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Towards a student-centred approach to information literacy learning: A focus group study on the information behaviour of translation and interpreting students¹

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Abstract

Introduction and objectives: From the vantage point of user studies and information literacy paradigm, an empirical case-study has been carried out (at the University Jaume I, Castellón, Spain) in order to establish a diagnosis of the information behaviour of translation students. It is hoped that this study will serve as a basis for the design and subsequent implementation of programs of instruction (within the paradigm of Information Literacy) specific to this interdisciplinary field.

Methodology: The study is located within the qualitative paradigm, using the technique of focus group interview. Two focus groups were made up of students from different stages of their academic career.

Results: A positive evolution is identified within the student group (from first to third cycle) as regards the successful acquisition of information skills. Differences are observed concerning information skills, knowledge and values between the translation students of the different cycles.

Conclusions: The study highlights the progress registered by the translation students in their information competence and the resultant conceptualization: a development from knowledge towards strategy and lifelong learning.

Key words

user studies, information behaviour, information seeking behaviour, Information Literacy (INFOLIT), translation studies, empirical study, case study, focus group technique

1. Introduction

Teaching is an interactive, dynamic process, and every lesson plan is subject to constant review as a class progresses. Moreover, nothing takes place in a vacuum and therefore it is also important to recognize that for the students the B.A. degree programme is an in-depth course of study, in which it is our responsibility as teachers to ensure continuity between the different stages. This is certainly true in all circumstances, and it is even more necessary in the field of instruction in information and documentation as applied to different degree programmes in the context of higher education, where the marriage between the teaching plans and the real needs of a community of actual students still leaves much to be desired in most cases.

Thus, we believe that to study the information behaviour or habits of specific communities is one of the objectives that need to be designed and planned by teachers of applied documentation, since this will help detect users' habits and needs, thus making it possible to introduce the necessary modifications for responding effectively to

1

With gratitude to the students who participated in the focus group interviews.

those communities' requirements and behaviour, while always seeking to improve both teaching and learning quality.

Since every professional community generates, seeks, retrieves and uses resources and sources related to the cognitive structure being researched or studied and the tasks being performed, the need arises to undertake studies of this kind which will enable determination of the real needs and behaviours of each user community.

This paper is part of a broader research currently in progress, whose main goal is to provide prospective translators and interpreters with a solid user-centred instruction in information literacy. In order to do this, it is important to be aware of our students' conceptions of information needs, search and use (all in all, their information behaviour), and also to know the views of both the community of translation instructors and the community of professional translators and interpreters. The first results of this ongoing research are presented in this paper, where we focus on the first of these groups: translation and interpretation students.

All in all, the main aim of the broad research in which this paper is framed is to gather empirical data that will ultimately help us in order to develop a framework for implementing an information literacy programme which will meet the needs of a specific user group: translation and interpretation students. Our hypothesis is that this kind of research focused on the information needs of real users will provide a basis for the didactic development of information literacy instruction, taking account of the information user in context, following pioneer studies such as those of Bruce (1997) and Lupton (2004).

Certainly, «that we should understand the needs of our clients in order to deliver effective information services is such an obvious statement that it is almost embarrassing to make it» (Wilson, 1995). Nonetheless, embarrassing though it may be, it is still necessary to highlight this point, which for the purposes of our study may be reformulated as follows: «we should understand the needs of our students in order to provide them with effective information literacy instruction». It should come as no surprise to learn that designing information literacy instruction without incorporating the student perspective leads to what Webber and Johnson (2000: 381) call an «inappropriate pedagogic strategy».

1.1 Why the field of translation and interpreting?

First of all, our motivation starts out from a direct, in-depth knowledge of the discipline of translation, which is a context which we know at first hand: we have a doctorate in the field of translation, we have carried out research in this field, we belong to the professional translator community, and our teaching activity concerns the instruction in documentation of prospective translators and interpreters.

Moreover, certainly in the target context of this study we find a huge research gap, because almost no previous research has been done dealing with the field of translators, apart from Alanen (1996) and Palomares & Pinto (2000), both of which studies centre on the professional translator community. Alanen (1996) concentrates on observing the working habits of the translator community regarding Internet resources. Palomares & Pinto (2000), using a methodology that is already more consistent and oriented towards user studies, endeavour to detect the documentary needs, habits and uses of the translator, from the viewpoint that, as we have seen, this group has to date not received a great deal of attention concerning how it behaves, how it uses information and what its information needs are in context. Palomares & Pinto stress in their conclusions that, on the basis of the empirical data collected by means of an electronic survey sent to a large professional translator constituency via

the most important mailing lists in the translation field, the most frequent, though of course not the only, documentation requirements are those concerning terminology.

Nonetheless, the two studies just mentioned, which constitute the only prior cases of user studies applied to the translation and interpretation field, are based on the professional community. Our own focus, as we have made clear in the introduction, is on not just the professional community but also the teacher and student communities, with the last-named group constituting the object of this first study, for which there is no previous research.

In this arena of application, it is important to remember that translators and interpreters are not only information users, but also information processors and producers. As Pinto stresses (1999: 106-107), the translator's documentary competence in the work environment needs to develop in terms of three complementary aspects, i.e.: the translator is: a) a user of information resources and sources; b) a processor and transformer of original information; and c) a producer of new documents. At the same time, the translator's documentary competence has to evolve in three dimensions: the informational, the methodological and the strategic (Pinto 1999: 108-110).

