Minor language, major challenges: the results of a survey into the IT competences of Finnish translators

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ABSTRACT

This article discusses the IT skills of Finnish translators. It presents the results of an online survey, conducted from December 2012 to May 2013. The total number of responses was 238, and the respondents are graduates of various universities who work with various language pairs (with Finnish as language A) and specialise in different fields. One quarter of the respondents are male, and more than half represent the younger generation (>36 years of age). The respondents' evaluation of their IT skills shows a satisfactory level of competence. Most of the respondents are competent at text processing and performing Internet searches, and the majority have some skills in computer maintenance. Many respondents are not very familiar with CAT tools, although some are active users of this software. However, most translators have little or no experience of image processing, hypertext markup, or spreadsheet software. Results show that the respondents are critical of the training in translation technologies they received at university. They also evidence Finnish translators' belief in IT skills as vital to contemporary translation work.

KEYWORDS

IT skills, online survey, translator training, minor languages, perceived computer skills.

1. Introduction

This paper focuses on the translators' IT skills from the perspective of translators of a less commonly spoken language (Finnish). Together with one of his Master's degree students, the author conducted a nationwide electronic survey, and the article reports its main results. The development of language technologies over the last ten years has been revolutionary. The importance of CAT tools (computer-assisted translation) in the work of translators has increased substantially, and as a result, the profession as a whole is changing (LeBlanc 2013). Anthony Pym (2011) and Ignacio Garcia (2009 and 2010) even claim that in the near future, modern translation technologies might make IT skills and a specialist

background more important for translators than language proficiency. Although this might indeed be the case for such pairs of world languages as English-French or English-German, it does not seem likely that this will apply to minor languages, at least not in the near future. Electronic language resources for minor languages develop more slowly, there are fewer text corpora and terminology banks available, and machine translation systems for languages of minor diffusion – if they exist at all – produce translations of much worse quality than for pairs of major languages.

The less a language is spoken, the fewer language resources are available. Small markets limit the profitability of compiling dictionaries for languages with only a few million speakers. It is important to mention, however, that data banks, translation memories, and text corpora are cheaper ways to develop language resources compared to compiling traditional printed dictionaries. Therefore, these resources are commensurately more important for less commonly spoken languages than for world languages.

Electronic resources are extremely helpful in the work of translators. However, they demand rather advanced technological skills, creativity, and a critical way of thinking. A good dictionary article with detailed definitions, information on stylistic features, and a couple of good illustrative examples is always the best option for a translator. If a dictionary is not available, a corpus might provide relatively reliable data. Without a corpus, Internet searches might be of help. It is obvious that translators of smaller languages frequently have to use the latter of these options, which, incidentally, is also the most difficult and time-consuming. Thus, the challenge of technologies for less commonly spoken languages is a challenge of the creative use of available resources (cf. also Bernardini 2004: 21).

IT skills are nowadays an essential part of the translator's work, and they should be placed immediately after language-related skills in order of importance. First of all, the documents for translating are produced in many different formats: text documents, spreadsheets, presentations, web pages, graphical images, program codes containing texts and messages, etc. Besides, freelancers must be able to back up their data and perform computer maintenance with minimal external help. Likewise, in-house translators with good technological skills are more efficient, can find technical solutions without assistance, and do not lose data.

IT skills include numerous very different abilities. Some of them are essential to a translator's work, whereas others are needed only occasionally. The expert group of the EMT Network (European Master's in Translation) specify technological competence (or mastery of tools) as one of the six areas of the key competences for translation services (Language competence, Information Mining competence, Thematic competence, Technological competence, Intercultural competence, and Translation Service Provision competence). The expert group lists the following technical skills:

- Knowing how to use software effectively and rapidly, and how to integrate a range of software to assist in correction, translation, terminology, layout, documentary research (e.g. text processing, spelling and grammar check, the Internet, translation memory, terminology database, voice recognition software, etc.);
- Knowing how to create and manage a database and files;
- Knowing how to adapt to and familiarise oneself with new tools, particularly for the translation of multimedia and audio-visual material;
- Knowing how to prepare and produce a translation in different formats and for different technical media;
- Knowing the possibilities and limits of machine translation.

