WP 5.1 New Tools and Technologies: Synthesis Report

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Status Quo Survey

The preliminary objective of OPTIMALE Work Package 5.1 was to establish the baseline of current practice (status quo) in the teaching of Translation Tools and Technologies in Master’s programmes around Europe. This was achieved by means of an online survey, which aimed to identify:

a) broad trends in training philosophy, design and future expectations among trainers;
b) elements of good practice for wider dissemination;
c) recurrent issues, problems and obstacles which needed to be addressed for the future.

The survey was addressed to representatives of institutes where translation tools are taught and was composed using the free version of SurveyMonkey software. It was open, by invitation only, between January and early April 2012. The results were presented and discussed at a workshop organised by the Institute of Translation Studies, Faculty of Arts, Charles University, Prague (Czech Republic), on 20 April 2012.

Survey Structure

The survey was formulated in eight principle questions, each with multiple sub-sections. Q1 was designed to capture basic information about respondents and their MA programmes: those data will be discussed in section 1, below. Q2 to Q8 each addressed a specific aspect of the tools and technologies training of student translators and each will be discussed below in a separate section, before a ninth and final section draws some conclusions:

- **Q1 - Master's programme information**
- **Q2 - Translation tools training strategy**
- **Q3 - Types of translation technology activities**
- **Q4 - Translation software taught and licences held**
- **Q5 - Tools teaching and assessment themes**
- Q6 - Staff training, IT facilities and technical support
- Q7 - Good practice
- Q8 - Future prospects
- Conclusions

Since the survey aimed to capture both quantitative and qualitative data, each question was followed by a free-text ‘Comments’ box. In the discussion below, the quantitative returns and corresponding graphs will be discussed first, and a selection from the most interesting and significant comments will then be given.

1. Respondents

One hundred email invitations to respond to the survey were sent out from within SurveyMonkey, which allows responses to be tracked. Invitations were sent to the coordinators of all programmes which are members of the European Master’s in Translation (EMT) network and/or the OPTIMALE project. Some coordinators responded by suggesting that a different colleague would be better placed to complete the survey. In addition, a few coordinators took up an invitation to put forward the names of colleagues from programmes outside the EMT/OPTIMALE networks who were involved in technologies and tools training; these trainers were also invited to complete the survey. Overall, the invited programmes represent between one quarter and one third of all existing Master’s in Translation across Europe.

The overall response rate was 50%.

1.1 – EMT/OPTIMALE membership

Representatives of 29 EMT programmes and 40 OPTIMALE programmes responded, in full or in part (for technical reasons associated with the limitations of the free version of the survey software, it was not possible to enforce completion of all questions). 23 respondents were members of both networks. Since EMT membership implies a strong record of tools and technologies teaching and OPTIMALE membership a significant interest in professional aspects of translator training, the survey could be expected to present a snapshot of more advanced, rather than average, practices in these areas.

1.2 – Programme Foundation Dates

A significant proportion of respondent programmes have been in existence for up to half a century, but a major expansion is visible in the 1990s and 2000s, with two programmes running for the first time in 2011:
These data may not accurately capture cases where a programme has continued under a new name, etc., but the overall pattern does raise questions about how older programmes have adapted to the new technologies and tools that have exploded onto the scene since the 1990s, and the extent to which newer programmes may have been designed around the new technologies. In particular, when a new Translation MA is being set up, where do the know-how and resources to include effective technologies and tools training come from? Some partial answers may be deduced from later survey responses.

1.3 – ECTS value and student numbers

Almost half of respondents were offering programmes of 120 ECTS (i.e. the two-year ‘Bologna’ pattern). Six programmes (mainly in the UK) are of 90 ECTS (Swansea University is alone among respondents in having both 120 and 90 ECTS patterns). Five programmes are of just 60 ECTS. Other values reported include 9, 29, 80, 96 and 180 ECTS.

The total number of students per programme varied widely, although some respondents were clearly conflating several programmes (so for instance the >200 students reported by ISTI, Brussels, represent the intakes of four different programmes):
Since the number of student on a given programme has direct implications for the provision of technologies and tools training (in terms of IT facilities and support, software licences, qualified trainers etc.), the fact that over half of respondents offer programmes of 50 students or fewer, with 16 having no more than 30 students, is unsurprising. Conversely, very large programmes might be expected to pose problems of student access to relevant facilities, software and expertise.