Translation is, above all, an expert activity which constantly requires information. Moreover, the nature of this information tends to be multilingual and very specific, belonging to diverse disciplines, depending on the text to be translated. Certainly, the translator's documentary activity is a vital instrumental link in the chain of mediation and transfer of knowledge that makes up translation, an indispensable part of translational know-how. Documentary competence is essential for the practice of translation, and, therefore, for the translator's (ongoing) learning process. Documentary search throughout the translation process entails learning how to locate, validate and correctly use the information sources offered by the library and the new technologies. Translators are faced with the challenge and the responsibility of becoming acquainted with and using the diverse means which now exist for the location, retrieval, handling and dissemination of information, manipulating the new and extraordinary resources which information and telecommunications technology have made available for their work. In other words, it remains up to the translator to find the data, the information source; and the translator is responsible for knowing how to use it. All in all, to translate is to mediate between languages and cultures, to operate a constant decision-making procedure, and, most certainly, to know what documentation means. Otherwise, decision-making cannot be based on contrasted information. If one is to translate, acquiring the right documentation means knowing how to identify the informational requirements of the text to be translated, and knowing how to find the right solutions.

We believe that a holistic approach is vital if we are to close the gap that tends to exist between users' real needs in terms of information competence and the didactic proposals which they receive as higher education students. For this reason, we are developing an empirical study project, with specific features within an applied, interdisciplinary working approach. This paper is a first step in this path.

1.2 Aims of the research

The ultimate objective (in the short and medium term) of this research is to improve the proposals for instruction in Information and Documentation which form part of the course programmes for students of Translation and Interpretation, starting out from a diagnosis of the behaviour and needs of this community of practice. Thus, we wish to promote the practice of INFOLIT, in an area which, intensively and constantly, works with and needs documentation.

Summing up, we need to know the information behaviour of translation and interpretation students, at different stages of their studies, taking account of their informational perceptions, habits, needs and uses, with the ultimate goal of employing the data obtained through this fieldwork for the designing of specific programmes of instruction that are targeted on this particular academic and professional profile.

With this purpose, it is necessary to diagnose the following: What are the information needs of this specific community of prospective translation professionals? What conceptions do these students have regarding information search and use for the development of their work? What is their information behaviour in context?

In this sense, the specific research questions of the work presented here are:

- What is the information behaviour manifested by translation and interpretation students when they seek information in order to perform translation tasks?
- Is there any link between the stage of their studies at which the students find themselves (from first to third –postgraduate– cycle) and their information behaviour (observed, for instance, in the type of sources and/or resources used and the problem-solving strategies proposed)?
- What obstacles do translation and interpretation students come up against when seeking to resolve their information needs?
- How do translation and interpretation students perceive their own information competence?

1.3 General theoretical framework: User studies and information literacy paradigm

The overall theoretical framework of this study places us in the field of user-focused studies, within the much broader arena of information behaviour.

The study of behaviour in information search is one of the most important areas of research within user studies, as it indicates how needs are usually satisfied, illuminates the context of the products and services required or resorted to by the users, specifies the conditions they have to meet, and defines the nature of user preparation and/or instruction in their real context.

All in all, it is certainly true that, as Wilson puts it in a seminal paper: «Within user studies the investigation of 'information needs' has been the subject of much debate and no little confusion» (Wilson, 1981). Work on information users and their needs is much scarcer than that on the use of systems and services, although the situation has changed a good deal over the past ten years. However, a considerable number of investigations have dealt with all aspects of the use of information systems and sources, often with a focus on particular disciplines or work roles. These constitute a group lying midway between system-oriented projects and person-centred studies (Wilson, 1994).

To use Wilson's terms, here we certainly focus our user-centred study on a particular discipline and work role, namely that of prospective translators and interpreters at a given stage of their studies.

We align ourselves with the paradigm (and mainly with Wilson's holistic viewpoint) which, since the 1980s, has arisen in this area of research within the field of documentation and has marked a shift from the traditional system-oriented approach, focused essentially on the process of information search (the way users enter into contact with an information system or make use of particular information), to a user-

oriented approach that is more concerned with users' individual knowledge. It follows that stress now starts to be laid on the observation of the context and circumstances that impel a user to require information, and on the individual features that influence how the information is sought and used.

For its part, information literacy has been gaining in importance in academia since the 1970s, and a review of the literature available reveals a wealth of articles defining it, designing instructional methods for teaching it, and assessing student achievement.

Certainly, knowing how to select and give sense to information, and use it in order to solve problems, handle new situations and continue learning are key issues in the teaching and learning scenario in contemporary society, above all in the universities and as currently recognized in the context of the European Higher Education Area (EHEA). In this sense UNESCO (1996) speaks of the need to consider lifelong learning as a key theme for the 21st century, going beyond traditional education. If the individual is to be capable of lifelong learning, it is essential to learn how to learn.

And, indeed, information literacy forms the basis for lifelong learning (UNESCO, 2005). It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning. As ALA Standards (1989) put forward, we believe that an information-literate individual is able to:

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one's knowledge base
- Use information effectively to accomplish a specific purpose
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally

Starting from this conceptual basis, it is important to understand the concept of information literacy, which refers essentially to the acquisition of informational competence, that is, of skills, knowledge and values for the use of and access to information from a multiple perspective, on the lines employed by Bawden (2001: 401), who argues for an inclusive concept of literacy.

Whilst there is growing advocacy of information literacy in higher education (Andretta, 2005), comparatively little is known about how it is experienced by those who use information. In this arena, our aim, running parallel to Bruce's (1997) and Lupton's (2004) point of departure, is to offer translation students perspectives and experiences on information literacy through an analysis of their information behaviour, in order to use that empirical basis to their benefit, in the improvement of their information literacy instruction. Thus, we consider it important to stress that information literacy is a holistic educational outcome, involves all information formats, includes evaluation, analysis and synthesis, is learner-centred, and involves the learners in all aspects of their lives and education process.