(EMT expert group 2009)

Daniel Gouadec stresses the increasing importance of technical skills of all kinds in the work of translators:

> The whole translation 'profession' is moving more and more rapidly towards a redefinition of what a 'translator' is. The 'new' translator must in fact be ready to undertake as many of the tasks listed and described above as he can, thus becoming an information management expert, technician, terminologist, phraseologist, translator, adapter, proof-reader, reviser, quality control expert, post-editor, editor, graphic design expert and Web page designer, Web page integrator, file manager, macro command writer and in some cases, IT specialist, all rolled into one (Gouadec 2007: 123).

Among the qualities, skills, and abilities expected from a translator at the European Commission is "a capacity to master computer-assisted translation and terminology tools, as well as standard office-automation software" (http://ec.europa.eu/dgs/translation/workwithus/staff/profile/). The Optimale project, supported by the European Union's Lifelong Learning Programme, performed a survey of translation service employers in 2010–2011 (Optimale 2012). The respondents' answers demonstrate the importance of IT skills in the industry. Predictably, some IT skills are regarded as essential (converting files into different formats, using CAT

tools) while others are considered to be less important or even unnecessary (using speech recognition software, post-editing of machine translations, using markup languages, etc.). The survey shows that the whole industry is rapidly changing and that translators often need to acquire additional skills they did not possess upon graduation. Evidently, translator training programmes also need updating. As the Optimale research covers twenty-seven countries and more than seventeen working language pairs, it therefore concentrates on general trends. More importantly, it only shows the point of view of employers, while the perspective of employees may be even more important.

Due to Finland's small population (5.45 million in 2013), Finnish – like other official languages of the smaller EU member states – is one of the less commonly spoken languages in Europe. As a result, the aforementioned lack of language resources is a significant issue for the Finnish language (see, e.g. Koskenniemi *et al.* 2012). Around ten years ago, Jääskeläinen and Mauranen discovered that when considering technology, Finnish translators only used word processing and electronic dictionaries and were not much interested in using other language technologies (Jääskeläinen and Mauranen 2005). I was curious to discover whether the situation is different today.

According to Koskenniemi *et al.*, use of the Internet and electronic resources has developed with incredible speed in Finland. The number of households using computers increased from forty-seven to eighty-one per cent between 2000 and 2009. All kinds of electronic services (banking, contacting officials, shopping, watching news, postal services, social networks, etc.) have become increasingly popular. The National Library of Finland has created various digital services and it makes publications available in digital form. The digital library, FinElib, received nearly sixty-nine million visits, and 196 million files were downloaded in 2010; these are clearly large numbers for a country with a population of five million (Koskenniemi *et al.* 2012: 13–14). It is therefore interesting to discover whether these developments have influenced the work of Finnish translators.

In this article, I discuss the following questions:

- What IT skills do Finnish translators possess, and at what level of competence?
- How do translators acquire these skills?
- How important are these skills in the marketplace?

To answer these questions, an electronic survey among the Finnish translators was conducted at the beginning of 2013.

2. The survey

The purpose of the survey was to obtain data on the use of computer software by Finnish translators. The questionnaire was developed, tested and carried out in conjunction with my student Outi Suppanen, who is writing her Master's thesis on the topic. The survey began in December 2012 and continued until 1 May 2013. The questionnaire was in Finnish. The web-based *E-lomake 3* software package was used to create the online questionnaire form and to collect responses (see https://e-lomake.fi/web/briefly-in-english.html). This program is installed on the server of the University of Tampere and is available to personnel and students.

Invitations to take part in the survey were sent to the mailing lists of different translator communities, such as SKTL, the Finnish Association of Translators and Interpreters (see http://www.sktl.fi/in-english/); KAJ, Translation Industry Professionals of Finland (http://www.kaj.fi/en); and the translator training programmes of eight universities (only students already working as translators were invited). In the final stage of the survey, a list of the email addresses of translation firms and freelance translators was collected from the Yellow Pages directory, and another invitation was sent directly to translators. Many translators are members of both SKTL and KAJ and may also have ads on the Yellow Pages; as a result, potential respondents could have received invitations via multiple channels. Nevertheless, invitations were sent twice to remind busy and absent-minded people. Reminders were sent two weeks after the initial message. It is difficult to calculate the exact numbers of invitation addressees (the recipients were also encouraged to pass the message on to relevant persons). However, after calculating the approximate numbers of SKTL and KAJ members and the number of students already working in the field, it can be estimated that between three thousand and five thousand translators from different regions of Finland should have received an invitation to participate in the survey.

