Electronic tools for the translation of medical texts in semi-attendance-based education

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Abstract
With this article, the author aims to link two issues that are of vital importance in the current context of the training of professional translators: 1) electronic tools for translation; and 2) the pedagogy of attendance-based education and distance learning. After establishing the proposal of the article (1. Introduction) and distinguishing two groups of tools, namely professional and pedagogical (2. Types of tools), certain didactic questions are posed as regards the learning and teaching of the use of electronic tools following semi-attendance-based models (3. Didactics of professional tools). The author subsequently proposes various professional and pedagogical tools, along with a number of learning objectives intended as a guide to incorporating the aforementioned tools into a context of semi-attendance-based education, specifically a specialised course on the translation of medical texts (4. Proposal of tools). Lastly, the idea that technology has to be at the service of pedagogy in the educational process is defended (5. Conclusion: pedagogy vs. technology).

Key words
Semi-attendance-based education, pedagogy, electronic tools, medical translation.

1. Introduction

Is it possible to teach and learn how to translate and how to use electronic tools for translation in a context of non-attendance-based education? Is the process of distance learning and teaching via the internet essentially different to its presence-based counterpart? In the age of ICTs and internet-based distance learning, are we in danger of overlooking student-focused pedagogy in favour of a pedagogy that concentrates excessively on technology?

It may be that we will need years to provide satisfactory answers to these and other questions, particularly if we bear in mind that we still do not know a great deal about how we learn to translate in a context of attendance-based education and what form the cognitive process of professional translators takes. Additionally, there is not enough psychopedagogical research available to enable us to endorse or reject many of the claims made as regards the benefits that certain technologies entail for education (Sigalés, 2001). In any case, it seems that the time has come to begin to respond to the increasing needs of semi-attendance-based and distance learning, and to explore the possibilities open to us.

The age of new information and communication technologies has seen the emergence of a wide variety of electronic tools that are revolutionising both the way in which professional translators work and the way in which translation is taught and learned in distance and attendance-based educational contexts. In terms of the context of universities, models of exclusively attendance-

based education are gradually giving way to others that combine attendance and non-attendance-based education, and even to completely non-attendance-based models.

This evolution in terms of educational models is attributable to different factors. On one hand, there is the technological availability of increasingly sophisticated and effective educational resources; on the other, people who, for various reasons, are unable to attend university campuses on a regular basis in order to participate in presence-based classes need to be integrated into the pedagogical process. We are referring specifically to the growing demand for the distance-learning and semi-attendance-based forms of university education in the field of continued education in professional sectors (Moore, 2001).

The proposal made in this article is envisaged in the context of a combined specialised medical-translation course, in which the most important part of the pedagogical process is carried out on the basis of attendance of classroom sessions and distance-learning resources are regarded as a means of support and reinforcement for the teaching provided thereat.

In addition to its importance in terms of the world of work, the translation of medical texts is an ideal field for reflecting upon the necessity of electronic tools for translation, as it is an activity that requires the use of databases; online dictionaries; electronic journals, books and encyclopaedias; websites of research groups and associations; distribution lists; etc.

2. Types of tools

From the point of view of a translation teacher, we can make a functional distinction between two groups of tools:
1. Professional tools, i.e. those that are used in the professional practice of translation.
2. Pedagogical tools, i.e. those that are used for the purposes of teaching and learning.

Within the first group, we can identify four types of tools on the basis of their use: a) tools for performing searches and consultations; b) tools designed especially for translating, such as memories; c) tools for writing and editing; and d) tools for remote teamwork and communication.

The second group of tools, which consists of those used for pedagogical purposes, includes: a) virtual spaces designed for distance learning, such as the Blackboard and WebCT platforms; and b) tools that are used to prepare didactic materials, such as programs for creating video files that enable us to provide education from a remote location as regards how to use a particular professional tool.

Nonetheless, this distinction between professional and pedagogical tools merely serves as a guide, as the dividing line between the two categories is not always clear. For example, a virtual environment such as BSCW can be regarded as both a professional and a pedagogical tool, as computer-supported cooperative work (CSCW) and computer-supported cooperative learning (CSCL) have many points in common (Schmidt, 2001).

Likewise, email is a professional tool as well as a pedagogical resource that offers many possibilities in semi-attendance-based education, ranging from debate forums to teaching from remote locations.

Within this article, and by way of examples, I will make various proposals as regards professional and pedagogical tools that are useful in the field of the translation of medical texts. However, before doing so I will devote a few paragraphs to didactic aspects that should not be overlooked in terms of teaching and learning how to use electronic tools for translating, in distance-learning and presence-based contexts alike.