In this context, in order to handle the complexities of today's information environment, what is needed is a broad, multiple and complex concept of literacy. It should include all skills-based forms of literacy, but should not limit itself to them or to any particular technology or set of technologies. Understanding, meaning and context must be central themes. Above all, we are essentially speaking of a form of literacy that is multiple and critical - that is, engaging in reflection.

With specific regard to the importance of critical thinking in the context of INFOLIT, we would like to stress the recent work of Elmborg (2006), who highlights the need to enable conceptual thinking and proposals for action in this field to move beyond an instrumental conception based on practical skills and competences, complementing these with a rigorous understanding of INFOLIT as a phenomenon located in culture and society, grounded in the ways in which communities construct meaning and the activities they carry out.

In this sense, Tuominen, Savolainen and Talja (2005) argue -in our view most convincingly- that information skills cannot be implemented independently of fields of knowledge, in the context of a perspective of in-depth and realistic understanding of learning needs. Their work suggests that, if rigorous and productive progress is to be made by initiatives for information literacy, it is necessary to analyse and understand the interaction between information and communications technologies, the professional learning context and the instruction in specific knowledge required for each area. In their words:

If we see the learners of information skills as belonging to information-literate communities, we need to understand the practices of these communities before we can effectively teach IL. In essence, the sociotechnical practice approach calls for empirical research efforts to analyze how specific communities use various conceptual, cultural, and technical tools to access printed and digital documents and to evaluate and create knowledge (Tuominen, Savolainen and Talja, 2005: 341-342).

Indeed, the study of information literacy, and therefore the bibliography on the subject, are growing at an exponential rate in the international context of Information and Documentation Studies. Nonetheless, the need for self-criticism should remind us that, despite this large emerging bibliography, there is still a lack of in-depth applied proposals in concrete areas of communication. It is here that we may see the relevance of the criticisms and warnings of Tuominen, Savolainen and Talja (2005). On similar lines, a recent study by Maybee (2006) argues that if training proposals in INFOLIT are to be truly targeted on users' needs, the first step has to be a tailored analysis of the information needs, conceptions and behaviours prevailing among those users with regard to seeking and using information. The present study (in a preliminary stage by now) certainly aligns itself with that viewpoint. In Limberg's (1999: 130) acute words:

A (...) development of the methodology in information skills instruction might take its point of departure in students' conceptions of information seeking instead of in an ideal model as seen from the perspective of the information specialist.

Methodological approach and design of empirical study Methodology: Qualitative perspective

Our methodological approach is defined by qualitative methods, following Wilson's (2000) critical contention:

A shift of focus in information science research towards qualitative methods and action research would support the proposition that information science is a social science by insisting upon the more intelligent use of social research methods for the development of models from the point-of-view of the philosophy of social (rather than physical) science. It would require that such models pay more attention to the behavioural and organizational contexts of information-seeking than hitherto, and to the totality of information resources and transfer mechanisms.

Also, according to Wilson (1981), qualitative research seems particularly appropriate to the study of the needs underlying information-seeking behaviour if our concern is to uncover the facts of the everyday information life of the people being investigated. From this viewpoint, in our case:

- by uncovering those facts we aim to understand the needs, perceptions and uses which impel translation and interpretation students towards informationseeking behaviour;
- by better understanding of the needs and behaviour concerned we are able better to understand what meaning information has in the context of the target group of users;
- by all of the foregoing we should achieve a better understanding of the user in context.

2.2 Empirical case: Focus group

As we have previously stated, the target group of this research on information behaviour is the community of translation and interpretation students in Spain.

For this research, in view of its characteristics and scope, we have chosen to employ direct methods based on contact with real users (i.e., for this first stage of the research, students; in the subsequent stages -which we are currently planning- we will deal with the teaching community and the professional community, as we have explained in the introduction), in order to obtain data which can, at a later stage, contribute to the designing of courses of instruction aimed at developing their activities and professional skills.

We have used diverse direct techniques for the collection of information relating to needs and user studies, from a perspective which is essentially qualitative. As we have introduced, for the purposes of this paper we are only going to concentrate on the results of the focus group study we carried out as part of a broader research.

We conducted an in-depth, qualitative interview, on a simultaneous basis, with a small, carefully-selected group of people, on a number of subjects related to the present research (ASA 1997; Morgan 1988; Valentine 1993). We believe that, as Morrison (1997: 5) explains, focus group studies, by contrast with individual interviews, tend to emphasize the participants' rather than the researchers' point of view, and offer the opportunity to observe a large amount of interaction in a short period of time.

For the purposes of our study, the focus group was created using selected students of Translation and Interpretation from the University Jaume I de Castellón (Spain).

We organized two focus groups: one with undergraduate students in the second year of their degree course in translation and interpretation, and a second one with graduate students currently registered on the doctoral programme. The characteristics of the two groups are as follows:

Focus Group A: undergraduate students from the second year of the degree course in translation and interpretation at the University Jaume I de Castellón, who have been my students for the core subject of Documentation Applied to Translation.

Focus Group B: graduate students (doctoral candidates): recent graduates who are beginning to have their first professional experiences but cannot yet be considered translation professionals. This group is of particular interest in terms of its members' perspective on the instruction they received over their degree

course: that experience is complete and inclusive, and at the same time still very recent.

