Useful Research for Students in T&I Institutions

Abstract

The usefulness of research in T&I training institutions is not a matter of course, and some efforts to find the optimum cost/benefit ratio in each environment is desirable. Gains can be sought in modest findings, enhanced reasoning skills and increased familiarity with scientific texts for students, and in higher academic status for the relevant institutions. Student research should not demand unreasonable investment in time and efforts. Students should benefit from close guidance, and collective work may have a multiplier effect on the benefit to be reaped from their investment. Empirical studies may be generally more suited to the students' needs than theoretical work, and interdisciplinary projects should be contemplated with caution. Potentially useful projects in the T&I training environment can be sought inter alia in the following axes: literature analysis, language exploration, information loss and errors in Translation, Translation strategies, training and learning, quality perception.

1. Introduction

Translation and interpreting (T&I) are taught in three kinds of institutions: within the organizations which employ translators and interpreters, in professional practice-oriented schools, private or academic, which see it as their essential role to provide the market with graduates who are immediately operational, and in modern language and other language-related academic departments, where T&I are components of a wider syllabus. It should be noted that sometimes, professional practice-oriented schools are part of 'normal' academic faculties, but still function more or less independently.

^{*} Daniel Gile
Université Lumière Lyon 2
Home address:
46, rue d'Alembert
F-92190 Meudon
Dgile@compuserve.com

Employers of translators and interpreters such as international organizations and large companies have shown some interest in applied Translation research (the word Translation, with a capital T, is used here as a hyperonym for translation and interpretation), including research applied to translator and interpreter training - the European Commission has actually funded a book on training (Seleskovitch and Lederer 1989) - but they generally do not conduct research themselves. Modern language and other language-related academic units are part of the academic world, and as such, are subjected to the usual research requirements. Professional practice-oriented schools have a dilemma. On one hand, they are dedicated to training translators and interpreters, a task which involves the intensive use of a relative short period for the acquisition of complex technical, cognitive and linguistic skills and leaves little time for research. On the other hand, some of their leaders and instructors are attracted by research, partly because of its potential applications to training, partly because of the intellectual stimulation it offers, and partly because of the advantages which it may yield in terms of social status and associated advantages in the academic world. This dilemma is the starting point of this paper, which attempts to suggest compromise strategies which might help contribute as much as possible at the lowest 'cost'.

2. On the concept of usefulness of research in T&I

In some disciplines such as medicine, physiology, biology, chemistry, physics, mathematics or computer science, the usefulness of research is a matter of course because of its obvious applications. In others, applications are less visible, but research is viewed as part of the discipline. This is the case of astronomy, paleontology, archeology, history, philosophy, or literary studies. Translation research is in an intermediate category, perhaps along with research in psychology, sociology, language teaching, political science or education science, in which concrete applications are sought, but not necessarily found and/or not necessarily acknowledged as truly useful. While there is constant 'academic' progress, with new concepts and theories, new findings from empirical research and new research methods, these disciplines have not always been able to demonstrate convincingly to society at large that they are capable of producing physical, conceptual or methodological tools to

overcome existing problems and improve significantly and consistently behavioral performance in central fields and tasks that they have tackled, mostly because of the complexity and variability of their objects of investigation (see for instance Gardner 1985).

T&I research suffers from a similar problem. Although there can be no question that more and more concepts, models, theories and empirical results are produced every year, members of the translators' and interpreters' community continue to object that such research has not yet managed to offer them new ways of improving the quality of their work (see for example Danaher 1992:15: "I have never found anything in theory which has been the least use in my practice, or even had any relevance whatever to my work"). Indeed, in spite of some authors' claim that research has helped shape training methods, or that theory is necessary for translators and interpreters to understand what they are doing, and thus improve their performance (see for example Hörmann 1992, Ingo 1992, Viaggio 1992, Mossop 1994, Gentile 1995), this is difficult to demonstrate (as eloquently pointed out in Dodds 1997). Moreover, while sociological factors having to do with the institutional status of disciplines such as linguistics, psychology, education science, etc. have kept them relatively safe from society's criticism, translation and interpreting as academic disciplines have not yet reached a sufficient degree of institutionalization to give them access to the ivory tower, and are still very much exposed to society, in particular to the population of practitioners of T&I, with whom many researchers interact daily when they are not teaching.

