Saving donkey work: Simplifying academic texts for translation

Ibrahim Aksu

Abstract: This paper investigates the question of whether texts can be successfully simplified for the purpose of translation in the academic environment. Research was conducted at a Turkish state university using questionnaires, interviews, and experiments. A multi-stage format was followed in which further research was carried out on the basis of intermediary findings. The issues discussed include: text simplification, Machine Translation, attitudes of university lecturer-translators, time-saving using simplified texts, translation difficulties to/from English and Turkish, sentence length and complexity, and translation needs in the academic context. It was found that although simplified texts offered speedier translation and reduced ambiguity, the benefits have yet to be widely recognized.

Keywords: academic texts, simplification, translation, Turkish, time-saving.

IntroductionTurks are not new to the art of translation. Every type of text was translated during the time of the Ottoman Empire, and today, a large quantity of printed matter presented to the public has been translated from other languages. However, the demand for translation far exceeds the number of qualified translators [1]. Thus, academic personnel in the English Department at universities in Turkey are often asked to translate a text to/from English or Turkish for someone inside or outside the institution. The texts vary from official documents, abstracts, and academic papers to court cases, instruction manuals, and restaurant menus. The work of these 'lecturer-translators' provided the starting point of this paper. Research was then carried out to examine whether simplification of texts might benefit not only the translators but also the authors of scholarly texts.

This study proposes that the writer of a text should share responsibility with the translator for ensuring the translation is accurate and unambiguous. If the original text is rewritten for the purpose of translation (which can be done much faster nowadays, thanks to computers), or written more simply with translation in mind, the time spent by the author doing so will be less than the time spent by the translator and the result far more satisfactory. It would also reduce the risk of ambiguity and increase the likelihood of papers in English being accepted for international publication.

Methodology, instruments and participants

This study looked at text simplification from the point of view of: (a) the translator, (b) the author, and (c) the text itself. Research was carried out in several stages using questionnaires, interviews, and experiments at Çanakkale Onsekiz Mart University (ÇOMU) in Turkey between 2009 and 2012. The participants were the academic staff of that university, in different faculties and departments, with the brief involvement of some students.

Opinions of university lecturer-translators towards translation

The first stage of the research aimed at learning the attitude of university 'lecturer-translators' about translation. A 7-item questionnaire (A) was applied to 25 members of the English Language Teaching (ELT) and English Language & Literature (ELL) departments at ÇOMU, in English. All were Turkish native-speakers. For some questions, respondents were allowed to choose more than one answer.

Positive	Lecturers	(%)	Negative	Lecturers	(%)
It's challenging	11	34	Being paid for it increases my motivation	14	43
It's just part of the job	8	25	I only do it if there is no escape	12	36
I don't mind doing it for friends or colleagues	5	16	I hate doing translation for anybody	7	21
I quite enjoy it	4	12.5			
I do it willingly	4	12.5			
TOTAL RESPONSES	32	100		33	100

Table 1. Opinions of university lecturer-translators about translation (Questionnaire A).

The responses to Questionnaire A revealed an ambivalent attitude towards translation. Seven lecturers enjoyed doing translation, 4 did not enjoy it, and 14 said it "depended on the text". The most frequently-chosen answers to the question "What is your attitude to translation?" are shown in Table 1. Despite the difficulties or reluctance involved, most (17) of the lecturers stated that they were "usually happy" with the final version of their translation, 3 of them "sometimes", and 4 of them "always". Nearly all (23) of the lecturers found English to Turkish translation easier, which is natural since it is their native language. Regarding the type of text they usually translated, 6 replied English-Turkish, one said Turkish-English, and 17 replied it was both ways.

To summarize, the lecturers made valiant efforts with various, often tough translation tasks and perceived the results as successful most of the time. Given that the work is additional to their main duties, the next step was to discover whether the task could have been made easier if the text was simplified.

Text simplification and computerized translation

The second stage of the research examined the concept of text simplification and its role in computerized translation, commonly known as 'machine translation' (MT).

Text simplification (previously called 'Controlled Language' or 'Plain English') is widely used in the fields of education, medical literature and technical manuals. Starting with the 'BASIC English' of Charles Kay Ogden in the 1930s, it was followed by 'Caterpillar Fundamental English' in 1970, 'Caterpillar Technical English' in the 1990s, the 'International Language for Service and Maintenance' (ILSAM), and 'ASD Simplified Technical English' (formerly known as 'AECMA Simplified English'). The guiding principle behind all these systems is the same; a controlled vocabulary and a set of grammatical rules. Simplification of texts is carried out by (a) syntactical-structural and (b) lexical modifications in

which longer, complex sentences are converted into shorter, simpler sentences while difficult words are replaced with more common synonyms.