The focus group participants were recruited on two grounds: 1) there existed a prior relationship with them (as students of the author of the present research), ensuring their commitment and seriousness as regards the interview; 2) they had shown proof of specific interest and permanent motivation in the area of Documentation Applied to Translation. Certainly, it is also sound to consider that perhaps a selection of students with no previous relation with the author of this reseach would have rendered different results. Nonetheless, following Morrison (1997) and Valentine (1993), we developed the focus groups interviews as a preliminary case study with students who guaranteed a good level of motivation.

The interview script we prepared for the focus groups consisted of six questions and one case-based problem (see Annex). The aim in designing this script was to ask the group members to reflect on the skills which are considered essential to information literacy: to recognize an information need, to locate the needed information, to evaluate information sources, to use information effectively, and to be able to integrate new information in order to generate knowledge. There is an additional aim, namely to use the interview questions to detect the respondents' information use habits, the possible gaps between information needs and expectations, and the degree of success in resolving the problem, by asking them to narrate their experiences (good or bad), opinions and personal perceptions arising out of practice. Thus, we believe that the questions are sufficiently targeted and yet at the same time sufficiently open-ended to get the discussion going and stimulate involvement in the interactive group interview, on the lines recommended in the methodological literature on the technique.

We also saw it as an enriching experience to conclude the interview with the examination of a concrete problem, following qualitative methods. Here, Carder, Willingham and Bibb (2001: 181) recommend the concept of *case-based problem-based learning* (CBPBL). This is a variation of problem-based learning (PBL), an approach that was first developed in the late 1960s for medical students at McMaster University Medical School in Ontario, Canada (Blake, 1994). It is, basically, the use of storytelling to engage students in the problems or dilemmas faced by the character(s) in the narrative, calling on the students' use of information gathering and decision-making skills in identifying key issues and postulating possible solutions (Waterman, 1998). Using an active, student-centred approach to learning, it encourages the development of critical thinking and lifelong learning skills.

When devising such case-based problems, it is important to take account of the following points (which we indeed considered when devising such a case for our focus group script):

- The problem should relate to the real world and should be complex enough to require the students to cooperate with one another in order to complete the exercise.
- The problem should be interesting or controversial enough to attract the students' interest.
- Learning objectives should be incorporated into the problem and should include concepts that have been covered in previous instruction, so that students can apply what they have learned to a real-life situation. Those objectives can later be shared with the students after the problem is solved, to help them check their selfevaluation.

In order to validate the suitability and potentiality of the questions making up the interview, we conducted, for purposes of reflection, a pre-test of the interview script for the focus group, with a group of academics who are experts in the field of translation and interpretation from the University Jaume I de Castellón. This group consisted of four people who are teachers and researchers in different areas of specialization (general translation, legal and administrative translation, interpretation and literary translation).

2.3 Data collection

The same interview was used for both focus groups, to make it possible to compare the results and monitor the hoped-for degree of progress as between the second-year undergraduates and the recent graduates.

The focus group session with undergraduate students (Focus Group A) lasted 1:33 hours, and took place on 26 April 2006. It was conducted and moderated by the author, and audiotaped. On the other hand, the focus group session with graduate students (Focus Group B) lasted 1:43 hours, and took place on 27 April 2006. It was conducted and moderated by the author, and audiotaped.

3. Results

With regard to the first question of the interview (¿What are the main information sources that you use in your translation tasks/assignments?), the replies from Focus Group A centred mainly and immediately on the use of dictionaries (bilingual; monolingual; synonyms, antonyms, etc) and the Internet. As we will notice in what follows, mostly the students use this broad concept without further specification, 'Internet', which evidently may give access to several types of sources. We are conscious of this general use of the term, but it is their view, and in this section we present it in a descriptive way.

One of the participants said she trusted paper sources more, and admitted that she still found it difficult to evaluate electronic material: she felt more at ease going to the library to consult paper dictionaries and encyclopaedias than searching on the Internet. However, on this point the other members of the group took the opposite view: for them, going to a library and consulting print sources was tedious and was not their usual way of doing things, as they found 'the Internet' more immediate and felt it was 'sure' to provide the information they needed.

They all felt a shade sluggish and had a sensation of wasting time when searching in printed dictionaries, as they were used to CD-Rom or on-line dictionaries. They found the latter of great use because they connect to other hyperlinks, permitting contextual on-line search validating or corroborating the results found. When one of the participants said that this was very important because rapidity of search is vital for translation, the conversation took a new turn and started to focus on quality. The participants stressed the fact that in any translation assignment or task the speed variable is crucial (there are deadlines to be met), but that this variable has to be correlated with quality of information search, since that in its turn will guarantee the quality of the translation as such. All agreed, given that all clearly resort mostly to 'the Internet', that their aim is to achieve a more efficient and faster information search process, but with greater efficiency as the first goal.

The members of Focus Group B stress that their main information source is the Internet, but they used this concept in a more specific sense. One of the participants, who is specializing in medical translation, said that on her work computer she had filed a number of specialist electronic options (via the option «Favourites»), and that she was familiar with frequently used specialist databases of guaranteed quality (e.g.

Medline). Another said she used Internet search engines (such as Google) for initial searches, following which she was able to locate specific online resources corresponding to her needs. The entire group recognized that they essentially used electronic resources of different types, adding that they had long since given up the use of paper dictionaries since they were much more at ease handling CD-Rom or on-line dictionaries.

