Translation Software: A Two-Edged Sword - Feedback from the Industry

Nadia KHIATI
Université de Saida

Résumé
The present paper tackled one aspect of the findings emanating from current PhD research as to the actual experiences of industry professionals from two subsidiaries of the Algerian energy company with translation. Based on a questionnaire administered to 132 employees, and an interview conducted with 43 of them, the findings revealed that the engineers' use of translation helped handle English language challenges; fostered information sharing; and, to a lesser extent, allowed for knowledge transfer. The findings also pointed to the role of the senior engineers' language and specialist knowledge in checking the quality of automatic translation. This paper ends up with a call for more training to improve the local staff's English skills and for the creation of a language/translation department to facilitate the engineers' professional performance.

1. Introduction

In today's globalized world, professional efficiency requires engineers to show, in addition to their specialist know-how, a certain proficiency in foreign languages, namely in English(Male et al, 2009). Because English is the global language of international communication and technology in the Algerian sector of energy industry, too, a good command of English is regarded as an asset that fosters both communication with foreign partners and access to technological innovations and knowledge. In such a constantly changing workplace, the new status of the global engineer grants the latter additional English skills that are not only limited to the specialist use of English for engineering, but also transcend to business communication (Kassim and Ali, 2010; Reimer, 2002).

Still, when English is neither the local staff's first language nor the habitual working language, the employees, with their non-native English competence revert to other available resources to handle their language difficulties and have their work done. One such resource, that the employees resort to, to handle English communication challenges is automatic translation. With the advent of Information and Communication Technology (ICTs) and the internet in particular, online translation software[1]is easily accessible. Otherwise, the translation application is easily downloaded in the engineers' personal computers or smart phones and can be used offline. In the midst of this complex but interesting situation that is the result of the internationalization of their respective company, an interest into the way the employees use translation software to cope with the different linguistic and professional requirements of industry has triggered the present research topic.

2. Previous Studies on Translation as a Communicative Task

Investigations into the professional workplace have been interested in uncovering the language challenges that derive from the globalized workplace and in particular, the employees' real practices and procedures to strive for communicative success. While some are purely descriptive, other studies, usually falling under the category of English for specific purposes (ESP) research, show a more pedagogical focus, and end up with clear pedagogical implications for better professional practice. Among these two categories of workplace-embedded studies, some have already reported on the employees' use of translation as a communicative task to get their work done as part of examining the various English language and communicative tasks emerging from authentic work environments

[1] Throughout this paper, the terms *'translation tools/software/ application(s)'* are interchangeably used to suggest that translation is reverted to with the help of a computer or another electronic device.

(Chew,2005; Louhiala-Salminen and Kankaanranta, 2012; Lavric, 2008; Lavric and Bäck, 2009)

Chew's (2005) investigation of the English language use in Hong Kong banks published in the ESP journal reveals that the employees resort to English translation of the Chinese reports, meeting minutes, and regulations meant for English-speaking banking professionals. However, in case of gathering information from international sources or consulting technical and computer manuals, translation is not advised. Instead, the reading materials are in English.

Other studies highlight the communicative challenges that inaccurate translations sometimes cause. For example, Louhiala-Salminen and Kankaanranta's (2012) examination of the language issues related to internal international communication reports on some barriers to communication that originate from poor translation of documents. Such a low-quality translation, as found out in this study, creates a barrier to knowledge access and information sharing. Eventually, the study recommends that improving the quality of translation is a guarantee to equal access to knowledge and information sharing among the employees.

Similar findings related to problematic translation are described in Lavric's (2008) report. In the case studies she describes, companies with technological products complain about the translated documents by professional translation bureaus that are, more often than not, inaccurate. In particular, the source of inaccuracy lies in special terminologies, which leads to a problematic translation. As a result, the report observes that the case companies avoid using the services of professional interpreting and translation competences because of special terminologies. Instead, the companies in question resort to their own experienced staff, or else, to some habitual clients, to do the translation.

Decidedly, reverting to translation, as reported from different professional settings, either facilitates or hampers workplace communication. By providing similar insights from an authentic Algerian engineering workplace, the present paper aligns with the afore-mentioned studies to contribute with industry professionals' real-world accounts as to the use of translation software, with all the advantages and risks that this activity entails. The following section describes the main methodology adopted in this paper. Then, the main findings are presented and discussed followed by the main conclusions.