The total number of responses received was 238. As was expected, female graduates of the University of Helsinki using English as their main working language were the largest group of respondents.[1] However, we managed to obtain sufficient answers from graduates of other Finnish universities (see Table 2) working with other language pairs: Finnish-Russian,

Finnish-German, Finnish-Swedish, etc. (see Table 1 below). About one quarter of the respondents (54) were male.

Table 1 shows the working languages of the respondents. It was surprisingly difficult to formulate the question concerning the pairs of working languages. Strictly speaking, there should always be at least two languages, plus the direction of translation (e.g. English-French, French-English, etc.). Some translators work with a certain pair of languages in both directions, while others translate only in one direction. Many translators have more than one pair of working languages, which makes their employment more stable. Therefore, to ascertain the exact language repertoire of the respondents, a long drop-down list of possible pairs of languages with the possibility of multiple selection would have been needed. To make the questionnaire more user-friendly, the participants were asked their working language pairs without the need for further explanation.

The working language A (generally the native language) of the majority was naturally Finnish; however, it was possible that some respondents could have been bilingual and that some could have had another language as their A language. Some respondents did mention the direction of translation by giving answers like “Finnish-Russian-Finnish” or “Finnish-Russian, Russian-Finnish” while others did not seem to pay much attention to this. As a consequence, it was not always possible to precisely determine the respondents’ language A from their answers. For example, one respondent answered “French-Finnish, English-Finnish”, which was unlikely to mean that the respondent is French-English bilingual speaking Finnish as a second language. Nevertheless, for all of the respondents, Finnish was the A or sometimes the B language, and their main working language pair was “Finnish-X” or “X-Finnish”[2]. The first working pair mentioned by a respondent was presumed to be the main pair of languages.

	Main working language	Percentage of total	Additional working language	Total	Percentage of respondents working in this language
English	117	49%	60	177	74.37%
Russian	43	18%	1	44	18.49%
Swedish	30	13%	44	74	31.09%
German	26	11%	9	35	14.71%
Other	22	9%	-	-	-

Table 1. Working languages of the respondents.

English was reported as the main working language by almost half of the respondents, and a further 60 respondents mention English as their second or third working language, making the number even higher – almost three quarters (74%) of the population of the survey. Russian, Swedish, and German are the other three most common languages. Russian and German are usually the main working languages and are not often translators' additional languages; this is most probably because they are regarded as "difficult" languages. Swedish, the second official language of Finland, on the contrary, is more popular as an additional working language than as a main working language. Among the respondents, there were also translators of French (8), Italian (5), Spanish (3), Polish (2), Danish (1), Norwegian (1), Portuguese (1), and Slovenian (1).

Table 2 below lists the universities that the respondents attend/attended. The University of Helsinki is the largest in the country and has Master's degree programmes in all major languages, therefore its dominant position was unsurprising. However, the domination of the University of Helsinki is not overwhelming; other universities where translators are trained – the University of Turku, the University of Tampere, and the University of Eastern Finland – are also represented in the survey. It is interesting to note that there are no Master's degree programmes in translation at the remaining three universities listed in Table 2, which demonstrates once again that many translators did not study translation, but rather foreign languages or linguistics.

University	Number of responses	Percentage of total
University of Helsinki	64	27%
University of Turku	48	20%
University of Tampere	36	15%
University of Jyväskylä	16	7%
University of Eastern Finland	17	7%
University of Vaasa	12	5%
Åbo Akademi University	10	4%
Other	35	54%
Total	238	100%

Table 2. The universities of the respondents.

Only around half of the respondents (121) hold a degree in translation, which also reflects the current situation where graduates of Master's programmes in foreign languages are employed as translators despite having no special training in translation.[3] This fact also strangely correlates with the absence of clear criteria for a definition of what a professional translator is (see Jääskeläinen *et al.* 2011).

Table 3 below shows the age groups of the respondents. More than half of the respondents (54%) are under 36 years of age, which means that they received their Master's degree during the last ten years and should therefore have had at least some training in translation technologies at university. However, the survey is not confined to young people. Representatives of older generations are experienced workers, most of them having permanent contracts, and some work as group leaders. They were not taught to work with IT tools during their university studies; instead, they acquired computer literacy on their own or by attending additional courses. The survey should therefore show how they cope with the challenges of the information age.