All in all, for this first question Focus Groups A and B agreed that Internet sources were their principal information gate. Focus Group A, still halfway through their course of study, recognized that they had not yet achieved full strategic and critical skills in using the Internet's huge possibilities and that they needed to acquire greater expertise regarding this resource; by contrast, Focus Group B could already testify to greater experience and knowledge of specific electronic sources and greater confidence in the qualitative and critical use of electronic sources.

With regard to the second question (*How would you assess your own ability and skills in finding reliable information on the Internet? If you like, you may grade yourself from 0 to 5.*), in Focus Group A one of the participants immediately felt personally involved by the question, explaining how she had noticed an improvement in her own procedures thanks to having followed the core course in Documentation Applied to Translation in the present academic year (2005-06). She said:

I have really noticed a change this year, and last semester's Documentation course really got me thinking. I remember how in the first year I wasted hours searching on the Internet, and I believed everything I found there! I had to look up biographical information on Eric Clapton and I thought all the biographies I found on the Internet were telling the truth until I noticed that some of them were contradicting others on some points. Then I no longer knew what to believe.

Another participant added: «That's what Documentation does: it makes you more cautious and more critical, and you no longer believe everything just like that: you realize that you have to compare». All agreed that they are now more aware of the need to search on a strategic basis and always compare the data obtained, though they recognize that they still have a long way to go in the matter of competence in information search on the Internet. Here they recognized – being asked to be a shade more specific by the interviewer – that they still need considerably more training in the knowledge of the available information sources and resources: at times when they have defined a need they don't know where to look. They recognize that when studying Documentation they realized that 'the Internet' is a bottomless pit, but that there do exist organized and structured electronic sources – databases, portals, websites – which they need to know and that they have more to learn in this sense. They state that knowledge of the wide range of information source types has opened their eyes to the possibility of locating a datum in a form which would earlier not have occurred to them (e.g. personal sources).

One participant opened up a new line of approach when she stated that she was concerned about, and had become more aware of, the need to manage the information one has acquired, thus creating, updating and optimizing one's own knowledge base.

The members of Focus Group B opened the debate on this question by reflecting on the Internet in general, stressing the problem of the signal-to-noise ratio in document search and complaining about the Internet's inadequate structure and the lack of filters given the fact that 'anyone can put anything on-line'. In the face of this, they mentioned a number of strategies and criteria which they use to test the reliability of resources:

authorship (are these resources created or approved by official bodies?); presence or not of a 'last updated on ...' notice, and whether the date given is recent; the type of language of the resource; and its design or format. They concluded that they have internalized these practices (search using reliability criteria), and that they have made considerable progress in this respect since the first years of their course.

Thus, for the second question both Focus Groups continued to reflect in depth on the quality factor in any documentational process (search, retrieval, analysis and use) related to a translation process. Focus Group A was aware of the importance of the issue and of how much they still needed to learn, while Focus Group B already revealed greater maturity and awareness in this area, as well as a high degree of internalization and acquisition of evaluative habits which can provide quality guarantees for all information search activities.

With regard to the third question (Do you feel prepared to tackle any information search arising from a translation task/assignment, whether specialized [scientific, legal or literary] or general, and independently of whether it is a long-term or an urgent assignment? What do you feel you still need to learn?), the members of Focus Group A stated (continuing with the reflections arising from the previous question) that what they felt most needed reinforcing was information management – the systematization and full use of the data and resources gathered in the course of assignments. They added that they were aware of the need to learn more strategies for assessing information correctly and evaluating resources on a basis guaranteeing quality.

The members of Focus Group B discussed the problems which they had encountered on occasion, but said they felt sufficiently prepared: they had acquired strategies and knowledge with regard to the information sources they have to consult, and, in the face of the difficulties of whatever kind (pressure of deadlines, lack of resources or failure to locate the data required), they said they would know what to do, at least on the basis of their experience to date. One member concluded:

Yes, I think we are sufficiently prepared: we already have a way of acting, more or less conscious, the one we usually follow, and when something unexpected happens which calls for a different strategy, I think we know where to look. For example, I contact experts or other colleagues by means of mailing lists, and somebody always replies.

The other members agreed with her, and, to conclude the debate on the subject, one added: 'Yes, we do feel prepared enough, as we've already got our strategies – in fact, I think we've already got our strategies for earning our living when we have to'.

Thus, the perceptions of Focus Group B reveal a confidence in their own abilities which is important for any kind of problem-solving activity in a translation task. For their part, the members of Focus Group A recognized what they still need to learn – above all, as we see it, the admission of one's own gaps is a sound and necessary first step towards making them good.

With regard to the fourth question (Say something about a translation experience or task where you had real difficulties in finding the information you needed, and explain how you resolved the problem), the members of Focus Group A recognized as a starting-point that as first-degree students they are asked to deal with tasks where the challenges and the degree of difficulty vary greatly, the aim being to develop their skills in the resolution of problems in context, but they are not required to tackle extreme cases. One said that the worst experience she had had to date was with the translation

of a text on the early history of the cinema: she had not understood a number of the concepts used in the original and had not managed to find (or did not then know how to find) any kind of information on them. Finally, she resolved the problem by appealing to a personal source (a fellow student who had read up on the subject) and using an article which she had found in a specialized magazine, but she concluded that she had not known how to document herself properly because she was not sure exactly what information she needed: this was more than a purely linguistic matter, since it concerned the understanding of the text's content. Another participant explained how on one occasion, faced with a text on the Egyptian pyramids, she has failed to locate certain data on the Internet and had then collapsed and not known how to go on translating, because:

I couldn't believe it wasn't on the Internet, and then I seized up altogether. The next day, I went to the library and found what I was looking for in an encyclopaedia – but at the moment when it hit me, I thought: if it's not on the Internet it can't be anywhere.