2. Translation Tools Training Strategy

Question 2 was designed to capture the overall ‘philosophy’ and approach to technology and tools training implemented by each programme. Information was sought on the approximate proportion of programme time and content devoted to these areas, the primary teaching strategy (e.g. hands-on practice or tutor demonstration), the balance between free and commercial tools, and the perspectives from which they are taught. The comments received are evidence of widely varying practices.

2.1 – Proportion of Tools in the Programme

Over 90% of the programmes surveyed teach translation technologies and tools. The same proportion contain at least one credit bearing unit dedicated to tools, and almost 90% have one or more units in which tools play a secondary role:
70% of respondents estimated the technologies and tools component of their programme at between 10% and 25% of its total content, although some comments expressed doubt as to the method of estimation. Around 20% of respondents reported a 10% or lower component, a proportion which might be expected to rise outside the professionally-focused EMT-OPTIMALE community. Only around 5% of respondents reported a tools component higher than 25%.

2.2 – Primary Teaching Strategy

This question sought to elicit the balance between tutor demonstration and hands-on practice in the teaching of technologies and tools, and the extent to which e-learning and blended learning strategies are currently used:

Columns 1 and 2 were intended to be mutually exclusive, but in the event 32.5% of respondents reported that their primary strategy was by tutor demonstration, whereas 90.9% stated that it was by hands-on.
practice. Clearly, however, there is a very heavy majority using hands-on practice, with attendant implications for facilities, licences etc. As yet, there appears to be only a very small e-learning component (4.9%), but blended learning is high, at 53.8%. The former may well be associated with distance learning programmes, of which there seem to be very few at the moment, whereas the latter category probably includes use of a VLE (Virtual Learning Environment) such as Blackboard or Moodle within conventional programmes.

2.3 – Perspectives on Technologies and Tools

This question sought to establish the prevailing balance between free and commercial software, the perspective(s) from which the software is taught, and the degree to which language pairs are combined in training exercises:

![Figure 5: Perspectives on Tools](image)

More respondent programmes teach commercial tools (88.4%) than free ones (78.6%), and only 11.6% do not teach paid-for tools at all, which suggests that commercial software is widely perceived as essential for professional training. Whether or not full licences etc. are available, most programmes surveyed seem to be finding ways of teaching industry-standard software.

All respondent programmes teach technologies and tools from the perspective of the translator, but fewer than half from the perspective of the project manager (48.8%) or the translation company (46.5%). This may be an area for future development, as might the relatively low proportion (32.6%) focussing on localization. Almost 70% of programmes do mixed-language software training.
2.4 – Selected Comments

1. Our aim is to make our students multi-skilled so that they can adapt to any international company or service.
2. We try to give students hands-on experience of the widest possible range of TM systems (both commercial and free): this is mainly done through workshops run by the students themselves, who work in teams to prepare materials and then run short workshops for other students.
3. The lecturers are invited localization consultants and trainers. The course includes individual practical exercises.
4. Translation tools are generally introduced by the tutor through description, explanation and demonstration of use. No hands-on sessions, with the exception of subtitling software workshops.
5. Their perspective is equally focused on translators and translation companies, so they get familiar with a simple translator-translation agency relationship.
6. There are special courses in CAT and Translation Internship (minimum 12,500 words of supervised commercial translation).
7. We do teach use of tools but we don't assess use of tools. [...] We do not assess their competence in working with IT tools.
8. We teach students SDL Trados Studio 2009 SP3 (Programme is a member of SDL TRADOS University Network), about 78% of them pass the provider's test and become certified SDL Trados Studio users.
9. Most of our translation projects come from real needs (university, associations, small and medium size companies).
10. The tools taught in the obligatory subject are also used, either extensively or in a more limited way, in some of the courses on Translation Practice but the situation varies here, depending on the language and the teacher.
11. We use demo versions of commercial tools like Wordfast and Trados.
12. Hands-on practice is our main objective and the perspective is that of the individual translator because the market of translation in Italy is mainly made by freelance translators.
13. Students doing internships also get plenty of practice and learn the implications for project managers and translation companies 'on the job'.
14. CAT tools play a crucial role in role-playing games (totaling a 21-hour unit supervised by a specialized trainer).
15. We show students some of the translation tools at work by showing them and rather by explaining how they work. We do not use them in our practical classes. There are presentations by students who work with them in various translation agencies.
16. No specific course is dedicated to the tools exclusively, mostly due to no sufficient resources available. Usually, the trial versions of tools are used to demonstrate to the students. Also, the students are encouraged to get acquainted with the technologies on their own, as part of individual work, or during the internship. The long-term strategy is to develop a specialized course.