3. Methodology

The data used in the present paper derive from a larger empirical PhD research-in progress-that initially explores, among other things, the ways in which the Algerian employees in the globalized sector of energy industry handle the English language demands imposed on them during the accomplishment of their work-related tasks. To this end, two tools of primary data collection were deployed, including a semi-structured questionnaire and an interview. Before sketching them, a description of the research context as well as the participants in the study are first proposed.

3.1 The Research Context

The data used in this paper were obtained during the author's field visits to two subsidiaries of the Algerian energy company for a period of three months (from 1 March to 7 June 2015). The subsidiaries in question are two neighboring chemical plants whose original builders(and renovators) are Americans. Thereby, the internal technical documentation (operational manuals and technical specifications) mostly exists in English. Apart from this, the company subsidiaries are often involved in international service contracts with the result that foreign suppliers and manufacturers provide them with new equipment

or spare parts. With their secondary school English level, Algerian engineers are often obliged to comply with their English speaking business partners. Here, English still does not enjoy the status of a default[1] working language as French does. French, the colonial heritage is the language of internal corporate communication, say, a language that the feel most at home in using.

3.2 The Participants

The participants of the study consist of industry professionals of different categories including lower-level engineers, middle-managers (heads of services), and high-level managers (heads of departments). However, the bulk of them are engineers who belong to the technical and maintenance departments. The reason behind adopting such a purposive sampling (Ross, 2005) lies in the fact that industry engineers are the ones who most regularly and actively use English for professional purposes (see for e.g., Reimer, 2002; Kassim and Ali, 2010). This claim is also informed by the researcher's fieldwork into this workplace setting during the completion of both her Master's and PhD dissertation (in progress). Below is a description of the sample according to the working experience.

[1]In this state owned company, the official language of internal communication is Arabic, however, the words of a middle manager truly summarize the language situation in energy industry when he says, *"I have never seen a document written in Arabic, apart from condolences"*(interview data; author's translation).

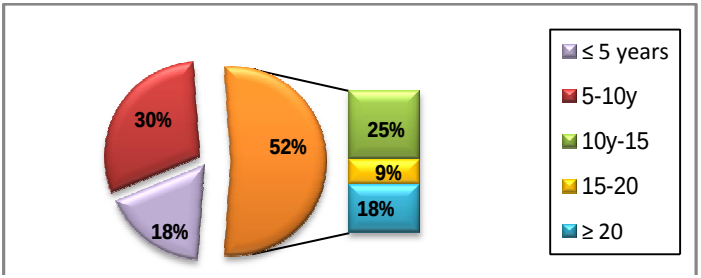

Figure 1: Industry Professionals' Working Experience

As Figure1 assists to show, the 70% of the sample having more than 10 years of experience grants the respondents the status of 'established engineers' (Male et al., 2009) or a 'specialist informants', who, according to Leong (2001, citing Selinker, 1979), are well positioned to explain '*…what…expert members of the disciplinary culture do when they exploit language in order to accomplish their generic goals'*. That is, they represent a reliable source of information for the present study thanks to their solid experience derived from their long-standing immersion in the specialist domain of work.

3.3 The Questionnaire

The semi-structured questionnaire was administered to 132 employees to elicit information about the use of English at work including questions enquiring about the frequency of communicative tasks that require the use of English skills at work, or else, the type of knowledge (linguistic or specialist) that enhances or impedes communicative success. However, the most relevant question for the sake of the present paper was the open-ended one requiring the respondents to provide input about the individual strategies that are actually used to cope with English usage. The researcher proceeded then to the categorization of the identified themes according to different headings.

3.4 The Interview

The interview was conducted in French with 43employees. The aim was mostly to collect qualitative data including detailed accounts on the use of and need for English as well as the language challenges emanating from workplace demands for English. Conducting the interview in English rather than French, the habitual language of internal communication, would not have allowed for the expected outcome, that is, detailed information aimed at (due to the interviewees' varying levels in this language). That said, all the translations of the interview representative quotes including any shortcomings are of course the author's.

Storing the interview transcript, which equalled 36.000 words, under a digital TXT format enhanced its examination with TXM[1]corpus analysis software (Heiden et al., 2010). Apart from the descriptive counts that co-occurrence data offered, using such software-enhanced analysis helped create concordance and that would back up the qualitative[2] analysis of the interview by spotting the most recurrent themes as well as cross-checking the interviewees' responses.

4. The Results

This section details the findings related to the use of translation as a reaction to the interface being identified between English as an international language of business and technology and French as the default working language in the engineering workplace under study. It is divided into two parts. The first

[1]. More information on the textometry software are found in the official website of its creators (http://www.textometrie.ens-lyon.fr)

[2]From the moment that the interview was conducted, transcribed and digitally stored in French, corpus tools were used to explore the recurrent themes dealt with in the interview rather than to investigate the lexico-grammar (linguistic realizations) of the discourse being produced.

part deals with quantitative findings of the questionnaire, namely those that are relevant to the topic focused on in this paper. More qualitative findings deriving from the interview will be tackled in the second part.