Age group	Number of responses	Percentage of total
≤25	35	15%
26–35	94	39%
36–55	88	37%
≥56	21	9%
Total	238	100%

Table 3. Age groups of the respondents.

To sum up, the respondents of the survey form a heterogeneous group that can be considered representative of all the workers in the field of translation in Finland. They are people of both genders, of different age groups, with degrees either in translation or another subject, and they are graduates of different universities, who work with different pairs of working languages.

3. The structure of the survey

The questionnaire consisted of four parts:

1) the background of the respondent,
2) self-evaluation of the respondent's own technological skills,
3) evaluation of the training in translation technologies received at university,
4) evaluation of the relevance of different IT skills for the translator's activities.

When designing the questionnaire, special attention was paid to ensuring that it was as simple and short as possible. The questionnaire was conducted in Finnish. The original Finnish version of the questionnaire form was introduced in the article by Mikhailov and Suppanen (2013), and an English translation is attached as an appendix to this paper.

The multiple choice answers were based on the Likert scale (e.g. for evaluating user skills, these were 1 = *poor*, 2 = *satisfactory*, 3= *good*, 4 = *very good* and 5 = *excellent*; *no answer* was scored as 0). From drop-down lists, the respondents chose verbal answers that were saved as numeric values. This made it easier to compare data, to calculate average scores and dispersion, and to perform the requisite statistical tests. The form also contained input boxes for comments and additional information.

The IT skills evaluated in the questionnaire were as follows:

- computer maintenance,
- word processing and text formatting (e.g. Word),
- spreadsheet software (e.g. Excel),
- presentation software (e.g. PowerPoint),
- image processing software (e.g. Adobe Photoshop),
- markup languages (e.g. HTML),
- translation memory software (TM),
- machine translation (MT),
- the Internet,
- term banks and online dictionaries.

The survey data is quite extensive and can be used for different purposes and studied from different perspectives. In this paper, only a general overview of the survey is presented. A more detailed analysis will be conducted in the Master's thesis of Outi Suppanen, which will be finished by the end of 2015; an electronic version will be available on the TamPub Institutional Repository on the website of the University of Tampere.

4. The self-evaluation of IT skills

The acquisition of IT skills is a complex issue. The way users learn to use the various features of software depends on their psychological type as well as on the nature of their work (cf. Olohan 2011). It was not possible to obtain extensive data on the respondents' skills using the survey; instead, only a general idea of the users' skills is available.

Despite the obvious need for IT skills, few of the respondents consider themselves advanced users. They rate their IT skills as good or excellent only in using word processors (4.42) and in performing Internet searches (4.71). Their computer maintenance and text formatting skills are satisfactory, but may need some improvement (3.82 and 3.49). The respondents can more or less satisfactorily cope with translation memory software (3.11), but the other skills rated in the survey (image processing, HTML literacy, machine translation) are satisfactory or poor.
Surprisingly, the self-rated skills of those who have a degree in translation are only marginally better than of those who do not. Even after filtering out the older generations, the picture did not change much. Significant differences can be found only in the use of translation memory software (see Table 4).

Master's degree in translation studies	Maintenance	Word processing	Image processing	TM	Internet
No	3.79	4.33	2.89	2.87	4.68
Yes	3.85	4.51	2.89	3.35	4.75

Table 4. IT skills of translators with a Master's degree in translation studies vs. translators with no such degree.

Table 5 shows the levels of IT skills by main working language. One might expect differences relating to the nature of the work; for example, translators of Russian should be able to work with a Cyrillic keyboard. Russian translators should also be able to change the language settings of the computer, whereas translators of English or Swedish will generally be

quite happy with the factory settings. A brief look at the table, however, indicates that this is not the case: most of the scores are very close.

Language	Maintenance	Word processing	Image processing	TM	Internet
English	4.06	4.39	2.99	3.37	4.75
Swedish	3.57	4.43	2.4	3.77	5
German	3.81	4.38	2.81	3.46	4.77
Russian	3.49	4.56	2.98	1.84	4.4

Table 5. IT skills by main working language.