At this point, Translation research can present no clearly useful application to society (except in machine translation and associated tools), and in that respect it remains within basic rather than applied research, though some application-oriented projects can be suggested (a few examples are given further down). That being so, how can one talk about the "usefulness" of research in T&I, at least in the short and medium term?

It will be argued here that spectacular application of findings to the practice of translating and interpreting is not the only dimension of usefulness of Translation research. Other aspects deserve to be stressed, in particular modest findings, reasoning capacity enhancement, and the fulfillment of academic obligations. Familiarization with scientific dis-

course and procedures as a preparation for the Translation of scientific texts, and direct observation of other translators' and interpreters' output (also mentioned by Pöchhacker 1992:219) for inspiration and guidance also deserve to be mentioned.

2.1. Modest findings

Spectacular findings resulting from a good comprehension of the cognitive mechanisms of T&I, of personal aptitudes required from good translators and interpreters, of the reasons for and extent of variability in the results of training, etc., may be long in coming due to the complexity of the Translation task, to the lack of qualified researchers in the field, and to environmental obstacles such as difficult access to subjects and to raw data. However, more modest results can also be useful in helping teachers, students and practitioners make better educated guesses in choosing training and/or translation strategies, the stress being on the fact that these remain educated guesses, because only part of the picture will be available. For instance, knowing more about variability in the perception of quality by readers or listeners may explain some negative responses from clients to what the practitioners themselves may consider good performance (or vice versa), and may help them focus on parameters they have neglected so far (such as intonation, after finding out that the interpreter's intonation is not 'natural' (Williams 1995), and that intonation is important in quality perception (Collados Aís 1996), or the lag behind the speaker, when finding out that it is perhaps more disturbing to the audience than previously thought (Moser 1997)). Admittedly, research is not the only way to arrive at such knowledge, and is not necessarily more reliable than direct observation, introspection or intuition, but it is one way of advancing. Another example is that knowing from research that cognitive skills develop over many years, trainers will be able to take a view of the students' achievements (or the lack thereof) after a training course of one or two years which may differ from the view they might have if they considered that the learning process is virtually over after the program is completed. Thirdly, on the directly applicable side of research, having a list of the most frequent errors in language A used by native speakers of language B may help trainers focus on language enhancement of their students more efficiently.

2.2. Sharpening reasoning skills

Research is largely based not only on tools, physical, technology-based or intellectual (such as statistical tests), but also on rigorous thinking, and in particular on rigorous logical inferencing. In fact, most of the criticism which drives progress in research focuses on the rationale associated with the theories and experimental procedures under consideration, by identifying weaknesses in the underlying logic, gaps in the coverage, bias in sampling and interpretation, etc.

In the literature on Translation, the importance of analytical skills to the translator and interpreter is stressed time and again: such skills are presented as necessary to gain solid comprehension of texts, which can be ambiguous, clumsy, linguistically incorrect, or simply so specialized that systematic analysis comes in to complement the Translator's missing linguistic and extralinguistic knowledge. With its emphasis on rigorous reasoning, research can help sharpen such skills. The exercise can be beneficial not only to students, but also to teachers, who may not have had an opportunity to take their reasoning skills as far as they could during their own studies, unless they were fortunate enough to be submitted to the ordeals of mathematics, law or other disciplines with similar requirements in some previous life. Supervising students is a good opportunity to exercise their critical reasoning skills.

In this respect, empirical research is probably more efficient than theoretical research, not because it has some intrinsically superior value, but because of its conventions. By forcing researchers to define, specify and (often) show the precise data on which their inferencing is based, it generates more well-documented criticism, mostly on the rationale underlying the design of the study, its implementation and conclusions. The discussions based on such criticism are excellent exercises in logical reasoning.

2.3. Academic functions

Translation research clearly has an institutional dimension in the academic world. For instructors who hold academic positions in the traditional sense of the word, it is one of the principal pathways to promotion. Actually, in many programs, the emphasis has always been on the practical aspect and training of translators and interpreters, and in many

cases, there are no academic requirements from trainers. While this strategy makes sense in a purely practice-oriented environment, the general trend seems to take the academic direction, if only because many new Translation training programs are created within academic units and in compliance with academic standards. Even those prestigious schools which used to focus on the professional dimension of Translation only are going along with the trend. As a consequence, there are more academic meetings and publications every year, and schools which do not participate run the risk of losing much ground, no matter how good the training proper they offer. Moreover, translator and (mostly) interpreter trainers have repeatedly called for their programs to be placed at postgraduate level. In the eyes of the academic establishment, second and third degrees are credible if they involve some kind of research. A minimum amount of research, or at least of publication activity, has therefore become a must in any ambitious T&I training program.