3. Didactics of professional tools

There are two factors that could contribute to the way in which the use of electronic tools for translation is taught and learned. Firstly, it is necessary to ensure that students understand the necessity, usefulness and function of a given tool, as they need to be aware of its relevance

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within the translation process. Secondly, students need to discover for themselves that they can use the tool in question to satisfy the requirements generated by the translation process. In both cases, the role of the teacher is of vital importance.

3.1. Understanding the tool: conceptual knowledge

While the best way of learning how to use an electronic tool consists of using it, comprehension is regarded as a means of enabling work to be carried out (Stone, 2001) and it is considered necessary for students to assimilate the following aspects in order to integrate technological knowledge into the translation process properly:

- Defining the need: what translation-related problem or difficulty are we dealing with? The problems that occur most frequently in the translation of medical texts include a lack of knowledge on the subject of the text, a failure to understand concepts, unknown terms and unfamiliarity with the conventions of the genre to which the text in question belongs. Each problem requires a specific tool.
- Defining usefulness: what is the function of a given tool? Some of the most common uses are finding definitions and contexts of use for concepts, topic-specific introductions, equivalent target-language terms, parallel target-language texts for the textual genre and equivalent sequences in databases, among others.
- Situating the use of the tool within the translation process: at what stage of the process do we use the tool in question? Tools are used at a specific point within the process, on the basis of the need for them and their usefulness. This could be the stage of reading and comprehension, that of documentation and consultation, that of writing up, that of revision and correction, etc.
- Describing the tool in detail: what does the tool consist of? In which components or functions are we interested for our work? What are its technical characteristics? How can it be used?
- Establishing the procedure to follow: how does the tool work? How can we use it in a specific case? This is possibly the area that requires the greatest degree of discursive input, as students have to be allowed to move on from concepts to action and results.

The five aspects referred to above can be defined as discursive strategies geared to explanation, argumentation and instruction for the purpose of learning. The aim of these discursive strategies is to make students understand concepts that they will subsequently have to apply. It is therefore essential that the language we use as teachers is appropriate to the pedagogical aims involved.

The oral approach used in conjunction with visual demonstrations in classrooms in an attendance-based context is replaced by a written approach in a context of distance learning. This switch from an oral to a written mode entails a series of rhetorical and discursive modifications geared to ensuring that communication between remote points is effective.

One of the main modifications consists of switching from the synchronous communication used in an oral approach to the asynchronous communication used in a written approach in a context of distance learning. It is for this reason that remote interaction and feedback are fundamental factors, as they compensate for the absence of direct communication and make it possible for students to learn not only from teachers, but also from other students.

3.2. Application of the tool: working knowledge

Understanding entails the practical application of that which has been understood (Stone, 2001). In this sense, practical application is an indispensable pedagogical factor in the acquisition of procedural knowledge, as it makes it possible for students to discover and verify the usefulness and relevance of a tool, which boosts their motivation. However, practical application must take place in accordance with an appropriate methodology.

Establishing learning objectives and a task-based approach (Hurtado Albir, 1999) is a methodology that allows us to link technology and pedagogy and, consequently, to optimise the

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way in which students learn to use electronic tools. This means that establishing learning objectives and practical tasks alike becomes a priority once a teacher has decided which tools are to be incorporated into the pedagogical process. This objective and task-based methodology is not only appropriate for attendance-based education, but also for distance learning.

A common feature of all the tools discussed in this article is that they are used in the virtual environment of the internet. Indeed, translators' professional work is currently entirely dependent upon resources available on the web. The fact that the internet is the natural context of electronic tools for the translation of medical texts has consequences for the way in which the use of these tools is taught and learned.

The first such consequence is that users of these tools have to be internet users to begin with. In other words, they have to be familiar with the basic notions, strategies and techniques of communicating via the internet (peculiarities of hypertextual language, browsing, etc.). The second consequence is that the way in which these tools function remotely or telematically is, in its own right, the object of teaching and learning. To put it another way, there are aspects of some of the tools that will be referred to below, such as mailing lists, that may be better learned from a remote location.

4. Proposal of tools

In this section, I will propose some professional tools (for the purposes of documentary consultation and searches and communication between professionals) and some pedagogical tools (for distance learning and the preparation of materials) that are useful in the context of semi-attendance-based education described at the start, namely a specialised course on the translation of medical texts. At the end of the section corresponding to each tool, I will suggest learning objectives that could be developed both in classrooms and remotely. It goes without saying that this is an open proposal that does not pretend to be exhaustive.

4.1. Professional tools for documentary consultation and searches

In addition to online dictionaries and glossaries, there are other internet-based tools for the purpose of searching and consultation which could be extremely useful for translators of medical texts, especially if it is borne in mind that any terminological work on the subject of medicine is necessarily incomplete in nature.