An exception to this is the need for text simplification in computer-based translation but a major problem is how to deal with 'long sentences' and 'complex sentences' [2, 3, 4]. Solving this has so far met with insurmountable obstacles, for two reasons: (a) computers lack 'common sense', and (b) in the real world authors do not always write logically, thus sabotaging the software. Efforts to overcome the problem by Turkish researchers were also hampered by financial constraints [5, 6, 7].

MT first became widely available in Turkey around 2004 when the first text translator program appeared on the market, claiming to instantly translate an unlimited number of English pages into Turkish (but not Turkish to English). By 2006, the product was re-branded and claimed only to 'support' translation. In 2009, we carried out an experiment using free online computer translation services to assess how useful they might be in the academic sphere. Six web sites were asked to translate 'It was a pleasure working with you.' into Turkish. None of the translations were satisfactory and most were nonsensical. When the experiment was repeated in 2012, two sites (*translate.google.com*) and (*www.translation-services-usa.com/turkish*) produced an acceptable result. This was encouraging enough to continue with the experiment. The sentence: 'Preliminary results of the survey were determined to be inconclusive' was input into (*translate.google.com*). However, the online program did not recognize the negative prefix at the end and gave the same result as for the sentence: 'Preliminary results of the survey were determined to be conclusive'. By 2015, improvements had been made (Google software claims to be "self-learning") and the same web site gave a correct translation. Nevertheless, other experiments confirm that MT is still seriously flawed and cannot be used for reliable translation of academic works. Also, no research has yet been carried out to write computer programs that actually *simplify the text themselves* before trying to translate it.

With no alternative to the human translator but a continued need for greater speed and accuracy, the next stage in the research focused on testing whether text simplification could bring about faster translation.

Time-saving using simplified texts

In the third stage of this study, an experiment was carried out to measure the time gained when translating a simplified text compared to the original. The expected result would be a shortening of the process, as represented in Table 2, where there is an overall time saving of 20%.

Original version of text	Time	Simplified version of text	Time
Time to simplify text	none	Time by author to simplify text	1 hour
Time to translate text	5 hours	Time to translate simplified text	3 hours
TOTAL	**5 hours**	**TOTAL**	**4 hours**

Table 2. Hypothetical calculation of time saved in translation by text simplification.

Experiment A (quantitative)

The first experiment was conducted with 21 final year ELT students during their weekly 'Translation' course. They were given the simplified version of a short academic-style text (4 sentences, 53 words) to translate from Turkish to English and asked to note down when they started and finished (i.e. how long it took them). They were allowed dictionaries. This would be followed by a different class

translating the original (unsimplified) version on a different day. The average time taken to translate the two texts (original and simplified) by each group would then be compared.

The first stage of the experiment was not successful. The students spent from 7 to 20 minutes translating the simplified text with no great difference in accuracy. The lecturer who administered the experiment attributed the significant time discrepancy to two main factors, (a) differing degrees of willingness to do the task, and (b) despite the students being a homogenous group who theoretically possessed equal knowledge of their native language and the target language, some may have found the task more difficult due to their educational background and/or for cognitive reasons. Since the first part of the experiment was inconclusive, the second part was not carried out.

Experiment B (qualitative)

More meaningful was a small-scale experiment carried out by the author of this paper and a colleague in the English department. There was a requirement for a departmental letter to be translated from English into Turkish. Both the grammar and vocabulary of the letter were simplified, and the colleague translated it. After completion, the colleague was asked to comment in writing on the version that had been translated with reference to the original, which was shown. The colleague noted that:

It is better to translate texts from simplified versions. The first reason is that translation is time-consuming. Secondly, in the 'simplified version' you come across words that you always use in daily life, so it is easy to find Turkish equivalent forms and also alternatives of the same word. Translating the simplified version took almost 20 minutes, but when I checked the original version, it is obvious that I would have spent more than an hour.

Thus, although the quantitative experiment did not produce a useful result, the qualitative experiment offered evidence of time-saving for the translator in excess of 50%. Calculating the time taken to *simplify* the text was unfortunately overlooked in both experiments but was of fairly short duration.

Difficulties of Turkish-English / English-Turkish translation

An important aim of this study was to identify particular areas of difficulty in the translation process. In the next stage, responses to item 3 in Questionnaire A (What are the worst aspects of translation?) were analyzed. Respondents could choose as many appropriate items as they wished. Results are shown in Table 3.