3. Types of Translation Technology Activities

The purpose of this question was to ascertain which of 21 named training activities involving technologies and tools were compulsory and which optional in the different programmes, and whether they were regarded as representing a major or a minor component of the programme. In the tables which follow, activities are ranked in descending order of the number of programmes for which they are compulsory.

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1 Italic added.
3.1 – Ten Most Important Activities

Between 70% and around 50% of the programmes surveyed included as mandatory: use of Translation Memories and termbases, construction of termbases and corpora, data mining and project management activities. A further 5-13 programmes offered these as optional activities:

![Figure 6: Top 10 Technology Activities](image)

However, only the top three (use of Translation Memory (TM), termbase (TB) construction and data mining) were clearly designated by respondents as ‘Major’ rather than ‘Minor’ components: the other seven of the top 10 are more evenly weighted on that scale. Moreover, for each activity in the Top 10 there are between 10 and 30 programmes which appear not to offer it at all (though this result, surprising in a group of programmes for which technology might be expected to play a prominent role, may be at least partly an artefact of incomplete returns).

All the Top 10 are relatively ‘traditional’ (and, arguably, central) activities in any technologically competent contemporary Translation programme, and all lend themselves to individual learning and assessment. The rise of project management\(^2\) to 4th place probably reflects perceptions that this is now a common first destination profession for graduates. While use of Machine Translation (MT) is included in over 30 programmes, respondents see it as marginally more optional/minor than compulsory/major, despite the fact that MT is predicted to grow significantly in importance in the industry over the next few years.

3.2 – ‘Less Important’ Activities

These activities are each available in 20-30 programmes, but increasingly on an optional basis and perceived as being of increasingly minor importance:

\(^2\) It is unclear whether respondents were regarding this as a professional competence or as a CAT tool component.
They fall into a number of sets:

1. **LSP-focused** (rather than translator-focused) activities such as use of Quality Assurance (QA) mechanisms, server-based TMs and TBs, MT engine training. There are also significant cost implications for universities wanting to purchase licences for these activities. However, expert presentations at prominent fora worldwide, including the EMT conference 2011, have been suggesting for several years now that all these activities will be more important in the future and trainers will need to prepare students for them. Internships and/or training by in-house professionals might help fill this gap.

2. **Multimedia translation** (subtitling, dubbing, audio-description). These are all apparently perceived as peripheral in our sample group (though there are whole MAs elsewhere devoted to them), and there may be issues of software costs (though much can be done with freeware). Again, trainers seem to be behind the curve of professional demand in some countries in these areas.

3. **‘Added value’ services**: website localization and web editing, Desktop Publishing (DTP), software/games localization, are all increasingly in demand in the language services industry, but obviously not catered for by many programmes.

While these are all currently ‘minority’ activities, completely absent from many programmes and otherwise generally perceived as optional and minor, trainers may well need to adjust to the demands of delivering them more widely in the near future. Since, arguably, many current programmes, no doubt in consequence of their origins in traditional philology, still focus on the individual student as a future lone translator rather than as a multi-skilled actor embedded in a complex and fast-moving industry, this adaptation may prove challenging.
3.3 – Selected Comments

1. We are planning to introduce teaching on MT and post-editing, also on Quality Assurance tools.
2. We intend to introduce server-based TM and TB exercises, and multimedia translation, in the near future.
3. As from 2012, a specific module on MT will be introduced.
4. Our technology-based activities are focused on terminological databases, compilation of multilingual glossaries, etc.
5. The Programme has a translation project management course, aspects of quality assurance and tools are covered in the compulsory course “Preparation for Profession”.
6. All the technology-based activities mentioned above are listed from the consumer point of view. Our students are also acquainted with the architecture, methods and algorithms which will allow translators to interact more efficiently with the developers of such tools.