4.1 Questionnaire Findings

To the open-ended question enquiring about their coping strategies as regards the use of English, and without being asked, the respondents deliberately invoked the translator as a resource through which they cope with challenges emanating from English language use. The following graphic display illustrates the employees' responses.

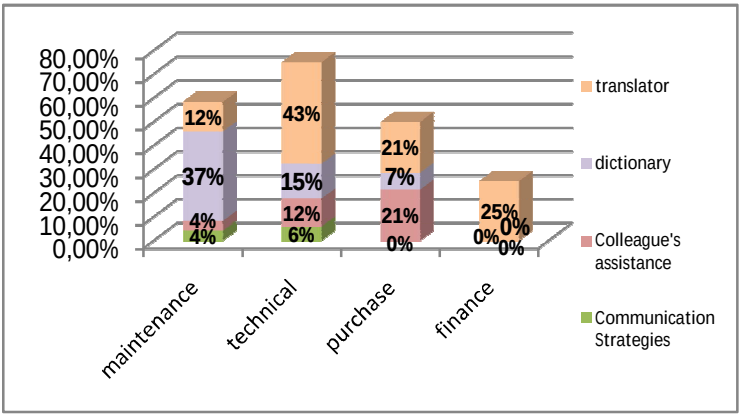

Figure 2: The Different Company Resources Used to Handle English Communication Tasks.

As it appears from the above figure, all the departments' staff members unanimously report on the use of the translator (online or application) as a strategy to handle multilingual situations.43% of the technical department staff; 21% of the purchase department staff; 25% of the finance department; and 12% of the maintenance department staff reports its use as a

task facilitator in the fulfilment of work-related communication tasks. The respondents' use of the dictionary presupposes the technical dictionary, i.e., the dictionary of technical terms, not necessarily bilingual, which is out of the scope of this paper.

Colleagues' assistance is however noteworthy here because it is invoked with a considerable percentage in the technical department staff (12%) and to a lesser extent (4%) by the maintenance department staff. At this stage, however, it is too premature to precise how they both human and automatic language assistance interact. Supplementing such quantitative findings with a more qualitative examination of the relevant communicative tasks that engineers typically encounter is what the subsequent section proposes.

4.2 Interview Findings

The interview results suggest that the translator is one of the resources that the interviewees draw on to accomplish different communicative tasks. The most frequently cited tasks are proposed below in the light of representative quotes or concordances from the interview.

4.2.1 Translation in Technical (email) Communication

The engineers resort to translation in e-mail communication, while reading or composing their message as evidenced by the following quotes:

TI6*:… I can communicate via e-mail. I cannot write advanced English, I make mistakes; I look for the translation; I ask the help of colleagues. And they (foreign partners) normally send back a reply. It means that they understand (my English).*

TI5: *We have trouble using English. This is why we directly pass to the translator- or to colleagues who master English*

and who can understand what the e-mail message really means.

TI8: *When being sent an email in English, I have to answer in English. There is internet there are- the solution now is vast. There is the translation software from French to English- (there are) many things.*

From the quotes above, the engineers' opting for the translator be it online or as an application, is a straightforward solution to difficulties encountered with language usage. It appears that using automatic translation to fill in immediate gaps in English knowledge enables its user to be less handicapped and attain certain autonomy in English language use. Noteworthy is the way in which automatic translation tools precede human assistance as evidenced from the two first quotes.

Because writing, or even reading, can be collaborative in nature, asking for the assistance of their English proficient colleagues' takes place from time to time to compensate for the lacks resulted from such an automatic translation. In this sense, the linguistically ablest colleague intervenes either to remedy for any linguistic irregularities that the translation tool may have caused or to check whether the translated text is still faithful to the required meaning. Decidedly, the role of experienced staff in compensating for the lacks translation software is crucial.

4.2.2 Reading Materials and their French Translation

Engineers constantly need to read technical English materials for knowledge access and information sharing. In addition to the internal technical documentation (operational manuals, codes, etc.) engineers also receive reading materials under the form of technical specifications or technical reports from foreign suppliers or service providers.