2.4. Familiarizing oneself with scientific texts for translation purposes

Finally, doing research, even at a fairly unsophisticated level, is a good way of gaining insight into and familiarity with the scientific rationale and text-linguistic features of scientific discourse, including terminology and phraseology. Many non-literary translators and most conference interpreters encounter such texts and speeches during their professional life, and gaining familiarity with them is clearly a good preparation for their translation. It is only fair to acknowledge that this contribution alone does not justify an investment of hundreds of hours of work in research, except possibly for students who are going to specialize in translating scientific texts, but it is a positive contribution nevertheless.

2.5. Observing other translators' and interpreters' output

In empirical studies where source Texts (texts and speeches) and target Texts are examined and compared, students have a good opportunity to see how other translators and interpreters work, what strategies they use and where they fail, and to learn from them, both in terms of inspiration and in terms of heightened awareness of the pitfalls.

3. Making the students' research useful

3.1. Compatibility with the practice-oriented aims of the program

In this paper, the focus is on the students' research during their initial training. Although it is linked to the instructor's research activities, if only through supervisor-supervisee cooperation, Translator training programs are primarily aimed at students, and for them, the stakes during the initial training period are much higher than for their teachers. Since students are enrolled in such programs in order to become translators and interpreters, not researchers, whatever research activity is proposed to them should preferably contribute to the achievement of that goal, and not make it more difficult. In particular, the time and efforts required from students should not be excessive, and if possible, the investment should be profitable to them in terms of professionally useful knowledge and skills (knowledge of Translation strategies, enhancement of translation and/or interpretation skills, correction of language errors, etc.), the other potential benefits listed in Section 2 taking second or third rank.

3.2. Giving students a good chance to complete their research project

Another point is that both the extent of research efforts required of students and the difficulty of the task should be contained so that they have a good chance of completing their work. This means in particular that it is preferable to direct them towards small-scale studies with modest objectives, since larger and more ambitious studies can place serious demands in terms of commitment and efforts and are more often abandoned due to the difficulty. The limitation does not apply to trainers, or to students who have a particular interest in research, or to students who can finish their practical training first, and then complete research requirements so that they can get their degree while working as practitioners. Neither does it preclude large-scale projects from being conducted in the framework of schools, if these are divided into smaller components which are allocated to individual students (see Section 3.4).

A fundamental question in this respect is whether, in the relevant academic environment, research conducted within the framework of Translator training leading to a graduate degree is supposed to demonstrate the students' capacity to do research autonomously and lead to an 'original' contribution, or whether the required research papers and thesis are considered more an introduction to research and an ancillary component of the academic curriculum. In the former case, the legitimacy of which can be challenged in a professional practice-oriented T&I training program, proper research training should be given to students so that they can complete more ambitious projects than most of those described in the second part of this paper. In the latter case, there are more chances of reaching an acceptable, fruitful compromise.

3.3. Close guidance

Close guidance of the supervisee is another important prerequisite for successful and positive research. Except for rare cases of students enrolled in another course of studies which includes research training in parallel to their Translation studies, and of graduates from the relevant disciplines, Translation students are merely beginners in research, and in most schools, they do not even attend courses in research methods. As a consequence, many of the steps of research that come as a matter of course to seasoned researchers require much time and effort from them, starting with the choice of a topic, which experience shows is a formidable task. In graduate schools in most academic disciplines, the acquisition of research skills and demonstration of the level achieved through a thesis or dissertation are an important objective per se. In Translation training, as explained above, research is but an ancillary component, and corresponds to a rather formal requirement, and hence to lower expectations. Thus, in professional-practice oriented Translation training institutions, when learning research, the apprenticeship mode with close supervision by an experienced researcher is not only acceptable, as it is in many other disciplines, but probably a better option than a full course in research methods.