Only two scores in Table 5 are noteworthy. The first is the computer maintenance score of the translators of English, which is better than the other groups and contradicts my previous expectations. The reason for this might be due to freelance activities. In-house translators do not have to concern themselves with installing software or keeping their computers up to date.[4] The second noteworthy score is the one for translation memory software use by the translators of Russian, which is much lower than the scores stated by the translators of other languages, although the Russian translators do not seem to have problems in other IT skills. Most of the critical remarks about TM software also come from the Russian translators. The reason for this is most probably that the translators of Russian are older than other participants of the survey: 16 respondents are in the 36–55 age group and 11 (25% of the whole group) are older than 56.

The comparison by specialisation shown in Table 6 does not reveal much difference because most translators specialise in multiple fields, for example, literary and technical translation, literary and audio-visual (AV) translation, literary and legal translation, etc. As expected, literary and AV translators possess worse CAT tool skills than technical and legal translators. Translators working in the localisation industry do seem to have better skills in markup languages and TM than others, but their skills are still not as good as might have been expected.

	Maintenance	Word processing	Image processing	HTML	TM	Internet
Technical translation	3.97	4.52	3.08	2.32	3.42	4.65
Localisation	4.48	4.67	3.30	3.07	3.89	4.70
Legal translation	3.80	4.49	2.82	2.16	3.28	4.77
Literary translation	4.14	4.57	3.04	2.33	2.19	4.57
Audio-visual translation	4.13	4.48	2.94	1.90	1.97	4.84

Table 6. IT skills by specialisation

A comparison of the IT skills of different age groups (Table 7) does indeed show that young people are more competent in using computers. Older translators seem to be doing most of their translation work with the help of word processors rather than CAT tools. However, the older generations are not bad at using the Internet. Interestingly, the eldest and the youngest respondents are about as equally competent in using TM software. The students obviously hadn't yet attended the relevant courses or had not had the chance to use TM in translation work, while the translators of the oldest generation are not interested in acquiring another special skill just a few years before retiring. Regardless, the observed differences do not seem to be very large, meaning that many of the respondents are only occasionally using new technologies; instead, they confine themselves to word processors and Internet.

	Maintenance	Word processing	Image processing	HTML	TM	Internet
≤25	4.26	4.60	3.11	2.17	2.20	4.71
26-35	4.04	4.37	2.87	2.10	3.32	4.77
36-55	3.62	4.42	2.84	2.12	3.51	4.76
≥56	2.95	4.38	2.81	1.81	2.05	4.29

Table 7. IT skills by age group.

A comparison of Tables 4–7 shows that the self-evaluations of the skills in which the respondents believe they perform better are more homogeneous than the evaluations of the skills that are considered to be problematic. The scores for word processing and Internet search skills are very close in the different groups, while substantial differences can be observed in the scores for using translation memories and image processing software.

The reasons for this phenomenon become more obvious after studying the answers separately. Table 8 shows the self-evaluation statistics of the 43 translators of Russian in five IT skills. All respondents used scores 4–5 when self-evaluating word processing skills, with the exception of one who responded with a score of 3. More than half of the respondents (25) believe that they possess excellent word processing skills. Their self-evaluation in using TM software is very different, however: the respondents used the whole 1–5 scale, and almost half of them (20) said they could not use the software at all. Only about one quarter of the respondents (5+5+1=11) claim to have at least satisfactory skills in using TM software, and just one respondent reported being proficient in TM.

Proficiency level (0–5)	Maintenance	Word processing	Image processing	TM	Internet
0	0	0	0	20	0
1	4	0	4	5	0
2	4	0	11	7	1
3	13	1	11	5	3
4	11	17	16	5	17
5	11	25	1	1	22

Table 8. The score tallies of the self-evaluation of IT skills by the translators of Russian.

The measure of the spread of a set of numbers is called variance. The formula for calculating variance (σ^2) is as follows:

$$\sigma^2 = \frac{\sum (x_i - \bar{x})^2}{N-1}$$

Where N = number of items, x_i = value of item i, and $\bar{x}$ = mean value of x. Variance can be easily calculated with the help of spreadsheet software. For example, there is the *Var* function in Microsoft Excel and OpenOffice Calc.

Table 9 shows that the variance in the self-evaluation of word processing and Internet search skills is very low, while the variance in self-evaluation of skills in TM software is considerably higher.

Maintenance	Word processing	Image processing	TM	Internet
1.16	0.35	1.12	3.26	0.27

Table 9. Variance in the self-evaluation of IT skills (all answers).

To summarise, the survey has demonstrated that most of the respondents possess basic IT skills, and at the same time, the level of specialist skills varies greatly. Proficiency in special software is obviously connected with the specialisation of translators and does not correlate greatly with age or training at university.