At this point we may remember how Kuhlthau (1993) presented the view that the feelings students experience during information-seeking have substantial impact on the various stages and activities of this process. For example, the initiation phase of information-seeking is characterized by feelings of uncertainty which gives rise to feelings of doubt, confusion and frustration. When the search process proceeds and hopefully turns out to be successful those feelings change into confidence, optimism, relief and satisfaction. These emotional factors have led Kuhlthau to raise the importance of attitudinal behaviours towards information seeking. The frustration felt by the student who practically collapsed when the information was not 'in the Internet' is a negative experience which makes her aware of her need to learn to know this huge resource more competently, and realize that although the information may be there, 'somewhere in the net', what matters is to know how to trace the path towards it.

Other participants said that, given that the native language into which they translate is in many cases Valencian, their biggest source of problems to date has been the lack of resources available in non-majority languages. In this connection, however, another member of Focus Group A (of Romanian origin), reminded them that there exist languages whose minority status is even more so than that of Valencian and for which there exist even less resources – and yet, even so, people succeed in translating from them. Starting out from this point, the participants debated further and concluded that, while lack of resources is certainly a problem for documentation in the translating process, what matters more is to have strategies for alleviating that lack of material resources.

The participants in Focus Group B narrated a number of cases where they had experienced serious problems. One recalled, as an especially complex case, an assignment in which she had had to translate, from English to Spanish, a text written in English by a person of Arab origin whose main working language was French. She had great problems understanding the text thanks to its idiosyncratic English. When she realized that the author had actually been thinking in French and the English of his text was mediated by that language, her documentary strategy was to look for the French equivalents of the elements she had not understood.

Another recalled how one of her first assignments after graduating was to translate into Spanish some research articles on creativity in the industrial field. They had been written by a Japanese research group which was the only reference source on the subject. Her problems lay in the content of the texts – not in the language, which was a comprehensible, if not entirely orthodox, English as used by the Japanese researchers.

She held working meetings with her client, a Spanish industrial design teacher who did not speak English but was familiar with the subject-matter. She had thus managed to resolve her conceptual doubts and do the translation.

Another participant said that her most difficult assignment had been the translation into English (i.e. out of her native language) of a documentary on the life of a Valencian painter, poster artist and trade union militant from the period of the Republic – a figure little known to the general public, on whom she had found no information. What she did was to look for data on other, better-known, poster artists from the same period, in order to locate vocabulary, and also to search in documents on international trade union organizations of the same ideological hue as the painter's, so as to find other concepts and terms. Finally, she asked a native speaker to check her translation, to be sure that all was comprehensible.

For this question, then, we note that the members of Focus Group B already possess a considerable degree of competence in problem-solving strategies, while it is precisely that aspect in which the members of Focus Group A still need, as they themselves admit, to fine-tune their skills.

Complementarily, with regard to the fifth question (Say something about a translation experience or task where you had very few difficulties in finding the information you needed and where you felt fully at ease in the documentation process), the members of Focus Group A coincide in affirming that the assignments in which they had felt most at ease had been those in which they had been familiar with the subject-matter, even if they had had to undertake language searches to find the right terminology. The type of text cited here tended to be in a neutral register (e.g. publicity material or children's books).

In Focus Group B there was a clear consensus in the sense that the most comfortable experiences, with the most accessible documentation process, had concerned assignments in areas in which they had already done a lot of work on and which related to their chosen field of specialization. One participant mentioned her experience as a translator of web pages, another her in-depth exposure to medical translation. What was concerned was assignments on subjects which they mastered and which they worked in with some frequency. Another participant, who had scarcely had any professional experience, said that if she attempted an overview of the various specializations she had studied over her course, she would conclude that the simplest documentation tasks were those concerning translations where there was a highly specific terminology and extremely full and well-organized resources. She gave the example of legal translation as being simpler in this sense:

It meant learning the vocabulary or having the information and resources on file, and being aware of the particularities of each type of text, whether it was a house purchase deed, a will, or whatever. Anyway, there's a whole range of sources which are clearly defined, reliable and official, and once you know those sources and you're familiar with the texts I think there are no problems handling the translation. I always had the most problems with literary translation.

We can see, in a sense, how both focus groups agree that the better one's knowledge of the conceptual content of the source text, the easier it is to handle the documentation process.

With regard to the sixth question (*Explain, in the light of your experience to date, what it means to you to be documented effectively and with guarantees of quality in a translation task or assignment. Please give examples)*, the participants in Focus Group A referred to the steps learnt when studying Documentation Applied to Translation (in the first theme – introduction and overview of the subject – in which they were introduced to the paradigm of information literacy). They expressed strong agreement with the skills described in the proposal seen in class, as taken from the ALA standards:

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one's knowledge base
- Use information effectively to accomplish a specific purpose
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally.

The participants wish to achieve maximum command of these skills, which form a continuum and which, they feel, sum up what it means to be effectively documented with full quality guarantees in a translation task.

When answering this question, the members of Focus Group B stressed the importance of correlating the time and quality variables in any translation task and in the documentation process required for it. They agreed that effective documentation means documenting oneself within the time available, and exercising the efficient handling of doubts and identification of all possible problems. They were also aware of the crucial importance – something which, they said, they had learned over time and had become more aware of once they had finished their first degree course – of learning to assimilate and manage the information located, retrieved or simply discovered in the course of a task or assignment. That is, they stressed the importance of building up and managing one's own knowledge base, while starting out – this is a relevant point – from a more exhaustive, and constantly updated, knowledge of the available range of information sources and resources. In this sense, they concluded that a key factor is constituted by the individual's willingness to carry on learning, keep up to date and create networks for collaborative work. They added that resources change, and therefore what is most important is to acquire strategic skills.