4. Translation Software Taught and Licences Held

The different parts of this question were designed to establish which translation tools are most widely taught in current programmes, and approximate ratios of students to licences (this gives an approximate indication of how much access to a given tool students are likely to have, other factors being equal).

4.1 – Most Widely Taught Tools

In the table below, tools are ranked in descending order of the number of programmes for which they are compulsory. Also shown is whether a given tool is regarded as being a major or a minor component of the programme:

![Figure 8: Top Twelve Translation Tools](image)
The dominance of software from SDL International (Trados, Multiterm) is very marked, with traditional heavyweight competitors such as Atril Déjà Vu and Star Transit a long way behind. The number of MA programmes still using old versions such as SDL Trados 2007 suggests that some may be finding it difficult to upgrade to current software, for whatever reason (lack of funds, lack of expertise, inertia, etc.). If these were the only CAT (Computer-Assisted Translation) tools taught, graduates would be coming onto the market with out-of-date skills.

4.2 – Most Widely Held Licences

The position with regard to licence holding closely reflects the relative popularity of the corresponding CAT tools, though it should be noted that free online tools such as Google Translate, Google Translator Toolkit and Wordfast Anywhere do not require licences in the commercial sense:

![Figure 9: Top Dozen Licence Holding plus Licence/Student ratios](image)

The figures for the ratio of students to licences show peaks generally at the extremes: most programmes seem either to have a licence for every student (a 1:1 or better ratio), or one licence shared between four or more students (a ratio of 4:1 or worse). This disparity may reflect the programme’s teaching philosophy (more tutor demonstrations, less hands-on experience), but it may well also be a function of available IT facilities, funding, and the cost of multiple licences. In any event, a high ratio of students to licences is likely to correlate with relatively low levels of individual access and have a negative impact on student experience.

4.3 – Least Taught Tools

Many of the other tools on the survey list are taught infrequently, if at all, and widely regarded as optional/minor. They include freeware such as OmegaT, and software such as Across for which free student licences can be obtained. This suggests that the cost of licences is generally not a primary driver of tools choice. Localization tools such as Alchemy Catalyst and Lingobit Localizer are probably in this list because...
software localization is not yet a priority for most programmes (despite well-known exceptions such as the MSc in Translation Technology offered by Dublin City University) – though it should be noted that SDL Passolo comes in 6th place in the ‘Top Dozen’ list:

![Bar Chart](image)

**Figure 10: The Rest**

It is not clear from Figures 8-10 how many of the tools reported in the survey are full versions and how many are demo versions with various limitations, although a number of comments suggest that demo versions are quite widely used, notably for optional/minor tools where a licence purchase would make little sense in view of the limited student use expected.

4.4 – Selected Comments

2. 20 computers are equipped with Trados, which is costly and sometimes complex in terms of maintenance.
3. The selection of tools reflects: 1. the needs of LSP’s where students do their internships […]
4. The main problems: costs of licences + our IS services not always able to cope with installing all the different tools + some tools cause problems with the server or have bugs (ex: Multitrans and Multiterm) + we are not using enough shared memory tools (more expensive).

5. Tools Teaching and Assessment Themes

Question 5 grouped together topics aiming to capture and rank by perceived importance a range of different approaches to teaching and assessing translation technologies and tools. Issues investigated included the relative importance of individual vs. group work, different modes of assessment, and the place in the curriculum of the history and theory of technologies and tools, industry practices and structures, crowd
sourcing and legal issues, and aspects of basic IT literacy. The question asked was simply whether or not the various elements were present in the respondent’s Master’s programme.

5.1 – Top Dozen Themes

Not unexpectedly, there was almost universal affirmation among respondents that their programmes embodied learning and assessment through individual work, but learning and assessment through group work was almost as frequent. 27 programmes use practical tasks in their assessment, and only 11 do not:

![Diagram showing the frequency of various learning and assessment methods across programmes.]

**Figure 11: Top Dozen Themes**

The theory and principles of translation tools are more widely taught than their history. The teaching of tools both embedded in translation projects and as software in and for themselves figures quite prominently in the list, as do the teaching of professional roles, industry standards and industry developments.