5. Evaluation of teaching

In Finland, translator training began at the end of the 1960s. Currently, there are Master's programmes in translation at four universities: the University of Helsinki (English, German, French, Russian), the University of Turku (English, French, German), the University of Tampere (English, German, French, Russian, Swedish), and the University of Eastern Finland (English, German, Russian). IT skills are taught in the curricula of all translation programmes.

In the second part of the questionnaire, the recipients evaluated the teaching of IT skills in their university curricula. Many respondents graduated before the use of computers was commonplace, and they therefore did not take part in the evaluation. One respondent left this comment:

> I got my degree in 1970s (1973–1979) and at that time we did not use computers at all. The first word processors came into use in the beginning of 1980s and I took a course in word processing that was paid for by my employer. Since then, I have had to study everything on my own and attend courses at my own expense. [Please note: All responses were originally in Finnish, and all translations are mine. – M.M.]

Another respondent commented: "There were no computers yet in the 1980s. What was most important at that time – as well as nowadays – was the quality of translated text. I wrote by hand or used a typewriter."
The 1990s were a time of great change; this is clearly visible in the comments of those respondents who studied at that time. One respondent is mildly critical: "The problems of IT training at the University of Helsinki had nothing to do with the quality of teaching, the reason was that computers were quite a new thing at that time and not widely used yet."

Another graduate of the same university was quite happy with the teaching: "The teaching of Word skills was very well organised at the University of Helsinki, as was the touch typing training. Technology has developed a lot since the teaching of HTML, etc. of that time. Therefore, I have had to learn a lot on my own later."

However, even those respondents who studied during the last ten years are rather critical of the teaching of IT skills at their universities (see Table 10). Some are irritated by the way the teaching of practical skills was substituted with abstract academic theorising: "During my studies, practical translation always happened to be buried under some scholarly and idealistic worthless theory."

Many respondents (34) wrote that Finnish universities are behind the times, and that much more attention should be paid to technology: "I did not even have a chance to try translation memory software during my studies, although translation was my major for my first four years at university."

It is evident that a large number of our respondents have either acquired most of their technical skills themselves or have done so by attending additional courses, sometimes organised by or paid for by their employers. One respondent wrote: "I did not have any IT training as part of my major subject at the university. I acquired the skills through minor subjects and additional courses."

Another respondent stated:

> There was too little teaching of those skills at the Department of Translation in Kouvola [the University of Helsinki's Department of Translation Studies was originally in the town of Kouvola; it later moved to Helsinki and was merged with other language departments – M.M.], although they specialised in translation. It's a pity when I think back to it…

However, one of the respondents commented that "a translator should take care that his/her technical skills do not lag behind technical progress."

Table 10 below presents younger respondents' evaluation of the IT skills training they received at their universities. The grades the teachers received from their alumni are very low indeed. This does not necessarily mean that the situation is as bad as it looks. As was already mentioned, a large number of respondents studied at traditional philological

departments. Surprisingly, even those working in the field do not draw much of a distinction between Master's programmes in foreign languages and Master's programmes in translation. Graduates from philological departments are supposed to embark on academic careers or teach in schools, therefore they do not have translation technologies in their curricula.

Maintenance	Word processing	Image processing	TM	Internet
1.88	2.6	1.28	2.19	2.98

Table 10. Evaluation of teaching of IT skills (Age >36).

It is worth noting that the teaching of translation technologies has been developing very fast in all translator training programmes in Finland over the last ten years. New teaching modules and courses have been introduced, and the use of IT tools is being integrated into translation courses. The whole system is still midway through its transformation. Even the younger respondents have witnessed only the initial phases of this process.

It should be mentioned, however, that university curricula would inevitably be "behind the times:" while TM technologies are being integrated into curricula of Finnish universities, cloud technologies and human-assisted translation software have become widely used. Using online translation software will probably cause dramatic changes in the whole process of translation work in the near future, and, as result, those working in the field will need to update their IT skills.
Interestingly, all respondents took it for granted that IT skills are an essential part of translator training (teachers of translation are not as unanimous). None of the respondents thought that the skills obtained at high school or self-taught skills would be sufficient for those working as translators.