It is of great interest to see how the two focus groups come to practically the same position. Focus Group A, which is aware of the information literacy paradigm (as they studied it during the present academic year as part of Documentation Applied to Translation), explicitly resorts to this paradigm to structure its reply. However, Focus Group B, which is not explicitly aware of the paradigm, nonetheless approximates to its conceptual bases when it gives particular importance to applying a critical and effective perspective to all information search, to the constructive assimilation of information in order to build up one's own knowledge base, and to the need to keep one's skills up to date through lifelong learning.

Finally, with regard to the seventh question, i.e. the case study (see Annex), there was considerable disagreement as to what to do: the members of Focus Group A are second-year students, and the idea of not just translating a text but adapting it culturally appeared to them as being not directly related to what they have been familiar with and done thus far in their studies. However, all agreed that they would consult personal sources in order to evaluate how to approach the task and exchange views on the information which has to be transmitted from the viewpoint of the culture which they are asked to take account of in the assignment. No other documentary strategy occurred to them, and they finally recognized that in the case of information needs such as those of

this case, which go beyond what they have experienced to date (terminology, concepts, textual genres, etc.), the cultural information required constitutes a considerable challenge which they do not feel equipped to handle, and in the face of which they admit they lack the necessary resources and, above all, do not have confidence in their abilities and skills at the present moment.

For their part, the members of Focus Group B were not taken aback by the task: they saw it as perfectly realizable. The medical translation specialist said that she was not familiar with subjects of this nature, but she knew that numerous resources exist for such cultural information, especially in English-speaking countries such as the UK and US. She added that she would also approach personal contacts to check the information and try to reach a consensus as to how to focus the data in the leaflet to take account of the attitudes of Muslim women as a group. The rest of the group too said they would want to consult personal sources.

Both focus groups reached a similar position here regarding information behaviour, but Focus Group A showed a high degree of insecurity and admitted a lack of confidence in their own capacities, whereas Focus Group B exhibited a higher level of critical competence and, in the face of a difficult case, offered a flexible and strategically oriented attitude to resolving the problem.

All in all, in brief, we consider the following to be the key findings from the interviews with the two Focus Groups:

- The Internet is the information source most used by students of Translation and Interpreting. However, it is very important to notice how they conceptualize the Internet as a somehow monolithic entity, without further specification, thus revealing their need to know more on particular electronic sources and search engines.
- 2. Comparison of the strategic knowledge of electronic information sources of first-cycle students and recent graduates exhibits a positive evolution.
- 3. There is also a positive evolution as between first-cycle students and recent graduates as regards critical skill in the use and processing of information.
- 4. There is an explicit concern for the quality and reliability of the information handled, in all cases.
- 5. Particular importance is laid on acquiring strategic problem-solving skills.
- 6. Particular importance is laid on handling information in order to organize and build one's own knowledge base.
- 7. There is an explicit interest in lifelong learning on the part of the recent graduates.

4. Final overview and concluding remarks: A research in progress

Taking an overall view of the preliminary results obtained, we may conclude that the students of these focus groups in the Translation and Interpretation field are aware of the skills required as an essential part of information literacy: that is, to recognize and delimit an information need, locate the necessary information, evaluate the information sources, use the information in an effective fashion and know how to integrate new information so as to generate knowledge. The first-cycle students recognize that they still have much work to do on the strategic construction of their information habits, and this leads to considerable mismatches between information needs, expectations and degrees of success in problem-solving. However, the third-cycle students exhibit a considerable degree of progress as regards problem-solving, and this is confirmed by the demonstrable skills of the recent third-cycle graduates.

If we take an overall view of the results of the first- and third-cycle focus groups, while also reviewing the working issues that we proposed at the beginning of this research, we may conclude the following:

- The first-cycle students on the Translation and Interpretation first-degree course lack clear strategies for handling information needs and problem-solving searches. They rely for the most part on the Internet but lack a solid knowledge basis regarding the network itself, tending to conduct intuitive searches, unstructured or scarcely structured in nature and using the well-known search engines. They are aware that they need a better knowledge of the available range of information sources for translation, as well as of procedural and strategic skills in general (organization and planning capacity) and IT and information skills (information management capacity and knowledge of IT as such). They feel their own information skills to be weak and realize they need to work on the matter, being particularly aware of the need to learn critical-evaluative strategies for seeking and handling information, and, equally, to learn how to manage the information obtained so as to build up their personal knowledge base.
- The third-cycle (postgraduate) students of Translation and Interpretation, who have recently completed their first-degree course, are in possession of clear strategies for handling information and search needs for problem-solving purposes. They rely primarily on the Internet, but already display a guite sophisticated knowledge of the network, carrying out evaluative searches (using criteria for determining the reliability of the information), and accessing information sources with which they are familiar and which offer quality quarantees. They are aware that they still need to acquire greater knowledge of the range of information sources for translation and are concerned to keep their skills up to date in this respect. What is most noticeable, however, is the selfconfidence they exhibit with respect to their own (especially strategic) problemsolving skills. All in all, they perceive their own information skills as being reasonably solid, having been acquired incrementally over their first-degree course and reinforced on a day-to-day basis by practical experience. Despite all this, they remain highly aware of the need to work on their skills in order to consolidate them, laying particular stress on the role of information management with a view to continuing to build up their personal knowledge base. We may say, summing up, that their perspective focuses on the need to conceive information skills as a part of lifelong learning.