• Specialised search engines: Scirus < http://www.scirus.com >
Unlike other search engines, such as Google, Scirus only performs searches in websites with scientific content. Scirus is not only reliable in terms of its scope (it searches in more than ninety thousand web pages), but also where the quality of the information that it recovers is concerned. The advanced search option offered by Scirus makes it possible to obtain a very high degree of refinement where consultations are concerned.

Image 1: SCIRUS screen

Learning objectives for Scirus:
a) Learning to use the advanced search options.
b) Learning to recover information in order to resolve problems and one-off difficulties in specific pieces of work.

• Databases: Medline <
http://www.ncbi.nih.gov/entrez >
Medline, the database of the USA's
National Library of Medicine, is possibly
the most up-to-date and complete medical
database in the world. Its search engine,
Entrez, offers the option of performing
highly refined searches. As is also the
case with Scirus, it is not always possible
to gain free access to complete texts
identified by searches.

Learning objectives for Medline:
a) Learning to use the Entrez search
engine.
b) Learning to recover information in order
to resolve problems and one-off difficulties
in specific pieces of work.

• Electronic books: FreeBooks4Doctors! <
http://freebooks4doctors.com >
FreeBooks4Doctors! is an essential
resource for medical translators, as it
provides completely free access to a wide
range of books on different aspects of
medicine in various languages.
Furthermore, these online electronic
books are a valuable source of visual
information (drawings, photographs,
illustrations, diagrams, animations, etc.).

Learning objectives for
FreeBooks4Doctors!:
a) Learning to search for books by medical
specialities.
b) Acquiring introductory knowledge on
the subject of the text to be translated.
c) Searching for parallel texts in the
source and target languages.

• Electronic journals:
FreeMedicalJournals.com <
http://freemedicaljournals.com >.
FreeMedicalJournals.com is part of the
same initiative to provide free access to
medical information as
FreeBooks4Doctors!. Its links to a wide
variety of specialised journals in a range of
languages make
FreeMedicalJournals.com an extremely
useful and highly user-friendly tool.

Learning objectives for
FreeMedicalJournals:
a) Learning to search for journals and
articles by medical specialities.

Image 2: pantalla MEDLINE

Image 3: pantalla FREEBOOKS4DOCTORS

Image 4: pantalla FREEMEDICALJOURNALS

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b) Searching for parallel texts in the source an target languages.

• Creation of *ad hoc* corpora: InfoRapid <
http://www.inforapid.de/html/english.htm >
The creation of corpora that cater for
specific needs is a very useful practice,
especially in the case of there being a
shortage of terminological works on the
subject being dealt with. This program can
be used to reap the benefits of the tools
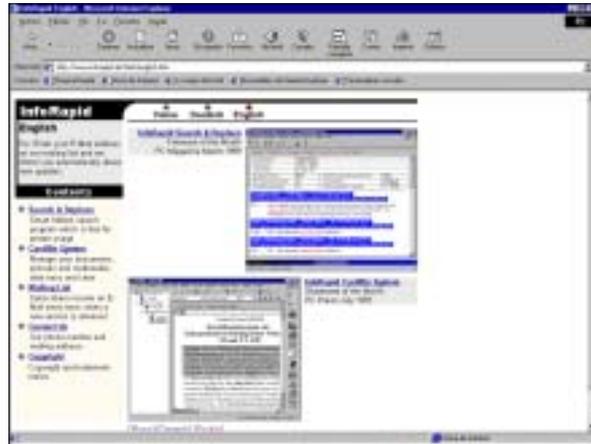referred to above and to resolve
terminological problems.

Learning objectives for InfoRapid:
a) Learning to establish an *ad hoc*
minicorpus in response to terminological
and phraseological requirements.
b) Learning to use InfoRapid to search for
and recover information from a
minicorpus.

Image 5: pantalla INFORAPID

• Electronic encyclopaedia of textual genres: Gentt
Gentt, the electronic encyclopaedia of textual genres for translation, is an electronic tool
designed to solve problems related to genres, developed by the Departament de Traducció i
Comunicació at the Universitat Jaume I. This encyclopaedia is particularly useful for generating
parallel texts on the basis of a specific text to be translated. The Gentt encyclopaedia basically
consists of two components: 1) a multilingual corpus of specialised texts; and 2) a search
engine that combines 13 fields (textual genre, subject, author, etc.). The corpus of texts is
divided up into three fields, namely legal, medical and technical.

Learning objectives for Gentt:
a) Acquiring information on source and target genres.
b) Learning to combine the search engine's 13 fields.
c) Searching for parallel texts in the source and target languages.