3.4. Collective work

All these considerations should logically lead to a heightened awareness of the advantages, in the Translation research environment, of focusing more carefully on collective endeavors, both diachronically (building upon what others have done) and synchronically (working in cooperation with other researchers):

3.4.1. Replication

In the diachronic dimension, replication, both total (performing the same analysis with exactly the same material and tasks) and partial (performing a study very similar to, but not quite identical to the replicated study), is a matter of routine in well-established experimental disciplines for the purpose of checking results and their variability and improving the procedures. In the T&I training environment, it is particularly useful:

- a. It provides students with a good opportunity to see how qualified researchers have gone about tackling a research problem, whereas most training institutions do not provide systematic training in research methods.
- b. It allows them to look at previous studies critically, and possibly suggest improvements or extensions, thus sharpening their reasoning skills on relatively solid material.
- c. It saves them the time and stress associated with choosing a topic, finding an appropriate theoretical framework, and designing a study. Clearly, if their thesis is replication work, students will learn less from the exercise than if it is original work, but in their environment as outlined above, T&I graduates are not expected to be fully qualified researchers, and those who want to complement their training in research can take a higher degree with higher demands.

3.4.2. Project sharing

Allocating a single project to several students offers two advantages:

a. It allows the group (a class, a department, a training institution) to tackle large-scale projects which would not be feasible for single researchers. This is particularly valuable in empirical projects where variability can be very high and only large amounts of data will yield sufficiently clear results. b. It stimulates interaction between the students engaged in the research project. Since all of them work on similar or related materials and with similar or related methods, they are less likely to work in isolation and more likely to discuss methodological and other issues with each other, which makes their work somewhat easier and more enjoyable.

The drawback of project sharing is that it reduces the possibility for students to make a truly original and creative contribution. This however can come at a later stage, and one might add that students inclined to engage in original research work at that early stage should be allowed and encouraged to do so.

3.5. Empirical work

Yet another point is that it is generally easier for beginning researchers to do empirical research than theoretical research, especially in the framework of replication studies, because once their task of observing, implementing an experimental design, noting, measuring, comparing, etc. is well defined, they have their actions clearly charted ahead for them, whereas in theoretical work, much reading, assimilating and analyzing of other authors' texts may be needed before they can identify the productive direction which will eventually lead them somewhere. Moreover, as explained in Section 2.2, I believe that their reasoning skills can be better honed in empirical research, where errors can be demonstrated relatively easily, whereas in theoretical work, an accumulation of examples and counter-examples often leave the proponents of an idea and their challengers undecided and there may be too much room for personal interpretation of both texts and facts without precise procedures to test them.

It may also be wiser, in such empirical projects, to give priority to Translation product-oriented research rather than to process-oriented research:

- Firstly, as explained in Section 2.5, text-oriented research into translation and interpretation gives students an opportunity to study systematically and critically the Translation work of their peers (students) or elders.

Secondly, research on the Translation product lends itself to observational studies (see Section 3.6), which are on the whole less complex and pitfall-ridden than experimental studies, generally used for process-oriented research (see Gile 1998).

3.6. Interdisciplinarity, inferential statistics and other highspecialty components

This last point is linked with feasibility issues. After having been rejected as misleading and irrelevant by some influential authors in the seventies and early eighties (especially in the field of interpreting), interdisciplinarity has become a buzzword (see for instance the Preface of Snell-Hornby et al. 1994, or the Introduction to Gambier et al. 1997). It turns out, however, that importing the theories and methods of other, well-established disciplines such as cognitive psychology and psycholinguistics, with their emphasis on experiments in the strict sense and on inferential statistics, is often problematic (Toury 1991). Not only do many T&I scholars lack the required training, knowledge, and experience in the relevant theories and methods, but many of these methods lose their scientific legitimacy in the constrained, highly variable environment of T&I, where it is so difficult to gather sufficiently large and representative samples for experiments, and where rather complex Translation strategies make straightforward comparisons of information content somewhat unreliable. As a corollary, interdisciplinary projects should be handled with particular caution, unless students are also enrolled in a studies program in the relevant cognate discipline or benefit from guidance from an expert in the field. In this respect, it may be useful to recall that much valuable scientific work is done through careful observation and simple (but rigorous) measurements, without complex experimental designs and experimental statistics. These are necessary in some environments, but they are fairly useless, and even counterproductive in others, just as a bicycle may be more useful as a means of transport in some environments than a high-powered, sophisticated car.