Difficulties of Translation	No. of Replies	(%)
Cultural differences	13	52
Vocabulary	12	48
English-Turkish linguistic differences	9	36
Lack of time	9	36
Looking in the dictionary all the time	8	32
Understanding the original text	7	28
Not finding words in the dictionary	6	24
It is time-consuming	6	24
Grammar	4	16

Table 3. Difficulties of translation according to 25 lecturer-translators (Questionnaire A).

The translators appeared to encounter the greatest difficulty with the 'vocabulary' of English. Estimates of the number of words in English, based on different criteria, vary from 350,000 (New Oxford Dictionary, 1998) to 475,000 (Webster, 1993) but over 1,000,000 according to Global Language Monitor (2009) and a joint Harvard/Google study (2010). By comparison, Turkish has fewer words. One reputable source puts the number at 111,027, but 616,767 when including derivatives, terms and names (Turkish Language Board, 2011). Turkish translators therefore feel at a disadvantage in respect to English vocabulary.

'Grammar' is rated lowest in terms of difficulty. A random selection of lecturers in the Foreign Languages Dept. of ÇOMU was asked which language was more complex with regard to its grammar, English or Turkish. The majority replied without hesitation that Turkish grammar was more complex. Since they perceived English grammar as easier, this would put them in an advantageous position regarding translation of sentence structures.

There are few scholarly studies comparing the complexity of world languages, but Turkish grammar can be said to be difficult only in the sense that it uses multiple prefixes and suffixes to convey tenses, prepositions, pronouns, and other syntactic functions. It is also very regular, and is one of the languages on which Esperanto is based. A brief comparison of Turkish and English is useful here. Turkish is an agglutinative language belonging to the Altaic branch of the Ural-Altaic family. English is an Indo-European language. English lexicon arises mostly from Romance and Germanic languages whereas Turkish contains predominantly Turkic words together with Persian and Arabic. Translating Turkish to English and vice-versa therefore requires knowledge of two completely different language systems. The order of components in a sentence, for example, is almost the reverse.

Although it would appear from this research that translators might benefit more from simplifying English vocabulary than its grammar, mistakes found by the authors of this study in translated texts indicated that syntactical structures are just as important. This aspect was investigated more fully in the next stage of the research.

Sentence length and complexity

The fifth stage of the research investigated the role of sentence length and complexity in relation to translation.

Sentence length

It is clear there is no limit to the length of a sentence in any language. In English, a single sentence of 4,391 words may be found in James Joyce's 'Ulysses' (1922), one of 13,955 words in 'The Rotter's Club' by Jonathan Coe (2001), and another 2,403,109 words long in Nigel Tomm's 'The Blah Story' (2008). In French, the record is held by Victor Hugo for an 823-word sentence in 'Les Miserables' (1862). In Polish, there is a 40,000-word sentence in 'Gates of Paradise' by Jerzy Andrzejewski (1960). 'Dancing Lessons for the Advanced in Age' (1964) by Czech writer Bohumil Hrabal consists of a single sentence, 128 pages long. The quoted works are all novels, and long sentences in literary works are perhaps to be expected, but they do tend to prove the point. We would like to propose, therefore, that there is no limit to the length of a sentence written in one's native language but there is a limit to the length of a sentence that may be successfully translated into another language such that comprehension is retained, depending on complexity (see next section).

To obtain a figure for the average length of Turkish sentences in the academic context, the number of words in the first 5 sentences of the introductory paragraph of 5 different papers in a book of conference proceedings [8] was counted. The 25 sentences produced an average of 19.76 words per sentence. The two shortest sentences were 9 and 10 words long while the longest were 40 and 52 words long. Since Turkish does not use the definite article, and prepositions and auxiliary verbs are in the form of suffixes, this represents a considerable density of language.

Regarding average words-per-sentence in academic writings in English, the Simon Fraser University, Canada (*www.sfu.ca/~whitmore/style/clarity*) recommends 18-24 as a target. Lancaster University, UK (*www.lancs.ac.uk/celt/sldc/materials/science/sentences*) advises that "sentences in most scientific writing should be around 15 to 20 words long". Studies have suggested that the actual average is 23.29 or more [9]. However, most of these studies are concerned with the *readability* of a text. The issue in this study is the *translatability* of a text.

A brief experiment was conducted to try and answer the question of whether sentence length is a problem in translation. The result suggests it is not. Two rather long Turkish sentences by different writers from a book of conference proceedings [8] were shown to two faculty members who were asked to decide whether they could be simplified for translation. For the first, shorter sentence of 25 words, they replied that it could be simplified to one of 14 words. In contrast, they stated that the second, longer sentence of 33 words was not complex, did not require simplifying, and could easily be translated.