TI8: *The majority of manuals, codes that we use are in English, it is rare to find them in French. We do the translation with our own means and that's all.*

TI5: *Generally speaking, all the technical documentation is in English. When we do not understand, we use online translation.*

Those engineers with rudimentary English level help themselves understand the information needed by using the translation software or referring to the already available translated French version that foreign suppliers provide to the Algerian clients on demand. It is of note, however, that this '*passive method*', as qualified by one of the interviewees, is not at all profitable. The high translation costs of official documents, such as '*tender specifications*' is a case in point. The following quote of a middle manager from the maintenance department better explain this:

MMM2: "*Unfortunately, we lose a lot of time and money because of French. …because the language of industry and world leaders are Anglophone…Our tender specifications are produced in French. …according to a US company, translation is very expensive. We pay these translation costs indirectly...*"

In addition to the high costs, the interviewee also points to the long time span that English to French translation takes, which hinders the process of the business transaction. This is confirmed by similar studies (Lavric and Bäck, 2009). Worse, further evidence points to mistranslations in the final French version that, after all, non-French-speaking foreign partners provided. This is proposed in the sub-section hereafter.

4.2.3 Automatic Translation Defaults

Software-supported linguistic analysis was particularly useful in showing how the interviewees evoke problematic

translation. Using the search feature in the TXM tool revealed that the French term 'translation' (Fr. *traduction*) most frequently co-occurred with the term 'sometimes' (Fr. *des fois*). With a mean distance of 4.6, 'sometimes' was the third most co-occurring words with 'translation'. Sending these co-occurring words to the concordances revealed that the two terms 'sometimes' and 'translation' co-occur 12 times as highlighted in the English version of the most representative lines .

Co-occurrence Data Sample for 'sometimes' and 'translation'
1) "*…there is the translated version which is a bit limited.* ***Sometimes the translation*** *is done word for word and misleads us."*
2) "*(the original English version is easy) to understand because* ***sometimes the translation*** *is not really well done."*
3) "*They demanded French translations of documents during the renovation contract.****Sometimes the translations*** *were bad. We prefer the original documentation provided in English."*
4) "*When trying to read the documents, every time we do****the translation****, that is done literally, word for word- because*** ***sometimes****there are expressions, 'idioms' (that automatic translation cannot faithfully reproduce)."*
5) "*In case of difficulties, we use online translation.****Sometimes the translation*** *is not correct, it is not always accurate."*

Table 1: Concordance Data Sample of the Terms 'sometimes' and 'translation' (English Version)

As the tabular extracts above show, the engineers qualify automatic, so called, '*word-for-word*' translation to French (line 4) as '*limited*', '*misleading*' (line 1); '*not correct*', nor '*accurate*' (line 5).In one word, they do not find it as '*really well done*' and as '*easy*' to understand as the original English version (lines 2 and 3). Here again, the engineers' language and expert knowledge enabled them to detect how imperfect automatic translation is. Decidedly, neither the French version of the English technical documents, nor the engineers' own

online French translation of English reading materials are found to be accurate. Word-for-word translation alters the meaning and causes misunderstanding, if not, misinterpretation. For an engineer in quest of technical information, the French documentation is more likely to be misleading than instructive.

A further manual[1] examination of the interview transcript shows how the engineers elaborate on the reason for which technical reading materials are better in their original English versions. They find that, *'technically-speaking'*, English is better. Others view English as *'the language of technology'* whereas French is rather *'the language of literature'*. That is to say, reading documents in English means, *'to understand better'*; *'to learn quickly'*, and *'to be up-to-date with technology'*. All these references denote that French translations are not that technical to yield in rich information. Lavric and Bäck (2009) truly mention the reason for which the translations of specialist texts are not faithful to the original one lies in the problem of specialist terminology. Presumably, this is the idea that the interviewed engineers tried to convey in their above quoted words.

4. Discussion and Conclusion

As evidenced from the questionnaire and the interview data industry engineers opt for automatic translation to cope with difficulties in English usage. Further details on the use of the translator emerged from the interviewees' accounts in particular. In other words, the engineers revert to English-to-French translation in relation to reading tasks, when reading

[1]. Though recurrently invoked, evidence of some themes (expressed differently) could not be highlighted through the concordance lines provided by the corpus analysis software. That said, only a manual reading of the transcript could reveal them.

incoming emails sent by the foreign partners, technical reports or manuals. From another part, French-to-English translation is related to writing tasks, mainly when responding back to an e-mail query sent by the foreign partners. Thus, the automatic translator enters into play when English is used for both engineering and business communication.