4. Examples of potentially useful research projects for students

The following are examples of modest research endeavors for students with moderate ambitions. It goes without saying that larger-scale and more sophisticated projects are welcome in the T&I scene, but they lie outside the scope of this paper.

4.1. Axis 1: Literature Analysis

If trainers consider it important or useful to students to know about T&I theory, one way of making their research useful is to have them study the literature with questions and/or hypotheses and a critical analysis of the views and arguments presented in the texts, and of form (structure, style, quality of language, illustrations, etc). This exercise in critical reading can be given one or several directions, including:

- Producing full reviews of texts on specific topics in the literature ('working into one's non-native language', 'strategies for translating metaphors', 'shadowing as a preparatory exercise for learning simultaneous interpreting', etc.) and their analysis.
- Producing comparative reviews of the literature by institutions, countries, schools of thought, etc. (How do the various institutions/countries etc. tackle specific training problems? How do they feel about specific issues in T&I?)
- Producing scientometric studies analyzing production, influence networks etc. by (mostly) quantitative analysis of production and citations (see below).

The research aspect of such work comes from the analysis of the material, and is a function of the questions that are assigned to students and of further guidance from their supervisors. Clearly, a review which only lists opinions and research findings may help students acquire some relevant information, but is at the low end of research and will not produce the benefits associated with the need for critical thinking. If, however, students are presented with a hypothesis or research question, and are asked to determine a strategy to try to find answers, things change fundamentally. For instance, one of my students at Lyon 2 who was interested in reading texts on T&I training was given a few simple questions to answer as a focal point for her research, such as: 'Are there particu-

larly influential authors or training institutions in T&I training as reflected in the literature?', and 'Does the literature report methods based on actual research, or rather on introspection and personal experience?'

My requirement was that the answers be solidly documented, and I suggested that citation analysis be used. Questions about influential authors and training institutions were explored by comparing citation frequencies (a basic scientometric technique), and questions about references and models for training methods were explored using qualitative cum quantitative citation analysis: various types of citations were defined (citation of a theory, an opinion, a study, an empirical finding, a definition, etc.) and their relative frequencies, including their evolution over time, were computed. The resulting thesis (Rowbotham 2000) is a modest one, mostly because of the relatively small size of the corpus and the student's inability to cover texts in languages other than English and French, but it gives nevertheless some interesting indications, and could be usefully complemented by work from other students who would replicate it with a wider corpus of texts with different languages. More importantly, it gave the student a taste of the rationale and requirements of research.

Such reviews, if pooled together to cover sufficiently large segments of the literature, can then be published, either on paper or the Internet. This provides a useful service to the T&I community, as well as to the institution which publishes them, by giving it a higher profile and thus raising its status. In fact, there is no reason why such projects could not span several training institutions which are interested in cooperating, and thus benefit the whole group.

In addition, by also asking the students to summarize the texts or translate their abstracts in a target language within the framework of the thesis, it is possible to include in the exercise a direct translation skill component, comprising in particular the analysis of specialized texts and documentary and terminological research for proper "equivalents" and reformulation (though this component can be viewed as lying outside the scope of the research endeavor as such).

4.2. Axis 2: Language Exploration

Language exploration through the analysis of authentic source texts of the types found in Translation work and/or their translation into the target language can have a dual benefit: as research work, it can provide valuable information on terminology, lexicology and phraseology in a variety of texts, thus potentially providing T&I trainers, terminologists and lexicologists with material for their purposes. Secondly, it is a good language learning opportunity for students.