In general terms, if we refer to the three categories specified by Maybee (2006) – information sources, information processes and knowledge base – we may state that, in the light of the findings of the present diagnostic research, the first-cycle students need reinforcement in whatever circumstances, but, in terms of their own perceptions, they especially need to focus on the knowledge of sources, while beginning to become aware of the need to conceive information search, retrieval and management as part of a process whose most important aspect is the critical perspective which confers quality on the end-product. They are, meanwhile, not at this stage aware of the importance of building and maintaining one's own knowledge base. For their part, the third-cycle students display a more sophisticated knowledge of information sources, give greater importance to the information process viewed as the outcome of a critical and strategic problem-solving competence, and are also aware of the vital importance of creating and maintaining one's own knowledge base from a lifelong learning perspective.

All in all, the learning process and the goal towards which we believe we should orient our students may be summed up as information literacy. This will equip them with

knowledge, skills, strategies and values for that use and handling of information which will be so essential to them as professional translators. In this sense, some preliminary didactic proposals that we consider as adequate are the following:

Proposals for improving INFOLIT	
First cycle students	 Strategies for electronic information retrieval; evaluative perspective Repertory of information sources
Third cycle students	 Continuing and updated training on information management; impact on resource optimization Updating of repertory of sources Advanced strategies for electronic information retrieval; again, evaluative perspective

This research on undergraduate and graduate students information behaviour and perceptions of information needs and uses in translation practice is exploratory work which provides insights into conceptual issues while opening up numerous questions for investigation.

Indeed, it is important to take up an aspect which we have already commented on in our introduction: the fact that this research project is part of a broader work-in-progress, aimed ultimately at improving the instruction of translation and interpretation students as regards their skills in information and documentation, via the implementation of curricula adjusted to their needs. In next works we will give an account of the results we have obtained by means of another direct technique for data collection with this user group (the student community): a semi-structured questionnaire.²

This research starts out from an awareness of the crucial importance of developing, in the teaching context of university-level instruction in Translation and Interpretation, the factor of critical awareness with regard to information needs, uses, habits and behaviour. To this end, our theoretical-conceptual and pedagogical paradigm is that of information literacy.

Therefore, our research is carried out in a real context of information use in which the application of research results necessarily involves some degree of organizational change of didactic dimensions, on which we are now working, on the basis of the findings of the present research. We are pleased to report that those findings evidence a clear positive progression in the information skills of Translation and Interpretation students as observed at different stages of their instruction, and also offer us important pointers as to which aspects need greater didactic reinforcement.

The diagnostic findings presented here clearly indicate the need for efforts to focus on developing the pedagogy and curriculum necessary to facilitate improvements in student instruction regarding Information Literacy for translation and interpreting trainees. As we intend to offer a realistic and user-centred training service to our students, this research is just the first step of a fruitful engagement.

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² See Pinto & Sales (forthcoming).

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ANNEX. Script for the focus group interviews

- **1** What are the main information sources that you use in your translation tasks/assignments?
- 2 How would you assess your own ability and skills in finding reliable information on the Internet? If you like, you may grade yourself from 0 to 5.
- 3 Do you feel prepared to tackle any information search arising from a translation task/assignment, whether specialized (scientific, legal or literary) or general, and independently of whether it is a long-term or an urgent assignment? What do you feel you still need to learn?

- **4** Say something about a translation experience or task where you had real difficulties in finding the information you needed, and explain how you resolved the problem.
- **5** Say something about a translation experience or task where you had very few difficulties in finding the information you needed and where you felt fully at ease in the documentation process.
- 6 Explain, in the light of your experience to date, what it means to you to be documented effectively and with guarantees of quality in a translation task or assignment. Please give examples.

7 • Now please consider this case:

X has just received her first translation assignment. The first thing she thought was 'great!': it wasn't a long text, nor did it look very difficult. What she had to do was translate, into Spanish, an information leaflet in English produced by a London hospital. Her city's patient care and information service had decided they wanted it translated and disseminated to women using the municipal health services. The content of the leaflet does not look complicated: the first part sets out guidelines for breast selfexamination as a technique for the prevention of illnesses of the breast, while the second part explains the benefits of breastfeeding and the mother's milk, for the newborn infant and even up to age two or three. The person from the patient care and information service who has asked for the translation wants a Spanish version of the booklet, but one which takes account of the possible need to adapt it for the city's growing community of Muslim women - most of whom do not read Spanish as such, the tendency being to ask someone to provide a sight translation of the content of leaflets of this type, so that the information can reach them. Fair enough, I'll remember who might read it, answered X, thinking this shouldn't be too hard as the leaflet looked general enough and in no way controversial.

However, once she was in front of her computer ready to start the translation, the doubts started pouring in. First, she realized she would have to check, very carefully, the Spanish equivalents of the medical terms (albeit not many) appearing in the leaflet. The biggest difficulty, though, arose when she thought of the likely Muslim women recipients and the request accompanying the assignment concerning adaptation to their needs. Doubt upon doubt assailed her: would they find 'breast self-examination' normal? might 'taking the colustrum' be taboo in Muslim culture? would they know what this meant in the first place? are the guidelines on how long to breastfeed likely to be very different in Arab culture? X had been told all the way through her course that one translates not languages but cultures, and now, suddenly, here she is faced with a task that might look manageable on the surface but which is now filling her with doubts. She needs information. What would you do in her place?