English for Specific Purposes 37 (2015) 112–121

Contents lists available at ScienceDirect

English for Specific Purposes

journal homepage: http://ees.elsevier.com/esp/default.asp

Friend or foe? Google Translate in language for academic purposes

Michael Groves [a,1], Klaus Mundt [b,*]

[a] Centre for English Language Education, University of Nottingham, Malaysia Campus, Jalan Broga, Semenyih, Selangor, 43500, Malaysia
[b] Centre for English Language Education, School of Education, The University of Nottingham, Dearing Building, Jubilee Campus, Wollaton Road, Nottingham, NG8 1BB, United Kingdom

ARTICLE INFO

Article history:
Available online 2 October 2014

Keywords:
Language for academic purposes
Machine translation
IT in SLA
Academic literacy

ABSTRACT

A recent development in digital technology, machine translation (MT), is improving in its ability to translate with grammatical and lexical accuracy, and is also becoming increasingly available for students of language for academic purposes. Given the acceptance of other digital technology for teaching and learning, it seems likely that machine translation will become a tool students will rely on to complete their assignments in a second language. This would have implications for the community of practice of academic language teaching. In this study students were asked to submit an essay in their first language and this was then translated into English through a web-based translation engine. The resulting English text was analysed for grammatical error. The analysis found that the translation engine was far from able to produce error-free text – however, judging in relation to international testing standards, the level of accuracy is approaching the minimum needed for university admission at many institutions. Thus, this paper sets out to argue, based on the assumption that MT will continue to improve, that this technology will have a profound influence on the teaching of Languages for Academic Purposes, and with imaginative use, will allow this influence to be positive for both the students and their instructors.

1. Introduction

An expert writer of academic English writes at a number of levels. The writer needs to take well-formed words, and use them to construct well-formed sentences, and then link these sentences together into clear, coherent and cohesive paragraphs. Beyond this, the writer then needs to align the writing with the generic expectations of the intended audience (Swales, 1998), as well as the stylistic conventions of the discipline that are commonly attached to specific genres (Biber, 2006). So the writer aligns the writing with the expectations of the communities of practice and enquiry in the field in which the writing takes place (Hyland, 2004).

Technological developments have long helped writers of academic English with many of these issues, either directly or indirectly. For example, corpus analysis has made much stronger and more robust descriptions of academic English as a genre,

* Corresponding author. Tel.: +44 115 82 32193.
E-mail address: klaus.mundt@nottingham.ac.uk (K. Mundt).
[1] Tel.: +60 3 8924 8692.

http://dx.doi.org/10.1016/j.esp.2014.09.001
0889-4906/

as well as the sub-genres within it than traditional linguistic work possibly could have (Peacock, 2002; Reid, 1992; Silver, 2003). Another example of beneficial uses of digital technology is that the wide availability of published papers on the Web has allowed students and researchers to examine the style and structure of vast swathes of academic writing. Further, freely available tools, such as Lextutor (www.lextutor.ca) and concordance tools have allowed students of academic English to examine their own interlanguage through various lenses and improve it (Cobb, 2010). This is well documented in various threads in the literature (Adolphs, 2006; Bruce, 2010).

In addition, new technologies have even entered the toolkit of all academic writers with little or no fanfare in the EAP literature. The spellchecker has enabled non-native and native speakers alike to write English that is less prone to error, and the inclusion of an effective autocorrect facility removes many mistakes without the user even being aware of their existence. Some word processors also have grammar checkers and the more recent development of the 'format consistency checker', signified by blue underlining in Microsoft Word. However, the success of these features has been less impressive (Vernon, 2000).

On the other hand, there is another technology that could overtake and replace these features – web-based machine translation (MT), most noticeably Google Translate. This is a free, web-based service that translates between a variety of languages. It is also available on mobile devices as an app. Google Translate is a statistics-based translation tool, which means that the system calculates probabilities of various translations of a phrase being correct, rather than aiming for word-for-word translation. It also has a level of interactivity with the end user, with users being able to correct the original translation, and this information being absorbed into the database.

Machine translation by means of computers dates back to punch card systems in the 1940s. Since then it has experienced several setbacks and significant advances (Hutchins, 2000), and with developments in Artificial Intelligence might well be poised to reach a degree of significant sophistication (Newton, 1992). Early machine translations were often of poor, even impenetrable, quality (Komeli, Hendavalan, & Rahimi, 2011), and are still far from perfect. However, the use of MT tools is becoming more and more widespread. Examples include the socio-political empowerment of minority language communities in Canada (Bowker, 2008), the use of spoken machine translation for non-English speakers in the British healthcare system (Somers & Lovel, 2006) and screening of the gist of news reports by US intelligence agencies (Koehn, 2010). Despite the fact that the quality of the translation is often regarded as poor in comparison to human translations, the use of MT is now reaching a much wider audience than before (Hutchins, 2006), and the development of more sophisticated MT options is receiving more substantial attention from policymakers (Bellos, 2012).

Several MT applications are available, both as professional software and web-based freeware, that can cater to different clients and specific purposes (Austermühl, 2001). This study focusses on only one of those, namely Google Translate, since, while a comparison of the quality of different MT tools would be interesting, it goes beyond the remit of this paper.

Once MT has become an effective tool, it has the potential to have a profound impact on the field of language teaching. After all, why would a potential student go to the effort and expense of learning a foreign language if she is able to produce an acceptable L2 text from her own L1 writing, instantly and with no financial cost? It is therefore vital to understand the ability of MT to create sophisticated academic text, and the present study takes a step towards that goal.

The aim of this study is to examine text which has been translated from Malay (Bahasa Melayu) and written Chinese through the Google Translate engine into English. The study will only investigate the grammatical accuracy of the translation, without examining the larger discoursal and epistemological features of the writing. It aims to discover if Google Translate has the ability to produce stretches of grammatically correct, communicative English.

Studies on this topic are scarce, probably due to the lack of imminent implications for current EAP practice. However, it would be short-sighted to ignore this emerging technology and the changes it may bring with it. The present paper's contribution to considerations related to academic language teaching and learning is to highlight these possible changes and to hopefully trigger more specific discussion on the benefits and the threats MT can bring, so EAP remains well prepared to address the needs of its community of practice.

2. Technological advances and their use in EAP

Technological advances have always played a significant role in second language teaching and acquisition, and they have generally been accepted as valuable tools in the classroom, for autonomous practice, for tutor–student communication and for research. The fact alone that most EAP courses these days seem to provide additional learning resources for their students on online platforms indicates that digital technology has firmly established itself as an integral and valued part of EAP.

In the course of this development, the face of the classroom has been altered as well. For instance, traditional learner dictionaries have largely given way to electronic dictionaries accessed through mobile phones, tablet computers or laptops, which, in turn, allow students to access other applications as well (Mehta, 2012). The quality of these dictionaries and other learning aids seems questionable on occasion, so the EAP practitioner's role has been extended to that of quality assurance, or at the very least to that of a guide to reliable online resources. After all, in the plethora of resources available to the student, there are significant differences in quality and reliability, and it seems part of the EAP tutor's remit to stay abreast of recent developments so as to be able to recommend appropriate ones to their students (Chapelle, 2003; Mehta, 2012).

It would seem that the willingness with which useful tools have been accepted into EAP practice may lead to other tools finding their way into the classroom as well; some of these, for example established data-driven tools, such as concordancers, have since their inception been used extensively in teaching, research and materials development (Oakey, 2010). Other technological applications may not receive such a warm welcome. Given the availability of online resources to the students in