Projects in this paradigm could focus on vocabulary frequency in various types of texts, on sentence structure variability, on lexical variability, and on frequent weaknesses among non-native speakers. Depending on the students' interests and motivation, as well as on their level of familiarity with descriptive linguistics, the extent of involvement with theory and the degree of technicality of the project can be modulated. Nevertheless, if the benefits of research in terms of reasoning ability enhancement are to be reaped, the introduction of guiding questions into the projects is highly desirable. For example, students may be asked to advance towards assessing the actual usefulness of reading general periodicals for language enhancement in conference interpreting. They would then have to think of variables that show such usefulness, and come up with a feasible project design. After thinking and reading about the subject, they may decide to test the usefulness of reading such periodicals for the enhancement of vocabulary, and focus on the relevance of the vocabulary found in such texts to the needs of conference interpreters. One way of measuring such relevance would be to compare relative frequencies of 'words' (or lexical units) in corpora from periodicals with the frequency of words from conference texts. They would have to look at the practical feasibility of various strategies for finding such corpora and for comparing them in a way that would make sense, and they should be made aware of the limitations of each strategy and each finding. Again, institutions could cover a particular field and/ or set of language combinations by dividing up the work between several students or teams, each covering a certain territory, so that much data can be analyzed and potentially applicable results for training can be reached.

4.3. Axis 3: Information losses and errors

Yet another direction for investigation is error analysis in translation and interpreting. Actually, the issue is far from obvious. Firstly, straightforward information matching between source text and target text may be misleading due to the strategic dimension of translation and interpreting (translators and interpreters may base their translation on what the author or speaker meant to say rather than on what s/he did say, and on what they believe would be best for the receivers in the context under consideration). Secondly, norms for fidelity can be highly variable (Gile 1999). It is possible to bypass some of these problems by having students study their own output and identify their own errors, since each interpreter knows his/her own norms. In other words, the idea in this axis no.3 is not to use errors and omission as a dependent variable in an experimental design (Tommola and Lindholm 1995), but possibly to do some exploratory study tracing individual students' experience and progress, in trying to answer questions about the relative frequency of various types of errors and omissions, the relative frequency of errors when working into an A language vs working into a B language, when working in the simultaneous mode vs. the consecutive mode, the evolution of error frequency over time, etc. In translation, this can be based on the instructors' comments and corrections of students' assignments. In interpreting, things are more complicated, since instructors will not make a full list of omissions and errors and comment on them, and students may not want to 'incriminate' themselves by admitting such omissions and errors. However, in team work, if students trust each other, projects can be shared, each student identifying his or her own omissions and errors, and the corpus can then be presented anonymously in the paper or thesis reporting on the project. Such work could both raise the students' awareness of the nature and frequency of their weaknesses in a realistic, quantitative way, and provide potentially useful information for training purposes.

4.4. Axis 4: Professional strategies

Professional strategies are another direction in which directly useful information can be collected both for students and for teachers. For instance, specific problems requiring coping strategies (such as ambiguous constructions, differing degrees of semantic differentiation of lexis

between the two languages making the choice of target-language terms difficult, metaphors, religious or ideological translation problems, etc.) can be identified, and texts introducing such difficulties can be either collected in the field or prepared and assigned to a sample of professionals for translation, thus giving the students an opportunity to study their elders' strategies in dealing with them.

In the experimental paradigm, translation norms could be hypothesized, along with associated strategies consistent with them, and tested by introducing into source texts specific problems that would call for norm-dependent decisions.

Other projects could include questionnaires about the use of terminological and other information sources for translation purposes, about norms, preferred strategies, etc., as well as the observation of professionals at work and their use of equipment, the distribution over time of specific acts making up their work (reading, consulting sources, writing, taking breaks, etc. - see for instance Séguinot 1989).

4.5. Axis 5: Training and Learning

One research axis which could obviously be useful to training institutions would be investigation of training and learning environments and processes. A large proportion of the T&I literature has to do with training, but the population of authors may not be truly representative of the larger population of anonymous trainers, and there is much room for replication, extension and innovation.

Methodologically unsophisticated projects include actual surveys of teaching methods (see for example Pöchhacker 1999), questionnaires and interviews with students and/or teachers to collect information about teaching methods, teaching issues, learning issues, expectations, attitudes, feelings in and out of the classroom, etc. Marking and tests, in particular, are an under-investigated aspect of training: for instance, little systematically collected data is available on actual variability in marking, both inter-personal and intra-personal. And yet, such information is relatively easy to collect through simple experiments.

This research axis can overlap with the other research axes listed above, insofar as students' progress can be measured in term of language mastery, of omissions and errors, strategies, etc.