6. The importance of IT skills in a translator's work

In the final part of the questionnaire, the recipients shared their opinions on the relevance of different skills for translator training and the importance of these skills in translation work. The opinions correlate to some extent with their self-evaluation. The translators do not think that using spreadsheet software, working with graphical images, HTML markup or machine translation are important for translators. "The translator

should not need to do the formatting of the translation, this should be done by somebody else," argued one respondent. According to the respondents, the most important IT skills for translators, in descending order of importance, are: Internet search skills, word processing, translation memory software use, and computer maintenance (see Table 11).

Mainte-nance	Word proces-sing	Text for-matting	Excel	PowerPoint	Image proces-sing	HTML	TM	MT	Internet
3.89	4.64	3.61	2.4	2.46	1.79	1.79	4.05	2.05	4.93

Table 11. Evaluation of the importance of IT skills in working life.

Internet search skills seem to outweigh all other skills. Most translators, whether freelance or in-house, agree on this point: the Internet is a highly valuable tool.

It is interesting to note that although translation memory software did score highly (4.05), the respondents do not consider it as important as Internet search skills. In contrast to this, the score for machine translation programmes is very low (2.05).[5]

In-house translators and freelancers work in different environments: those who work in-house do not have to install and update software. This issue reduces the importance of some skills:

> The IT skills required depend on what organisation the translator works for. A rank-and-file worker does not have administrator's rights to deal with software and computer maintenance. On the other hand, a freelancer or an entrepreneur evidently has to handle this. Increasingly often, it is expected that translators should produce a product ready for publishing. However, in my organisation, translators do not need to handle the document's layout or produce ready-to-use web pages (although we work together with DTP [desktop publishing] operators and web designers). I have not had to do any image processing yet either.

Some of the respondents point out that the importance of technical skills in the profession is growing. One respondent stated:

> It seems that translation work is becoming more and more technological all the time. It looks like technical skills will be soon more important than translation skills! I would recommend students to sink their teeth into any technical gadget they can get hold of. Technical skills are easier to sell than an extensive degree in the humanities!

7. Conclusions

The survey provides extensive information on the IT skills possessed by Finnish translators. It also reveals the translators' opinions on the IT skills needed in the translation industry, and their views on whether these skills should be taught in universities.

The survey suggests that the IT skills of Finnish translators require improvement, although the respondents possess the basic skills required to work as translators. The respondents understand that they lack some of the IT skills essential for facilitating their work. Based on the results of this survey, it can be argued that training in IT skills at Finnish universities is insufficient (or at least it was insufficient when the respondents were studying). One respondent asserted: "There should be many more courses in computer technologies in translator training programmes. For example, the advanced use of Word and other word processors. Additionally, Trados and other specialist translation programmes should be better introduced in the curricula."

The specifics of minor language translation are visible in the low scores for machine translation given by the respondents, showing that machine translation is either unavailable or of poor quality. One of the respondents commented to this effect: "I don't like any of them, they are all bad." In general, the respondents believe that their skills in using dictionaries are less than satisfactory (2.79). This most probably means that they do not use dictionaries very much, since very few are available. As a result, translators become active users of terminology banks (4.08) and Internet search engines (4.71).

It would have been interesting to perform surveys of the IT skills of translators from other countries working with other language pairs, especially those working with major languages. This would have made it possible to compare the importance of IT skills in different countries and for different pairs of working languages.

This survey demonstrates both the strengths and weaknesses of electronic questionnaires. Electronic surveys are fast and cheap, and the results are immediately available in electronic form. They also make it possible to cover large geographical areas and populous communities. Furthermore, anonymity is guaranteed: it is almost impossible to trace the respondent's identity. At the same time, as with our survey, response rates can be low: some people are suspicious of phishing and viruses, some never have time

to take part in electronic surveys, and some are just not interested. However, the low response rate is compensated for by a much larger potential population to address.

Finally, it should be mentioned that electronic questionnaires suffer the same problem as physical ones: no matter how many times and how many people check the questionnaire, there are always ambiguous questions and a few important issues that the surveyor forgets to ask. In this particular survey, there should have been a question about the nature of employment (freelancer/in-house). In addition, there should have been a "not applicable" option for some questions, especially when evaluating university curricula. Unfortunately, problems of this kind are very difficult to avoid: any researcher who has ever conducted a survey knows that issues only arise after the survey has been completed and the analysis of the data has begun.