Sentence complexity

Regarding sentence complexity, a paper by Armstrong [10] claims that the more difficult to read or "unintelligible" an academic paper is, the higher it is rated for research competence. Academic writing has never been known for its clarity and there is plenty of literature to support this, including the comment by Benson [11] that "Academic Bad Writing is indeed old news, and no secret. But it is also on-going; a thriving, flourishing, burgeoning industry with all too much product." Hence the annual 'Bad Writing Contest' that ran between 1995 and 1998 and awarded prizes for the worst academic prose from a published scholarly book or journal article [12]. Reasons given for the low esteem of academic writing include: (a) over-use of jargon, (b) pretentiousness, (c) trying to make a trivial subject seem more important, and (d) wanting to appear clever in the eyes of peers in order to be taken seriously. Turkish academics are as guilty of this as anybody. One of the interviewees for this study stated, "We like exaggerating and showing off with long sentences."

Density in Turkish sentences

One reason for translation difficulties between Turkish and English, which did not emerge from research but was observed on a daily basis in many written documents, is that Turkish sentences can effortlessly incorporate more information than a typical English sentence. What is accomplished with the addition of a simple suffix in Turkish requires articles, pronouns and linking devices in English. Translating a Turkish sentence containing a large number of sub-clauses is sometimes impossible without creating ambiguity. Even if achieved, the result will be cumbersome. 'Information overload' is therefore one of the biggest problems translating Turkish into English, as per Example 1:

1. *Üniversitemizin Mühendislik Mimarlık Fakültesi Jeoloji Mühendisliği Bölümü Araştırma Görevlilerinden O. D. ve Fen-Edebiyat Fakültesi Coğrafya Bölümü yüksek lisans öğrencisi Z. A.*

Finlandiya'nın başkenti Helsinki'de bulunan Finlandiya Çevre Enstitüsü'nde Avrupa Birliği tarafından 02-07 Kasım 2008 tarihleri arasında düzenlenen "Suküre'nin Uzaktan Algılanması" adlı uluslararası eğitim kursuna burslu olarak katılmışlardır. ('O. D., a research assistant in our university's Department of Geological Engineering in the Faculty of Engineering and Architecture, and Z. A., a post-grad student in the Geography Department of our Faculty of Arts and Sciences, were given a grant to participate in an international training course on 'Remote Sensing of the Hydrosphere' organized by the European Union between the dates of 2-7 November 2008 at the Finnish Environment Institute in Helsinki, the capital of Finland.')

Even short sentences can be problematical in the sense that too much information crowds out the sentence and weakens the message, as in Example 2:

2. *Kültürel mirasımızın bir parça olan Güneş saatlerinin hem astronomi boyunda hem de kültürel boyuttaki önemi özellikle vurgulanmıştır.* ('It was stressed that sun clocks, which form part of our cultural heritage, are especially important from the perspective of astronomy and culture.')

To illustrate that Turkish is capable of carrying more information chunks than English, Example 3 is a sentence translated by a lecturer-translator. Due to the excessive number of noun clauses, the English sentence is difficult to understand. A simplified text would not have produced this result.

3. *This study is important in that it allows us to observe the effect on realistic field selection by first-year high school students in Turkey of group guidance sessions offered prior to the field selection decision to increase the realistic level of student interest perceptions.*

It should be mentioned here that papers written originally in English by non-native-speakers would also benefit from text simplification. Interviews with some lecturers revealed an awareness that they were writing long or complex sentences but they found the habit difficult to break. One admitted to the compulsion to "decorate" sentences with too much information. Another stated, "My sentences are too long. When I think about it, I can usually make them shorter."

Examples 4 and 5 are from scientific studies written originally in English by Turkish authors before proof-reading. They are not translations. It can be seen that the authors have tried to include too much detail in one sentence.

4. *There are two dams, namely the Destan and Maharde Dams, and a water regulator at Jisr As Shungur (Figure 1) on the river in Syria, but no dams exist in either Lebanon or Turkey.*

5. *For these parameters, the amount of irrigation water and its quality indicated similar trends, that is, plant development significantly depends on the amount of water and especially water deficit of 50% is the critical level, more than that severely affects plant developments.*

Given the 'information overload' problem that exists, it would be logical to carry out text simplification beforehand. In the following stage, experiments were conducted to see if and how it can be carried out.

Simplification of English and Turkish texts

In this stage of the research, the process of simplifying sentences was investigated.