Teaching and learning can also be tackled through psychology or education science, in a more theoretical and/or experimental approach, but this requires a higher baseline level in terms of both theory and research know-how. On the other hand, the observational paradigm as described above does not mean that the projects would be simple compilations of pieces of information. Again, in order to leverage the research approach more fully, such observational studies should be steered towards answering specific questions, for instance by identifying common features of training and/or learning that discriminate between countries, institutional systems or learning styles, or assessing the extent to which the local market situation affects the structure, content and organization of life in a T&I training institution.

4.6. Axis 6: Quality and its perception

Finally, not to be forgotten in this illustrative list of research axes, is the issue of translation and interpretation quality. This is a relatively wide field of investigation where a non-negligible amount of literature is already available (see for instance papers in Dollerup & Lindegaard 1994, Dollerup & Appel 1995, Snell-Hornby et al. 1994), but there is still much room for replication, extension and innovation. Questionnaires and interviews can help identify inter-personal and inter-group variability with respect to quality norms and various quality parameters, and such information can be fed back into T&I training.

5. Finding the right mindset

All these student projects can safely be called research, but not all lie within the same paradigm, and not all need to encompass to the same extent the various components of research. As explained in Section 2, if maximum usefulness is sought within the specific conditions and requirements of the relevant environment, depending on the institution and its orientation, the degree granted and the students under consideration, such student research could legitimately lie anywhere on a continuum going from the type of work done by research assistants and consisting in implementing a professor's instructions to a full, autonomous project done for a serious thesis. If the environment induces conditions leading to the low end of the spectrum, is it desirable to have

students undergo the difficult and lengthy steps of topic selection, extensive reading of the relevant literature and design of the project? Many projects that started with such expectations have aborted, and many ended up with the students abandoning the idea of doing research, and doing a glossary instead.

Accepting limited individual objectives in student research is not tantamount to encouraging a 'Least Effort policy'. The higher the motivation and the personal involvement of supervisors, the higher projects can be raised in quality and scale. This author's personal viewpoint is that students should be encouraged to go as far as reasonable in their personal contribution, and that supervisors should try to maximize project quality and scale by proper management. In this respect, the team configuration (project sharing, as opposed to single-student projects) has significant advantages: not only does it allow to up the scale of projects by pooling together individual contributions as explained in Section 3.4, but it also fosters interaction between the students and allows supervisors to coach them more efficiently by holding coordination meetings in a seminar format, meaning that each student will get the benefit of comments and other guidance generated by the work and questions of other members of the team, thus covering the research process more comprehensively, even when there is no research course or seminar per se in the relevant institution. Depending on the circumstances and institutional possibilities, project reports can then be written up as research papers, individual theses or collective theses, with the possibility of publishing them as collective papers with the supervisor as a co-author, thus also contributing to his/her academic career.

6. Conclusion: How useful?

This paper claims that student research as outlined above can be useful. Can this claim be adequately substantiated? It is only fair to say that quantifying the usefulness of student research is difficult, except as regards the visibility of the relevant institution in the academic world, which can be measured by scientometric methods using citation analysis. A case in point is the University of Trieste's SSLMIT, known mostly for such research, which has generated many publications. Theoretically, it may also be possible to measure the impact of student research on their reasoning skills as applied to translation and interpreting, by con-

trolled experiments comparing the work of graduates who have fulfilled research requirements with those who have not in the same training institution (for instance, those who have written a research thesis as opposed to those who have prepared a glossary). However, not only is there a problem with expected variability which will probably require far larger samples of subjects than will be readily available, but the factors which make students turn towards research rather than lexicographical theses may also account for differences in their reasoning skills, in which case significant results between the groups could be a reflection of this initial difference, not of the effect of the research process. As to the contribution of modest research findings, it can be measured if they are directly applicable to training, for instance, if they help select better materials, or focus more efficiently on students' weaknesses in language mastery, but is difficult to assess otherwise.

It follows that in professional practice-oriented T&I training programs which are not submitted to formal academic requirements, the question of whether to engage students in research or not remains a matter of subjective appreciation. It is hoped that the suggestions made in this paper can serve as a conceptual framework for such assessments, help leaders of institutions where research is already present find the proper balance between the expected gain and cost, and help leaders of institutions where no research is conducted at present introduce it usefully.