5.2 – Other Themes

Rather more weakly represented are some of the themes identified recently as growing in importance in the industry, including MT post-editing, crowd-sourcing, and legal issues (though these are all still covered in around half of respondent programmes):
Figure 12: The Rest

Key generic skills (file management and data security, advanced Office (macros, templates, data exchange), learning from manuals and Help systems) also seem to be regarded, perhaps surprisingly, as of less than central importance to many programmes (but see Selected Comments, below).

Assessment by report or general essay seems very much a minority activity: technologies and tools seem to be assessed largely by practical project. Manufacturer’s certification tests (e.g. those offered by SDL International) are available in a significant number of programmes (13), but only used for assessment purposes by two. This suggests a perception that assessment for academic purposes, albeit in a training context, is different from the kind of assessment used by SDL. This theme would be interesting to explore further.

5.3 – Relative Importance of Themes

The percentage of responses that ranked the different themes as ‘important’ or ‘very important’ closely matches the degree to which themes are present in the respondents’ programmes:
Figure 13: Top Dozen Themes

Figure 14: Least Important Themes
5.4 – Selected Comments

1. Our approach is essentially practical, involving as great a mix as possible of types of evaluation, with both personal and group work on professional translation projects.

2. The largest amount of the students’ work load is devoted to self-studying thus one of the goals of the programme is to develop students’ skills of individual work and supervised group work.

3. Many aspects, though rated "very important" in the survey, are not regularly taught due to the limited number of teaching hours.

4. We suppose that students come to the MA programme with basic office skills, but we've recognized the need to focus on file security and advanced office skills in the Programme in future.

5. All the tools are not equally developed and therefore efficient with our working languages. That’s why we must mix up individual and team work/assessment.

6. It seems quite indispensable that translation students should be aware of the industrial, legal, commercial and professional involvements of the major softwares that are being used in view of their future career and professional ethics.

6. Staff Training, IT Facilities and Technical Support

Question 6 aimed to find out who currently teaches translation technologies and tools in Master’s programmes, and what level of professional qualifications and experience they have. A second aim was to establish the pattern of IT facilities and technical support available to students and staff.

6.1 – Teaching Staff and their Qualifications

Perhaps unsurprisingly in the case of a professional field so relatively new to university teaching, a minority of programmes (37.5%) rely solely on academic staff to teach tools. 69% of programmes employ external professionals, and 42.5% use external professionals for more than half their technologies and tools training:

![Figure 15: Teaching Staff, Qualifications](image)
In 46.3% of respondent programmes, over half the staff hold a formal qualification in translation technology. 42% of programmes have less than half their staff holding such a qualification, and 29% of programmes have no staff who hold any formal qualifications in translation tools. These figures are unsurprising given that the expansion of translation technologies is so recent: it is probably that graduates from Master’s (and perhaps PhD) programmes are probably now finding their way back into universities as trainers, alongside industry professionals.

Somewhat in contrast to the picture regarding qualifications, over half the staff in 72.5% of programmes have at least 5 years experience of tools teaching, under half in 18.4% of programmes, and no staff in 23% of programmes. It is likely that this last figure is substantially explained by the number of programmes which have been running for less than five years. On the other hand, some longer-established programmes probably depend on staff with extensive experience of teaching technologies and tools but with few if any qualifications in the field.

6.2 – Workstations, Servers, Support

In terms of hardware facilities available to staff and students, almost 75% of programmes surveyed have a 1:1 or better ratio of students to tools-equipped workstations, while 28.6% have a 2:1 ratio and only 3% have a 3:1 ratio or worse:

![Figure 16: Workstation Ratios, Servers, Support](image)

Almost 40% of programmes have their own dedicated servers and a similar number share servers with other specialist programmes. There seems therefore to be widespread recognition that translation programmes require more than just institution-generic server facilities.

31.6% of programmes have their own dedicated technical support and 57.9% share technical support with other specialist programmes. Again, almost 90% of programmes have access to more than just generic institutional technicians. However, some comments nuance this positive picture by repeatedly highlighting the problem of over-reliance on a single individual with scarce skills, on both the teaching and support sides.
6.3 – Selected Comments

1. Technical support is improving, but problems arise from our technical staff’s lack of familiarity with translation tools. Our objective is to increase the proportion of trained academic staff, both as a principle and because coordinating large numbers of external professionals is a headache!