Simplification of English texts

The syntax and vocabulary of an English text can usually be simplified when necessary. Table 4 shows a rather long sentence which would be clumsy to translate as it stands. In the simplified version, easy-to-translate words have been substituted, the original sentence divided into three, the subject repeated, and one word ('formative') omitted.

Original Text	Simplified Text for Translation
The predicted reason for their similar results was that preservice candidates in the arts were constructing assessments and the learning designs much the same way as other disciplines with a heavy use of multiple choice pre and post testing and lessons with primarily teacher directed instruction and low level formative assessment. (1 sentence, 51 words)	The expected reason for similar results was that preservice candidates in the arts were making assessments and lesson plans similar to other disciplines. The preservice candidates commonly used multiple-choice pre-testing and post-testing. They also planned lessons with primarily teacher-directed instruction and low-level assessment. (3 sentences, 48 words)

Table 4. English sentence with simplified version more suitable for translation into Turkish.

Simplification of Turkish texts

A university colleague was asked to try and simplify a Turkish sentence of similar length for the purpose of translation. Table 5 shows the original and simplified sentence.

Original text (Turkish)	English Translation
Gadamer'in bir metnin Schleiemacher'in ve Dilthey'in tanımladığı haliyle yeniden üretilmesini olanaksız olarak nitelemesinin temel nedeni, okurun yazarın ruh halini hissederek, kendisini onun yerine koyarak veya yazılanları zihninde canlandırıp yeniden yaşayarak yazarın başlangıçtaki deneyimini tekrarlayabilmesinin gerçekleştirilmesi zor bir olasılık olarak görmesidir. (1 sentence, 40 words) [8]	The basic reason for a text by Gadamer, as defined by Schleiemacher and Dilthey, being described as impossible to duplicate without change is the reader's difficulty in being able to recreate the writer's experiences at the beginning by perceiving his state of mind and putting themselves in his place or by bringing to life and reliving the writings in their mind. (1 sentence, 61 words)
Simplified text for translation (Turkish)	**English Translation**
Gadamer bir metnin Schleirmacher ve Dilthey'in tanımladığı haliyle yeniden üretilmesini olanaksız olarak nitelemektedir. Bunun temel nedeni olarak, okurun yazarın ruh halini hissederek, kendisini onun yerine koymasını veya yazarın başlangıçtaki deneyimi tekrarlayabilmesini neredeyse olanaksız olarak görmesidir. (2 sentences, 35 words)	A text by Gadamer, as defined by Schleiemacher and Dilthey, is described as impossible to duplicate as it is. The main reason is that it is almost impossible for the reader to recreate the writer's experiences at the beginning by sensing his state of mind or putting themselves in his place. (2 sentences, 51 words)

Table 5. Turkish sentence with simplified version more suitable for translation into English. (Translation by authors of this study)

Several actions were performed in order to simplify the sentences shown in Tables 4 and 5, bearing in mind that the procedure is not being carried out for the purpose of improved *comprehension* by the

reader (as in educational, medical, and technical applications) but for ease of *translation* from one language to another. The actions can be summarized as follows:

- Vocabulary was simplified wherever possible. Easy-to-translate words were substituted. Ideally, this requires knowledge of the target language.
- Words were omitted that would not be meaningful in the translated version.
- Sentences containing too much detail (data, information) were split into shorter sentences, i.e. the number of subordinate clauses was reduced.
- The subject was clarified or re-stated in all sentences, however simplistic the sentence may appear.

In further experiments with other lecturers, a tendency was observed on the part of the 'simplifiers' not to divide Turkish sentences, even much longer ones, into two or more shorter ones. The structures were revised but the sentence remained intact. This lends credence to the proposition that perhaps Turkish is more difficult to simplify than English. Anecdotal evidence was found in interviews that Turkish sentences, once written, cannot be simplified. One lecturer-translator stated, "English is easier to simplify than Turkish because it is more flexible. It is too difficult to disentangle the elements of a Turkish sentence after construction." This suggests that *re-writing by the author*, rather than *simplification by the author or another person*, would be a more practical approach for Turkish texts intended for translation.

Simplifying texts in university environment

At this point in the research, several questions arise regarding the author of a text.

1. Is the author willing to rewrite the text or have it rewritten by someone else?
2. Without knowing the target language, is the author aware of difficulties in translating their text?
3. Is a text simplified by the author less difficult to translate than the original, or possibly more difficult?
4. Is the author the ideal person to simplify the text, due to familiarity with the content, or the translator, who is more knowledgeable about the target language?