By using the translator likewise to fill in immediate gaps in English knowledge, these engineers, with 'no-waste-of-time' attitude find immediate gratification. Without the translator, most of them would not have dared take any risks to, say, participate in email communication with their international business. However, the findings also show that engineers dare revert to automatic translation in technical communication because there are always some linguistically-ablest colleagues who can rectify any detected anomalies. These colleagues generally belong to the work experienced staff category that is professionally and linguistically qualified to immediately intervene in case such language anomalies hamper communication. This finding confirms Lavric's (2008) observation that the company's qualified staff, in the absence of specialist translators, has a key role in checking the translations.

In the absence of human assistance, one drawback of automatic translations of technical documents is that they are not always reliable. Instead of helping the novice reader understand the content, mistranslations or poorly translated documents may represent a barrier to knowledge access and information sharing. Similar findings are reported in Louhiala-Salminen and Kankaanranta's (2012) study. Accordingly, the established engineers, those with enough work experience, go further to recommend to their colleagues not to completely and solely rely on translation applications when dealing with technical reading materials. In line with Lavric and Bäck's (2009)

similar observation in another professional setting, these senior engineers, therefore, recognize the risk of mistranslation that results from the non-expert workers doing the translation themselves.

In a nutshell, the general attitude prevailing among the engineering staff is that it is more advisable to read technical manuals in their original English version rather than translate them. This attitude among the local engineering staff has equally been echoed in Chew's (2005) investigation in a different professional environment. A long term language investment will perhaps be more profitable to the Algerian industry and its workforce than paying business partners for costly translations to French. This profitable language investment in question consists of providing English training (or retraining)to the local workforce to adjust to the new requirements of the global industry and business.

Additionally, as it has been mentioned in the findings above, the only human language support that the engineers rely on in the company are English proficient colleagues. However, recurrent calls for assistance will cause these linguistically ablest colleagues to be overwhelmed by additional tasks as evidenced from the interview data and further confirmed by Lavric and Bäck (ibid.). This is why there is an urgent need for recruiting expert translators and language assistants within the case chemical plants to facilitate the tasks of pre-experienced engineers. For an already compartementalized plant, in which each department is assuming its responsabilities thanks to its specialized staff, a language/translation department can easily be created as it is normally done in similar organizations over the world. Likewise, the expert translator or language specialist will bring 'additional','human',foreign language assistance to the engineers by, say, proof-reading their technical reports ore-

mails to check the quality of their English writing or their translation.

A further point needs to be raised in reaction tothe pertinent finding of the present paper suggesting, from the industry professionals' perspective that technical reading materials are of better quality when being read under their original English version. As explained by Poncini (2002) and Lavric and Bäck (ibid.), the reason for which automatic translations are not that technical is that they do not faithfully replicate the specific terminology of the original specialist texts. As long as French translations continue to be read, something ought to be done. Hence, to follow the expert suggestion of Poncini (ibid.), providing the industry staff and even professional translators[1], if any, with a glossary of the main industry-specific terminology together with short French translations will be more helpful in familiarizing the latter with specific terminology and preventing the former from falling in the trap of automatic translation.

The present examination of the translation practices is not comprehensive. It is worthwhile to observe alternative forms of translation practices in industry. This could be possible by qualitatively analysing authentic samples of workplace interaction, such as international meetings, where some of the participants play the role of the translator *in situ*. Studies suggest that the professional participants who are doing being translators are often the most linguistically privileged of their group (see for e.g., Lavric, 2008). They act as translators in the

[1]. In LSP literature, even professional translators are often 'outside' translators who possess but general language expertise that is not necessarily related to the specific domain and terminology of the professional context they are recruited in.

absence of an expert translator or even in his or her presence[1]. Lavric and Bäck (2009) declare that it is in business negotiations that translations most frequently occur. A first-hand examination of the -not yet explored- authentic data available to the author confirms the presence of translation practice during the meeting, too. Ample examination of the real-time instances in which the professional translator's language assistance is called for or marginalized will certainly yield in informative results about the real motivations of such language behaviour.

To conclude, this paper depicted how helpful, but also challenging, automatic translation tools sometimes were in authentic work environments. It also pointed to the experienced Algerian engineers' awareness of the fact that poor translation means '*poor communication effort'*, to borrow Poncini's (2002: 22) words. In a similar authentic and globalized professional context, where foreign languages use is an essential tool for getting the work done, not only the local staff, but also foreign companies being involved in joint business have to be sensitized to the negative effects that poor translations may have on their partners, and eventually, the progress of their mutual business.

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[1]. One of the engineers explained that professional translators are of little help in meetings as they cannot convey the message meant by those engineers properly for the reason mentioned in note 6 (interview data).

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