2. Staff are SDL Trados certified trainers and we are an Approved Training Centre.

3. We have one colleague who is the school’s IT manager who has attended training sessions and has now developed the experience in teaching translation and technology modules at undergraduate and postgraduate levels. He is our main expert, supported by representatives from translation industry who contribute to delivering the programme.

4. The teaching of CAT tools was introduced four years ago; therefore, our trained staff consist of relatively young people chosen from among our post-graduate and PhD students.

5. Staff on the compulsory course are self-taught except that they have received formal terminology training.

6. We have highly-qualified staff and a good laboratory in order to teach and use translation tools.

7. The training of the staff or rather their qualification in translation technology is one of our major problems since the University does not yet consider such a qualification as a requirement in recruiting new teachers. Besides, the turn over of teachers has become faster. Hiring external professionals is possible but poorly paid by the University.

8. As regards technical support staff, the situation is evolving at the moment, toward more centralisation, so we might lose our dedicated staff and servers.

9. We have one lecturer who teaches the CAT unit. He is Trados certified, a former professional translator, and has used CAT tools for eight years.

7. Good practice

75% of respondents considered that their programme embodies good practice in one or more specific elements, and the same proportion saw the general design of their programme as representing good practice. However, only just over 40% would be willing to write up their good practice as a case study, although nearly 60% would be prepared to be contacted for further details of their good practice.

Given appropriate safeguards, around 40% of respondents would be prepared to contribute courseware (workbooks, sample files, etc.) to an online resources bank, and the same percentage would contribute student-generated data, subject to similar safeguards.
8. Future prospects

In Question 8, respondents were asked to rank a range of future opportunities and threats in terms of their estimated likelihood of coming about in the next five years. Significantly, all the opportunities were ranked higher than any of the threats, which suggests that the general mood of respondents was optimistic and they expect the teaching of translation technologies and tools to expand in the future.

8.1 – Opportunities

The results show clear expectations of increased student demand, industry involvement, and availability of trained staff. There is clear expectation of change, but less confidence in the demand for new programmes, particularly collaborative ones. The range and complexity of tools is also expected to continue expanding as it has done over the last two decades:

![Figure 17: Opportunities](image)

However, it might be unrealistic simply to project that tendency forwards into the future. If tools were to become simpler and more user-friendly instead, there might be less need for specialist training at Master’s level. Two developments that respondents regarded as quite likely, migration to the Cloud and growth of MT, could both radically affect the translation market and the way it uses technologies and tools.

8.2 – Threats

The two greatest perceived limitations on future development are not technical but institutional: likely lack of money and of official (university, governmental) support.

22 respondents (51%) felt that lack of money was likely or very likely to hold back developments, and only 8 (19%) saw this as unlikely or very unlikely to be a problem.
14 respondents (33%) felt that lack of institutional support was a likely or very likely limitation, but 18 (42%) saw this as unlikely or very unlikely to be a problem.

Lack of IT facilities was also feared by 14 respondents, but 21 (49%) felt that this was unlikely or very unlikely to be a problem.

Lack of trained staff was only seen as a likely problem by 9 respondents (22%), but 21 (49%) felt that this was unlikely or very unlikely to become a challenge.

Only six respondents (14%) were worried about lack of technical support, whereas 20 (47%) saw it as unlikely to be a problem and almost 40% were neutral (i.e. apparently unconcerned).

8.3 – Selected Comments

1. Although there is always a pressing demand from CURRENT students for more hours of practical work with translation tools (which they see as the key to success) our GRADUATE students, with hindsight, always say that the grounding in translation skills which they received has been much more important and that hands-on learning on the job is quick and easy, with their basic training. Nevertheless, we are aware of the need to keep up with the evolution of the industry and plan to develop courses in MT and pre and post-editing from next year on.

2. Co-operation with the industry and the Faculty of Engineering will increase. More analysis studies will be undertaken in Masters’ theses and during internships.

3. A significant planned development is the introduction of server-based TMs and TBs, which currently carry a very high cost - we are exploring ways of mitigating this.

4. A major uncertainty in the UK is the evolution of postgraduate fees: if these increase in a similar way to undergraduate fees, the home and EU market for postgraduate translation programmes could be severely affected and would certainly contract dramatically.