At ÇOMU, it is rare to find faculty members who have simplified an already-written text to make it easier to translate, even though revising a text on the computer is much easier than in the pre-digital age. It is often assumed by authors that translation is a short, easy task. After all, they have labored long into the night to finalize the paper in hand. The hard work is done. There is a natural reluctance to re-tread the same ground and simplify the same text. However, interviews revealed that some faculty members are aware of the need to do so.

An Associate Professor was interviewed who has published many articles in Turkish. He had also written four abstracts of these articles for journals requiring a summary in English. About these abstracts, written for the purpose of translation, he comments:

I wrote them in a plain unambiguous language where the translator could not misunderstand the meaning. I deliberately chose Turkish words that did not have alternative meanings, and though I write long sentences in Turkish, those for the summary were short. Especially because the subject matter is poetry – very dense, open to many interpretations. In this way, I expected the truest, most accurate translation possible from the translator, though I myself have no way of checking the accuracy of the

English. Because I am a language expert myself, I am aware of the difficulties of translation. Someone in the History or Sports department might not give this due consideration.

The opinions of other faculty members support this sensitivity towards recognizing the difficulties faced by the translator. A lecturer in the Faculty of Agriculture stated forthright that grammatical structures in scientific articles needed to be short and direct. Another, an archaeologist, commented that he always split German sentences that he was aware were difficult, in fact impossible, to translate into Turkish as they stood.

To learn whether a consensus existed on this issue, a 12-item questionnaire (B) was sent online to all academic personnel at our university. This was sent on 30 March 2009 to 925 e-mail addresses held in a database by the IT Department. A total of 46 replies were received, lower than expected but enough to form a useful statistical sampling.

For the analysis, it was decided to include only replies from academic personnel with a doctorate or PhD candidates. Additional completed forms were obtained on an informal basis from lecturers who had not received the online questionnaire. The final population of the census is shown in Table 6.

STATUS	Res. Asst.	Asst. Prof.	Assoc. Prof.	Prof.	TOTAL
FACULTIES					
Engineering	1	4			5
Business & Administration		1	1	1	3
Arts & Science		10	3	2	15
Agriculture	6	4	2		12
Education	1	5	1	1	8
Fisheries	1		1		2
Fine Arts		3			3
Medicine		3	1		4
Tourism	1		1		2
TOTAL	**10**	**30**	**10**	**4**	**54**

Table 6. Population by faculty and status of replies to Questionnaire B.

Table 7 summarizes the replies to Questionnaire B. The format was designed so that recipients could fill it in quickly and easily. For some items only a single choice was required while in others it was possible to select more than one. There are small discrepancies in the number of replies to questions where a single choice was expected due to some respondents giving no answer or marking more than one. Comments were invited for items 2, 5, and 11.

No.	Questions-Choices	No. of Replies	No. of Replies	Total Replies	(%)
1	*Have you ever had one of your studies translated into English?*				
	Yes (Group 1)	27		27	50
	No (Group 2)	27		27	50
	TOTAL	**54**		**54**	**100**
2	*If the answer to Question 1 is YES, were you satisfied with the result?*				
	Yes	13	-		46.5
	No	13	-		46.5

		Group 1	Group 2		
	Don't know	2	-		7
	TOTAL	**28**	**-**		**100**
	If the answer to Question 1 is NO, please state briefly why you were not satisfied …				
		Group 1	**Group 2**		
3	*Who would you prefer to translate your text? (more than one answer possible)*				
	A professional translator	11	11	22	31
	A university student with good English	3	2	5	7
	A faculty member with good English	17	13	30	42
	An acquaintance with good English who will do it without charge	7	7	14	20
	TOTAL	**38**	**33**	**71**	**100**
4	*What is your opinion of MT?*				
5	*How would you prefer your text to be translated? (more than one answer possible)*				
	As per the original	5	7	12	19
	By simplifying the language	9	6	15	23
	The language may be changed a little without spoiling the meaning	19	18	37	58
	Other (please explain) …				
	TOTAL	**33**	**31**	**64**	**100**
6	*What style do you use when writing academic texts? (more than one answer possible)*				
	Short and to the point	7	9	16	23.5
	Quite long	7	9	16	23.5
	Simple and free of affectation	20	11	31	46
	Embellished and literary	1	4	5	7
	TOTAL	**35**	**33**	**68**	**100**
7	*Have you ever simplified one of your texts, e.g. an article or abstract?*				
	Yes	17	9	26	48
	No	1	6	7	13
	Partly	9	12	21	39
	TOTAL	**27**	**27**	**54**	**100**
8	*How difficult or easy is it to simplify the language of your texts?*				
	Difficult	1	1	2	4
	Possible with effort	14	11	25	48
	It can be done easily	12	13	25	48
	TOTAL	**27**	**25**	**52**	**100**
9	*Who should simplify the language of your texts?*				
	The text should not be simplified	2	2	4	7
	I prefer to do it myself	17	12	29	48
	A colleague familiar with the field	7	14	21	35
	The translator	2	4	6	10
	TOTAL	**28**	**32**	**60**	**100**
10	*How useful is simplifying the text when translating your studies into English?*				
	It's useful	17	19	36	68
	I'm not sure	9	6	15	28
	It's not useful	1	1	2	4
	TOTAL	**27**	**26**	**53**	**100**