4.2. Professional tools for communication
Given their telematic nature, professional tools for communication via the internet are of
particular interest in the context of semi-attendance-based education with which we are dealing.
The professional socialisation of
translators is largely taking place via the
internet, as the majority of all types of
exchanges of information between
translators are carried out by means of
this medium.

• Mailing lists: MedTrad <
http://www.medtrad.org >
Medtrad is a virtual community that brings
translators of medical texts from all over
the world together. The main activity of
MedTrad consists of an extremely useful
mailing list. MedTrad also offers an
electronic journal, Panace@, as well as
summaries of the messages exchanged
each day, in the form of its Medtradiarios.
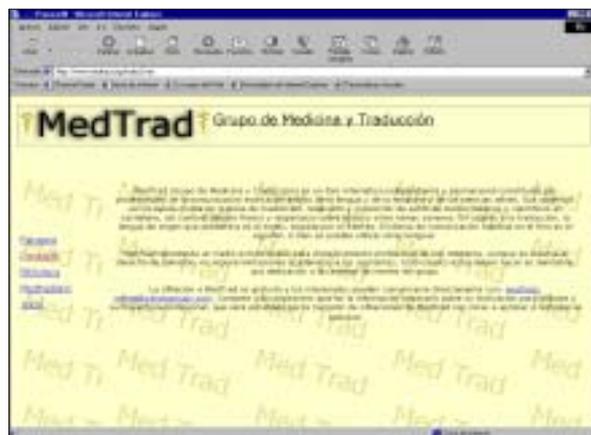When learning to use these distribution

Image 6: pantalla MEDTRAD

lists, there are certain pedagogical aspects that transcend purely technical issues, such as the degree of formality to be used or courtesy strategies.

Learning objectives for the Medtrad mailing list:
a) Being part of a virtual community, such as MedTrad, and reinforcing the professional socialisation of translators.
b) Classifying the queries made during a single day and describing the tenor of messages.
c) Making a real query and sending it to the other members.
d) Responding to a query made by another member of the list.

4.3. Pedagogical tools
• Virtual platforms: WebCT (Web Course Tutor) < http://www.webct.com >
Virtual platforms, such as WebCT, are tools that are designed for distance learning and teaching via the internet (WebCT, 2000). The architecture of WebCT makes it possible to organise teaching on the basis of the needs of students and teachers alike. In the context of semi-attendance-based education with which we are dealing, this platform's basic resources, such as the space set aside for subject syllabuses and materials, the calendar of activities and the debate forum, enable us to design a combined course in which the platform serves as a means of supporting and reinforcing attendance-based activities.

• Programs for developing didactic materials: Hypercam < http://www.tucows.com >
Hypercam is part of a range of products used for capturing all the movements made on a screen in video files.
Furthermore, Hypercam makes it possible to edit text notes within a video file in order to provide students with instructions, clarifications, suggestions, etc. as regards the usefulness and function of any of the professional tools referred to in this section.

Image 7: pantalla HYPERCAM

5. Conclusion: pedagogy vs. technology
Throughout history, the evolution of translators and translation has followed a course that runs parallel to that of successive communication and information technologies, from the primitive forms of writing in ancient Mesopotamia and Egypt, to printing and, a few centuries later, IT and the internet. Each of these technologies has constituted qualitative and quantitative progress in terms of the way translators work. The relationship between translation and language technologies has always been very close and highly productive.

Over the course of this long history, the various technologies have been used to facilitate the work of translators. At present, translator training can also benefit from ICTs. In this respect, there are certain points that we, as teachers, must bear in mind:

▪ It is a good idea to use pedagogical and professional criteria to distinguish between electronic tools that are the object of teaching and learning.
▪ Some electronic tools adapt better than others to contexts of distance learning.
▪ It is advisable to employ pedagogical criteria when teaching how to use electronic tools, without losing sight of the fact that they are tools for the purpose of translation. In professional contexts, technology is subordinate to the practice of translation. In educational contexts, technology must be subordinate to pedagogy.

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- At present, the wisest approach seems to be that of incorporating distance learning into the educational process in a gradual manner, as a means of reinforcing and supporting attendance-based education. It is therefore necessary to avoid the dichotomy of attendance-based education vs. distance learning.
- It is possible to benefit from distance learning, particularly in order to consolidate the professional socialisation of translators by means of membership of virtual communities and remote cooperative work.

The relationship between electronic tools for the purpose of translation and the pedagogy of attendance-based education and distance learning is a topic that requires attention and which must be the subject of research in the near future, if we wish to benefit from new ICTs.

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