5. Future developments in translation technology will require more emphasis on revision and evaluation of MT translation, and terminology will take up a more important place.
6. More and more students are bringing their own computers and devices equipped with translation tool technology. *Technology is already a permanent feature of the translation process for most students. They will become less dependent on fixed IT rooms and installations* and teaching will therefore have to adapt accordingly.

7. In a time of financial straits, there’s little chance that new developments in the translation technology of our programme will appear.

8. ??? If students can’t afford MA degrees ?????

9. Our future developments are in connection with the introduction of training in different types of translation and alternative teaching methods (e.g. e-learning) [...] 

10. I expect student demand (on the Master level) will remain unchanged but there is growing demand for in-service and refresher courses, and we would like to invest in this (b) The master will be extended to a two-year programme and localisation will become an obligatory subject for those taking the professional translation minor; the same students will also have to go through the mock exercise of setting up a translation bureau & seeking and handling a commission.

11. One of the characteristics of our University today: reluctant to anticipate and plan new developments in Humanities.

12. We expect a more democratic access to translation tools as a result of the development of the Cloud. Respectively, we expect more intensive sharing of databases and possibilities for constituting high quality translation memories.

13. Although we do know that Translation Technology is ever increasing and ever complexifying, we have adopted an approach that consists in sticking to the requirements of the people who hire our students, specifically as to mastering the tools.

14. Translators will become more post-editors of output provided by - amateur-translators- crowd-sourced translators- machine translation Demand for translation will keep increasing for a long time, as will the variety of possibilities in the field. However, the above three concept will make it harder for trained translators and translation programmes to convince the industry of their surplus [= added value?].

**9. Conclusions**

Despite the wealth of qualitative and quantitative data produced by the survey, it remains difficult to gain a clear sense of exactly how translation technologies and tools are incorporated into Master’s programmes. There is clearly a high degree of variability in the extent to which this is being done, and in the methodologies employed. Some general conclusions do however emerge, with respect to both current and future practice:

**9.1 – Current Practice**

1. In terms of the translation tools currently being taught, the market is strongly dominated by SDL International, with its well developed Universities programme and Certification scheme for translators and project managers.
2. There is clear evidence of very variable levels of software licence holding between programmes, some of which rely heavily on demo versions. It would clearly be better for students if a more level playing field could be created.

3. There is a wide consensus on the importance of practical and group projects in the teaching and assessment of translation technologies and tools.

4. Internships are widely perceived as an important link between universities and the language professions.

5. Academic staff currently have a somewhat ambiguous position in technologies and tools training – many seem to have experience but few have formal qualifications.

6. A recurrent issue is how to use and manage ‘bought-in’ professional tools trainers.

7. In many programmes, there still seems to be a divide between staff who deliver technologies and tools training, and others (e.g. translation tutors) who do not regard this as part of their job. An ongoing problem is how to involve the latter group in tools-related activities and overcome their reticence in relation to language technologies. Otherwise, the divorce which often obtains between translation practice and tools training risks being perpetuated.

9.2 – The Future

1. Apparently up-coming themes are currently minor/marginal in most programmes, but their potential implications for future translation technologies and tools training need to be better understood:

   a. Localization (software, games, and websites)

   b. MT post-editing (‘doing a job to a price’)

   c. E-learning (methodology?)

   d. Server-based workflows (cost?)

   e. Cloud-based translation – will it make many of today’s tools redundant?

2. The survey predicts an expansion of internships, but also of simulated translation companies within programmes as a basis for group projects able to bridge the gap between the academy and the language professions. There is considerable potential within other areas of universities (Medicine, Science, Engineering, Law …) for authentic materials to be provided in support of these activities.

3. A significant issue raised implicitly by the survey is uneven provision of translation tools licences between institutions, and to some extent between countries. It is clearly in the interests of student translators to be exposed to full versions of the latest software. Equally, it is in the interests of tools vendors for the next generation of translators to be familiar with their software. At the moment, software purchases are negotiated by each institution in function of the resources they have available. Might this be done jointly in future, through a system of common licence agreements?
4. The willingness of many respondents to share teaching resources and student-produced data (subject to suitable safeguards), makes the development of a platform for online collaboration a logical and desirable step.

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