Some aspects of computer-based translator training

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What problems are posed by the act of translation, and how may the translator overcome them? In a paper delivered to the first *Language International* Conference in 1991, Willi G. Scherf of Leipzig University makes a cogent attempt to characterise the all-too-frequent bottlenecks that confront the translator during the translation process. He writes: "In an initial phase, translators may encounter coherence disturbances of a more or less severe nature, when building some complex mental structure representing the text meaning of the source text. Later, they may get stuck in face of some dismal [...] inability to rearrange the complexities of the internal textual world into a linear utterance in the target language. As a rule both states force translators to mentally and physically shift their attention from the source and target texts to additional external sources: dictionaries, encyclopaedias, reference works of all kinds – the typical branching situation". The concept of 'branching', or one very close to it, is also suggested by terminology expert Juan C. Sager, who at the same conference emphasised the way in which "translators have to change roles during the complex decision making process of translation and work in the analytical mode of terminologists before switching back to text production". For many other commentators, the key to translation is even more straightforward: it lies, quite simply, in knowledge. Indeed, Anne Cordero of George Mason University goes so far as to argue – and to do so quite compellingly – that linguistic and related extra-linguistic

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knowledge constitute core "defining criteria" of the "learned profession" of translation.

Clearly, information technology can and does perform a very strong supporting role in the translation process. Professional translators now use a rapidly expanding range of powerful, efficient tools which enable them to conduct all necessary branching, role-switching and knowledge-acquisition operations — dictionaries and other reference works on a variety of storage media; access to on-line term banks, information services, translation forums, bulletin board systems and the Internet. A recent ASTTI survey of IT tools used by professional translators tells us that two thirds of those polled created their own term banks and glossaries, for which universal database applications and dedicated terminology management systems present effective solutions. Storage devices, scanners, modems and file conversion software make it possible to meet a broadening spectrum of customer demands (in particular, target-text delivery in various DTP formats on various media and/or by e-mail and file attachment). Lastly, advances in the development of computer-aided translation (CAT) tools like Translation Memory offer, as we have heard on several occasions during this conference, a real opportunity to increase productivity and ensure greater terminological accuracy and consistency in text types displaying a relatively high degree of repetition. The computer, its peripherals and an increasing range of commercially available software speed up the many tasks that translators are called upon to perform, and generally make our job a good deal easier.

However, there is another side to the impact of these tools on the translation industry. As information technology presses forward, translators are confronted with constantly growing expectations on the part of employers and clients. Possession of IT and CAT skills are an ever more important aspect of translators' ability to compete in the market, enabling them to meet any necessary product delivery requirements and deadlines, and to expand the linguistic and extra-linguistic knowledge to which Cordero and others refer.

There are obvious ramifications here for translator training. Institutes offering translation programmes have a clear duty to familiarise their students with the IT and CAT tools on which translators now largely depend. Failure to do so would not only be unfair to the novice translator, as Praetorius' Robert Clark rightly points out, but would also necessarily undermine the appeal of less progressive institutes: Aslib's 1996 Translator's Handbook, for instance, makes a point of advising prospective students to look out specifically for IT and CAT components before committing themselves to any translator training programme.

Training institutes have largely responded to the challenge either by building dedicated IT and CAT courses into their curricula, or by taking advantage of the resources of the various departments within a university and setting up translation programmes on interdisciplinary lines. However, with the exception of select technology-based translation programmes, the curricula offered by many institutes contain a significant proportion of contact hours in which translation is practised in traditional classrooms and not in computer-equipped facilities. Infrastructure and financial considerations undeniably contribute to this situation, though it must also be said there are sound didactic arguments in favour of the conventional classroom setting: most obviously the scope to move freely between teacher-focused and student-centred lesson phases in a relatively open and flexible environment. Yet the fact remains that the practice of


8 Such as the George Mason University translation programme described by Cordero, 174-75.

translation in many classrooms will only distantly reflect the professional translator’s experience of work in an increasingly computer-oriented market, suggesting that the computer should—in some form or other—find its way into a much broader range of contact hours than has hitherto been the case.

For the past three years, I have been attempting to bridge the gap between conventional classroom facilities and the real-world information society. Of all possible methods, I have opted for one of the simplest, using a portable computer data projector, a notebook and appropriate software to project images directly from the computer onto a screen. The merits of the system are flexibility, portability, and minimal strain on fixed assets and financial resources. The only prerequisite, beyond possessing the hard- and software, is that classrooms must be equipped with either light-dimming facilities or blinds, since the brightness of many portable computer data projectors still cannot really match that of regular OHPs.