11	*If there is anything else you would like to add on this subject, please write here …*
12	*What is your academic status? (7 choices)*

Table 7. Views by faculty members on translation and text simplification (Questionnaire B).

Overall, the questionnaire was successful in establishing the majority views of lecturers on translation and text simplification and in identifying key problem areas. The unexpected result in answer to Question 1 was that exactly half the respondents said YES and half said NO. This proved useful in the evaluation. Responses were therefore divided into two groups, Group 1 (YES answers) and Group 2 (NO answers), which could easily be compared. The results for Group 2 may be slightly distorted by the fact that respondents who knew English wrote their papers in that language or did the translating themselves and therefore had no need of a translator.

Fully half the respondents to Question 2 were dissatisfied with translations of their work. This indicates that more support needs to be provided for academics, possibly in the form of on-campus translation or proof-reading facilities, which only exist at present in a small number of Turkish universities.

Question 3 was the one most often left blank by respondents (2 in Group 1 and 7 in Group 2). One comment was, "It doesn't matter who the translator is as long as the standard is as I want." While there was some preference for professional translators, the greatest preference was for "a lecturer with good English" (42%), especially by Group 1. One weakness of Questionnaire B was that this could mean either a colleague in the same department or an English-teaching lecturer. Both may be intended. The choice of an acquaintance who "will do the translation for free" (20%) reflects a Turkish preference for (a) dealing with acquaintances rather than strangers, and (b) not paying for the service if possible. This is deeply-rooted in the culture and often leads to poor translations.

Replies to Question 4 were overwhelmingly of the opinion that MT is "not useful" or that lecturers "didn't know" or were "undecided". Analysis of responses has therefore not been included here.

Replies to Question 5 indicated a majority (81%) willing to accept changes to the text for the purpose of translation by "simplifying the language" (23%) or "without spoiling the meaning" (58%). However, the figure dropped from 81% to 68% in answer to Question 10 as to whether text simplification was "useful", possibly due to lecturers being unfamiliar with the concept of text simplification. A protective note was detected (more in Group 2) in the number of respondents (19%) who insisted translation should be "as per the original". One comment was, "If changes are made to the text, I must know about it. The translator should work together with the author when making changes."

In answer to Question 6, almost 70% said they wrote texts which were simple (46%) or short (23.5%). This finding may be usefully compared with answers to Question 8 where only 48% stated they would be "easy" to translate. The result may reflect anticipated difficulties with terminology. The low percentage (7%) who said they wrote "embellished and literary" (i.e. complex) texts is contradictory. About a third of the respondents were known personally by the authors of this study and some lecturers who stated they wrote long sentences (23%) in fact wrote short ones, and vice versa. It might be that a certain proportion of lecturers were unaware of the difficulties in translating a text. A difference of 28% may be noted in writing style ("Simple and free of affectation") between Group 1 (who had experience of their studies being published in English) and Group 2 (who had not).

This may be interpreted as those in Group 1 either adopting a simpler style, or being more successful in having works published because of their usual style of writing.

The high percentage of lecturers who replied they had simplified (48%) or "partly simplified" (39%) their texts in answer to Question 7 is difficult to evaluate based on this survey. It may have been due to lecturers complying with restrictions on the number of words in abstracts, for example. The question may also have been interpreted to include the shortening or editing of texts following journal editors' comments. The number in Group 1 (17) was almost double the number in Group 2 (9).

In answer to Question 8, the almost unanimous belief that texts were "easy" to simplify (48%) or "possible with effort" (48%) is surprisingly optimistic but supports the pretext of this paper, i.e. that simplification is necessary and can be achieved.

The answers to Question 9 are interesting. Almost half (48%) of the authors (more so in Group 1) preferred to simplify the text themselves. A large percentage (35%) preferred a "colleague familiar with the field" to simplify the text, which is similar to preferences in answer to Question 3 regarding the translator, though there are noticeable differences between the two groups. Only 10% trusted the translator with this task, possibly reflecting a worry about terminology. One comment regarding this item was the wish to simplify the text "together with the translator."