Bibliographical references

- Collados Aís, Ángela (1996). La entonación monótona como parámetro de calidad en la interpretación simultánea: la evaluación de los receptores, Tesis doctoral, Universidad de Granada, Facultad de traducción e interpretación, Departamento de lingüistica Aplicada a la Traducción e Interpretación.
- Danaher, Paul (1992). Deaf and blind but not dumb: translation theorists. In *Language International* 4:2. 15-16.
- Dodds, John (1997). Introduction to the workshop on 'The Interaction Between Research and Training'. In Gambier et al. (eds) (1997). 89-92.
- Dollerup, Cay & Loddegaard, Anne (eds) (1992). *Teaching Translation and Interpreting. Training, Talent and Experience*. Amsterdam/Philadelphia: John Benjamins.
- Dollerup, Cay & Lindegaard, Annette (eds) (1994). *Teaching Translation and Interpreting 2. Insights, Aims, Visions*. Amsterdam/Philadelphia: John Benjamins.
- Dollerup, Cay & Appel, Vibeke (eds) (1995). *Teaching Translation and Interpreting 3. New Horizons*. Amsterdam/Philadelphia: John Benjamins.

- Gambier, Yves, Gile, Daniel & Taylor, Christopher (eds) (1997). *Conference Interpreting: Current Trends in Research*. Amsterdam/Philadelphia: John Benjamins.
- Gardner, Howard (1985). The Mind's New Science. A History of the Cognitive Revolution. New York, Basic Books Publishers.
- Gentile, Adolfo (1995). Translation Theory Teaching: Connecting Theory and Practice. In Dollerup, Cay & Appel, Vibeke (eds) (1995). 55-62.
- Gile, Daniel (1995). Basic Concepts and Models for Interpreter and Translator Training. Amsterdam/Philadelphia: John Benjamins.
- Gile, Daniel (1998). Observational Studies and Experimental Studies in the Investigation of Conference Interpreting. In *Target* 10:1. 69-93.
- Gile, Daniel (1999). Variability in the perception of fidelity in simultaneous interpretation. In *Hermes* 22, 51-79.
- Hörmann, Patricia (1992). Introducing theory in a course of translation: a Chilean case study. In Dollerup & Loddegaard (eds) (1992). 57-61.
- Ingo, Rune (1992). Translation theory: four fundamental aspects. In Dollerup & Loddegaard (eds) (1992). 49-56.
- Moser, Peter (1997). Expectations of users of conference interpretation. In *Interpreting* 1:2. 145-178.
- Mossop, Brian (1994). Goals and methods for a course in translation theory. In Snell-Hornby et al. (eds) (1994). 401-409.
- Pöchhacker, Franz (1992). The role of theory in simultaneous interpreting. In Dollerup & Loddegaard (eds.) (1992). 211-220.
- Pöchhacker, Franz (1999). Teaching practices in simultaneous interpreting. In *The Interpreter's Newsletter* 9. 157-176.
- Rowbotham, Julie (2000). Enseignement en interpétation et traduction: étude scientométrique d'un échantillon de la littérature. Mémoire de maîtrise, Université Lumière Lyon 2.
- Séguinot, Candace (ed) (1989). *The Translation Process*. H.G. Publications, School of Translation, York University.
- Seleskovitch, Danica & Lederer, Marianne (1989). Pédagogie raisonnée de l'interprétation. Paris: Didier Erudition.
- Snell-Hornby, Mary, Pöchhacker, Franz & Klaus Kaindl (eds) (1994). Translation Studies. An Interdiscipline. Amsterdam/Philadelphia: John Benjamins.
- Tommola, Jorma & Johan Lindholm (1995). Experimental research on interpreting: which dependent variable? In Tommola, Jorma (ed) *Topics in Interpreting Research*. University of Turku, Centre for Translation and Interpreting. 121-133.
- Toury, Gideon (1991). Experimentation in Translation Studies: Achievements, Prospects and some Pitfalls. In Tirkonnen-condit, Sonja (ed). *Empirical Research in Translation and Intercultural Studies: Selected Papers of the TRANSIF Seminar, Savonlinna 1988*. Tübingen: Gunter Narr. 45-66.

- Viaggio, Sergio (1992). Translators and Interpreters: Professionals or Shoemakers? In Dollerup & Loddegaard (eds) (1992). 307-312.
- Williams, Sarah (1995). Observations on Anomalous Stress in Interpreting. In *The Translator* 1:1. 47-64.