At the most rudimentary level, the computer projections function as a sort of overhead transparency with extensive interactive features, enabling the teacher and/or the students to generate, highlight, colour, correct, edit, compare, and proofread large segments of text on-screen using any standard word processing or business presentation application. Depending on the size of the screen, multiple texts can be viewed either side by side or in rapid succession. At any stage of the lesson, work can be saved for future reference and later used to create various types of printed handout for distribution to the students.

The technique also permits more advanced and practical translation-related tasks to be undertaken. Suggested versions or corrections can be validated on-screen through the rapid retrieval of information from hard drives, CD-ROMs or, where a modem and telephone socket are available, from on-line services and the Internet: an especially useful tool for the teacher who has to convince sceptical students of his position. Terminology databases can be created and managed for or by each group under instruction. Various CAT and machine translation tools can be demonstrated, with follow-up sessions devoted to teaching and practising the specific skills required of the user (operating CAT and MT applications, post-editing machine output and/or augmenting the lexicons and other rule bases of CAT and MT software). Where it becomes necessary to consider paralinguistic, pragmatic and contextual aspects of texts—as in the case of speeches, debates, interviews, conversations or films—video sequences can be displayed by applications supporting, for instance, the cross-platform QuickTime systems extension. Similarly, easy-to-use software such as Avid VideoShop allow users to edit and subtitle QuickTime movies, which is of immediate relevance to any syllabus which includes interlingual film subtitling and screen translation, but which could also be seamlessly integrated into courses exploring the contextual constraints that habitually inform all types of polymedial translation (theatrical texts, for instance). Finally, the automatic ‘slide-show’ presentation sequences created with applications like Claris Impact or Microsoft PowerPoint can provide effective visual back-up in text analysis sessions, a feature I frequently make use of to highlight isotopies, topical sequences, lexical patterning, text-typical structuring, textual iconicity, and so on.

Apart from the positive effect that the sheer variety of options has on student motivation, the major didactic benefits in the use of computer-screen projection are centred on input. Studies in educational psychology indicate that more learning occurs when information is received in two sense modalities (such as vision and hearing) than when it is received in a single one, an insight which has long served to justify the widespread use of audiovisuals in education—and of overheads at conferences. This would therefore also suggest that computer-screen projection can make a significant contribution to the learning process by visually underscoring the oral communication which takes place in the classroom. A survey I began at the Zurich School for Translation and Interpretation (DOZ) during the 1997 summer semester appears to corroborate this hypothesis: provisional results show that the overwhelming majority of respondents—more than 90 per cent—wrote in unprompted replies that the opportunity to see texts, solutions and corrections on-screen...
considerably improved their ability to learn and to remember the various points raised in a lesson.\(^\text{10}\) In an effort to reinforce further the input obtained within the contact hour itself, my students are regularly issued with edited, annotated handouts containing the translations, corrections and all relevant terminology discussed in any given class. Although the same survey places at a more modest 45 per cent the proportion of students who explicitly considered these printed lesson 'protocols' helpful learning aids, it is interesting to note that the greater part of these respondents - some 74 per cent - were students in their first and third semesters at the school. Since the same students made up 70 per cent of all respondents in those early semesters, it is reasonable to assume that lesson protocols prove especially useful to students during the early stages of their training. (While I do in part accept Professor Peter Newmark's view that handouts "encourage passivity"\(^\text{11}\), my students are instructed to write as much as possible during class and are warned against relying on the handouts. To ensure that students actually refer to the lesson protocols, various exercises and drills may be included in the sheets and checks carried out in follow-up sessions).

With specific regard to translator training, a computer-based method of instruction has distinct advantages over approaches involving more traditional teaching aids. Even in Switzerland, which the German Fachverband Informationstechnik tells us has the second highest density of PCs in the world, it is quite unrealistic to assume that students entering tertiary education are uniformly computer literate: my experience tells me that quite a few lack a solid grounding. Computer-based instruction encourages course participants to develop and refine skills learnt or acquired in parallel IT and CAT courses, both by in-class observation of software in action and by the practical necessity of submitting copies of their translations - on diskette or via e-mail - in appropriate formats.