In answer to Question 10, a large percentage (68%) thought that text simplification was "useful". However, hesitation was present. Some respondents were "not sure" (28%) whether it was useful and two stated it was "not useful" (4%).

Question 11 allowed for comments and approximately 10 lecturers did so. Seven of these expressed a strong concern that the translator should be acquainted with the terminology used in their field or were dissatisfied because their texts had been previously wrongly translated for that reason. Typical comments were, "Translations made by persons not expert in the scientific field are not successful.", "Because the translator did not possess sufficient knowledge of the terminology in my field, it resulted in wrong English words being used and changes in the meaning.", and "I think the translation of technical terms and concepts is the most important problem in translating academic texts."

The replies to Questionnaire B indicated a positive response to the idea of text simplification despite differences among faculty members in terms of writing style and experience or lack of it publishing in international journals.

Discussion

Having works published in international refereed journals is crucial for the careers of faculty members. Success depends not only on the content of papers but also the correctness of language. Those written originally in English then polished to a higher standard have a greater chance of acceptance. This is not an option for all faculty members. Their English may be insufficient, or their second language may be, for instance, German or French. In one case, a lecturer who was fluent in German wrote a paper in that language and sent it to a journal in Germany. The journal returned the paper requesting it be in English. The paper was eventually published in a journal in Finland, in English, about 3 years later.

Submitting articles at a high enough standard of English is therefore one of the biggest problems facing Turkish academics today. Higher-ranking faculty members tend to require Turkish-to-English translation for international presentations and publications while research assistants need translation of English sources into Turkish. Hence a need exists for translation both ways, and the key role that on-campus translators play in the process. It is here that text simplification can play an important role, by

improving the accuracy of translation and increasing the chance of papers being accepted and published.

In an ideal world, simplifying texts would be unnecessary. Academics need only write more simply and directly. But while it is possible to write highly literate, jargon-riddled prose in their native language for publication in their own country, this is not the case nowadays in the international marketplace. Competition to have papers published in academic journals is increasingly cut-throat due to the internet and the number of papers submitted from developing countries around the world. Unlike the past, editors of international journals demand clarity and are more likely to reject ambiguous, poorly-written papers.

Conclusions and implications

This study set out to investigate whether simplifying texts for the purpose of translation is useful, whether it is possible, and whether it is practical in the academic environment. All aspects - translator, author, and text - were considered.

Regarding the translator, even a brief experiment showed that simplifying a text is possible and saves time for the translator. Regrettably, an opportunity was not found during this research to measure the *time spent rewriting a text* in comparison to *time spent by the translator*. Common sense, however, tells us that the former outweighs the latter (see Table 2). Terminology was also identified as a major problem with a lack of translators acquainted with terms specific to particular scientific fields.

Several conclusions may be drawn concerning the authors of academic papers. Firstly, research revealed that authors are rarely willing to devote time to rewriting papers despite improved accuracy of translation and a greater chance of acceptance by journals. Secondly, it was found preferable and more productive for the author to do any re-writing or simplifying necessary *before* it is handed over to the translator. Thirdly, lecturers showed a desire for translations to be done by acquaintances rather than professionals. About professional translation bureaus, one commented, "I thought about it but didn't trust them. They claim to be able to do it and charge a high fee but the result may not be as good as expected. So I preferred to approach a person that I knew and could trust, so as not to pay a stranger for nothing." Fourthly, lecturers generally appear to underestimate the difficulties of translation from their native language into English.

In texts intended for translation, both vocabulary and grammar must be as simple as possible. The vocabulary should be of a standard nature without the possibility of different meanings. This does not apply to terminology, which is often unique to the field. Sentence structures must be simple rather than complex, with a minimal number of sub-clauses containing too much detail. The subject of each sentence should be clear and repeated if necessary. This is especially important in consideration of the two languages studied here. One problem highlighted was that Turkish sentences on average are longer and contain more information than English sentences, hence the need to construct shorter sentences. Simplifying English sentences was determined to be easier than Turkish sentences though it is possible with both. Also, it was found the length of sentences is less important than grammatical complexity.

Human translation will continue to be the norm in the foreseeable future. The quantity of texts requiring translation will increase. A degree of standardization towards 'International English' using a more limited vocabulary is already taking place. This needs to be taken further. In the university community, where the internet and intranet are in constant use, the best method to promote more comprehensible and translatable texts might be to construct an online 'Translation Protocol' containing guidelines on how texts should be written, taking note of the points raised in this paper.

Finally, should anyone wish to replicate this research in another university or country, it is suggested that they include translators in all university departments, not only those in the English Department.

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