from language issues, these could include message accuracy

and precision/clarity (in a professional context), register and politeness, authors' intentions and expected response (operative function of the text).

Limitations and research directions

The notion of limitations we have in mind here concerns both, the use of technology in plurilingual communication contexts and foreign language learning, as well as the limits of the present study. As for the former, the main limitation that users need to count with when applying NMT technology to their workplace translation or plurilingual text communication is *control*. As evidenced by both functionalities in the *DeepL* system, they offer users a huge degree of control, mostly implemented by left-right data visualisation and easily accessible post-editing options. Paradoxically, the growing effectiveness of NMT engines (which is both expected and highly advantageous) can evoke a tendency on the part of users to transfer more and more control to technology, as based on an attractive yet false belief that translation or plurilingual text mediation can be fully automated (and hence, crossed out from the list of tasks in a plurilingual workplace). A way to solve the *control challenge* seems only one: control needs to be trained in order for users to develop self-reflective attitudes and skills (see: *e.g.* Klimkowski 2015; Pietrzak 2022).

As regards research limitations, the main is that our line of argument rests on indirect clues rather than empirical grounds. Our working assumption concerning non-LSP professionals' reliance on NMT in the plurilingual workplaces is inferred from an argument underlying the way foreign language learning is currently conceptualised in CEFR (Council of Europe 2020) that language learning is mostly aimed at building plurilanguaging skills in workplace contexts. Then if there is a considerable body of research to prove that at least some language learners and teachers find machine translation useful for skill advancement, it can also be reasonably claimed that machine translation can also be useful in language use, including professional contexts. Finally, we also observed that the fact that technological solutions like DW or DT are offered by companies like *DeepL* is almost bound to mean that their providers researched the market for their demand.

The main reason that hindered our own research into non-LSP user perception and experiences of using NMT in workplace plurilingual text mediation is methodological in nature and concerns the way to define the group of subjects. In other words, a non-LSP user is most likely too general a notion to serve as basis for empirical research. That observation means that users in particular industries could serve as subjects, but this solution is still largely problematic. Can we determine and how that all specialists in IT, logistics or medicine are likely to rely on NMT solutions in the same or comparable way? Or can we divide the industries deep enough to reach a "representative" group of subjects?

Another empirical research trajectory that can be postulated in this context is to focus on a particular NMT solution and define research pool as the users of this particular app. Yet the research objectives would also have to be modified accordingly.

Conclusions

As claimed by the CEFR companion volume (Council of Europe 2020), contemporary professionals are expected to engage in plurilingual mediation of texts in their workplaces. Contemporary recruitment standards and expectations are enough to support this claim. A vast majority of non-LSP specialists are

likely to have foreign language skills (particularly English) necessary to handle plurilanguaging on a daily basis. Yet, as presupposed by some software companies, these users may find themselves in need of streamlining their language-to-language workplace functioning by means of technological solutions like NMT engines.

Even though not related directly, the above-mentioned observations increase the likelihood that non-LSP professionals resort to NMT technologies in workplace contexts, irrespective of the risks they entail. To avert these risks, the technological tools like DeepL Translator or DeepL Write should become a regular part of (self-)educational curricula for non-LSP specialists. This seems a natural way to empower these learners and language users to make them responsible and effective users of these and future technological solutions in the field. Two basic educational scenarios were produced in this study to illustrate how simple it can be for a language teacher to implement NMT-related activities in their classrooms. One can easily imagine that these initial proposals be scaled up to cover group or teamwork activities up to a plurilingual project. Needless to say, all these educational formats and activities should maximise the advantages of NMT in professional functioning, but with due diligence to risk factors - coming from technology and from the users' handling of it. Another proviso worth making here is that if language learners are exposed to NMT and IA-related resources, they should be able to train with more than one tool. Different apps and systems allow for different user experience, which may influence how particular users employ or avoid particular apps. Getting to know a set of even apparently similar applications can allow users to develop their greater user awareness of what they want and what they can get from particular solutions.

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