Indeed, the survey mentioned above leaves little doubt that one of the major effects of such a method is that it gets students to make substantially more use of PCs, CD-ROMs, on-line term bases and the Internet when preparing assignments.\(^\text{12}\)

The last few years have seen an animated debate among theorists and practitioners on the relative merits of process-oriented and product-oriented translation training.\(^\text{13}\) I firmly believe that computer-based instruction is an effective means of combining the two approaches. In the first place, the technology enables the teacher to surmount (or bypass) many of the barriers that would otherwise obstruct attempts to foster process-oriented learning by providing quick in-class access to large amounts of information and by familiarising students with what Anne Cordero identifies as "crucial" research skills: few translators or teachers would disagree with her remark that "[t]he focus of acquiring extra-linguistic knowledge should be [...] on knowing how to find the resources, the access to needed information in a particular discipline. Developing research skills that go beyond looking up terminology is crucial for the translator"\(^\text{14}\). Furthermore, in allowing multiple translations to be generated, assessed, corrected, validated and edited on-screen, the computer-based method provides an interactive framework in which students can be involved in every stage of the translation process, every aspect of branching and role-switching, and thereby learn to develop the evaluative and self-critical faculties that the literature on translator training stresses again and again.\(^\text{15}\). On the product-oriented side, not only is the teacher always on hand to provide guidance in quality assessment, but there is also ample opportunity for participants to practise valuable

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\(^{10}\) 87 per cent of respondents stated that the use of the computer in the classroom encouraged them to make greater use of at least one of the following: PCs (87%), CD-ROMs (59%), the Internet (52%), on-line terminology databases (33%). Multiple answers were of course possible.


\(^{12}\) Cordero, 173-74.

\(^{13}\) A perceptive article on the way translators learn is Andrew Chesterman's "Karl Popper in the Classroom: Teaching Translation and Interpreting 2: Insights. Aims. Visions, ed. Cay Dollerup and Anne Loddegård (Amsterdam: John Benjamins, 1994) 89-95.

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proofreading and terminology-monitoring skills on large segments of text, skills that are so often neglected by the novice translator. My own (subjective) observations show that students exposed to the computer-based method are generally quick to acquire a keen product awareness.

Computer-based translator training can bring a wider set of options and greater flexibility to the classroom, without subjecting the teacher and the students to the fixed physical constraints of extensively computer-equipped facilities. In times of growing pressure on infrastructural and financial resources in education, it offers a realistic, relatively low-cost solution to the increasing technological demands placed on translator training institutes. There will always be a place for dedicated IT and CAT courses in the translation curriculum; but we should not overlook the potential of the computer as a teaching tool in its own right.

Appendix: Additional Notes on Hardware and Software

Computers

All notebooks require video out (for the projector). I would strongly recommend a Pentium or PowerPC processor running at 100 MHz or faster, at least 32 MB RAM, and a reasonably large hard drive (750 MB plus). Where portability is an issue, an internal CD-ROM drive is an option that should be seriously considered. When working with QuickTime movies, I find that a Macintosh PowerBook 5300cs (PowerPC 603e / 100 MHz, 40 MB RAM, 750 MB hard drive) or equivalent is perfectly adequate - if video sequences are played direct from the hard drive and all unnecessary system extensions are deactivated. Virtual memory should also be turned off. As even short film-clips take up a large amount of space on the hard drive, it is worth storing them on external media until they are required. I store my video sequences on ZIP cartridges and copy them to the hard disk on a 'need-to-play' basis. Please note that ZIP drives are too slow for video playback direct from ZIP carts; the more expensive but faster JAZ drives and their 1GB carts achieve much better results. The ideal solution for all multimedia tasks is a high-end notebook with a fast processor, Level 2 cache, VRAM and a large hard drive (such as the PowerBook 3400cs or equivalent IBM compatibles). If you wish to digitalise videos or TV programmes, you need a desktop computer with a TV tuner and/or video input card, together with the appropriate video capture software.

Applications

Any word processing application will suffice for translation teaching, but remember that students should receive as much exposure as possible to the sort of software products they are likely to encounter as professionals. For demonstration purposes drag and drop features are preferable to slower cutting and pasting procedures. Tear-off colour palettes are a useful tool when a variety of text units have to be highlighted. In my experience, the most user-friendly business presentation software is the Mac/Windows cross-platform application Claris Impact 2, which has better, easier-to-use multimedia features than Microsoft PowerPoint. For basic movie editing (cutting, pasting,
trimming; adding (sub)titles, other tracks and special effects) I recommend the user-friendly Avid VideoShop. Macintosh users should consider installing Windows emulation software (Insignia's SoftWindows 3.0/4.0 or Connectix's VirtualPC 1.0). This will give them access, at more or less tolerable speeds, to the large number of Windows-based products for translators (CAT tools, CD-ROM dictionaries and reference works, etc.) which cannot normally run on the Macintosh platform. Windows emulation software requires 40MB RAM or more to produce satisfactory results when Mac and Windows applications are launched at the same time. The most up-to-date emulations also need between 200MB and 300MB hard drive space (though older versions of SoftWindows require less).

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