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Appendix. The online form of the survey

The original web form was in Finnish. The form below is an English translation formatted for A4 layout. The answer fields are made visible.

1. Respondent's personal data

Age: 25 or under / 26–35 / 36–55 / 56 or over
Sex: male/female/no answer
Degree: Master's degree / Bachelor's degree / Other
Degree pending / degree not completed
University: _____
Other degrees/qualifications: _____
Your working language pairs (e.g. English-Finnish): _____
Translation is your…: main occupation / additional occupation
Your field of specialisation (multiple answers possible): law / administration / trade and economy / technology / fiction / multimedia / localisation / other
Other specialisation field: _____
Comments: _____

2. Respondent's self-evaluation of IT skills
Please rate your ability in the following IT skills (1 = no skills, 2 = poor, 3 = fair, 4 = good, 5 = excellent): Computer maintenance (1–5); Word processing (1–5); Formatting and publishing (1–5); Spreadsheets (1–5); Presentation software (1–5); Image processing (1–5); Markup languages (1–5); Translation memory (1–5); Machine translation (1–5); Internet (1–5)
Do you use TM software? (Always / Often / Occasionally / Rarely / Never)
Which TM software do you use? Trados / Wordfast / Omega / Deja Vu / Other _____ Version: _____
When comparing traditional translation with translation with the help of TM tools, which is more difficult for you? (TM is much more difficult / TM is somewhat more difficult / No difference / TM is somewhat more easy / TM is much easier / No answer)
Do you use MT software? (Always / Often / Occasionally / Rarely / Never)
Which software do you use the most? _____
Do you use online dictionaries and term banks? (Always / Often / Occasionally / Rarely / Never)
Which online dictionaries and term banks do you use the most? _____
Comments: _____

3. Teaching IT-related competences on translator training programmes
Which IT skills did you acquire during your studies and to what extent? (1 = Very few or no skills, 2 = Elementary skills, 3 = Basic skills, 4 = Many skills, 5 = Comprehensive skills): Computer maintenance (1–5); Word processing (1–5); Formatting and publishing (1–5); Spreadsheets (1–5); Presentation software (1–5); Image processing (1–5); Markup languages (1–5); TM (1–5); MT (1–5); Internet (1–5)
Other skills: _____
Comments:
_____

4. IT-related competences as a translator's professional requirement
Evaluate the importance of the following technical skills in the translator's professional activities (0 = No answer, 1 = Not important, 2 = Somewhat important, 3 = Rather important, 4 = Important, 5 = Very important): Computer maintenance (1–5); Word processing (1–5); Formatting and publishing (1–5); Spreadsheets (1–5); Presentation software (1–5); Image processing (1–5); Markup languages (1–5); TM (1–5); MT (1–5); Internet (1–5)
Other important IT-related skills:_____
Comments: _____

Biography

Mikhail Mikhailov is Professor of Translation Studies (Finnish and Russian) at the University of Tampere, Finland. He compiles and collaborates in the compilation of multilingual corpora and develops web-based corpus software. His research covers corpus-based translation studies with a particular focus on parallel and comparable corpora, terminological studies, and translation technologies.
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[1] The following offers some reasons for my expectations: 1) In Finland (and quite probably in many other countries), female students dominate non-technological fields, which can be clearly seen from university statistics: males comprise only 25–30% of students at the "non-technological" universities like the universities of Tampere, Turku, Jyväskylä, etc. (e.g. http://www.stat.fi/til/yop/2013/01/yop_2013_01_2014-04-25_tau_003_fi.html). In language and translation studies, the percentage of male students is even smaller. 2) English is nowadays the most popular language in Finland: it is taught as the major subject at eight universities. 3) The University of Helsinki is the largest university of Finland.

[2] However, as Swedish is the second official language of Finland, so one can imagine Swedish-speaking Finns doing exclusively Swedish-English translations.

[3] Fifteen respondents hold a degree in other fields (marketing, medicine, computer science, etc.).

[4] Sadly, it is impossible to verify this assumption or to check whether there were more freelancers among the English translators than the translators of other languages, because there was no question about the nature of employment in the questionnaire.

[5] It can be seen from the answers that at least some of the respondents did not seem to know the difference between translation memory and machine translation; they list Trados and WordFast as machine translation programs. Most respondents who claim to use machine translation in fact only knew about Google Translate. Only three respondents actually use commercial MT software (Moses, Prompt).