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## **INFOLITRANS: A model for the development of information competence for translators**

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### **Abstract**

#### **Purpose:**

Since every community of practice generates, seeks, retrieves and uses information resources and sources related to the cognitive structure being researched or studied and the tasks being performed, the need arises to undertake studies focused on real user communities, which in our case is the group of translators.

#### **Approach:**

In this arena of application, it is important to remember that translators are not only information users, but also information processors and producers. Thus, their documentary competence has to evolve in three dimensions: the informational, the methodological and the strategic. The conceptual model we propose is based on information literacy (INFOLIT) standards and also our knowledge of translation practice and the competencies it demands, where INFOLIT plays a starring role.

#### **Findings:**

This paper is part of a broader research currently in progress, whose main goal is to provide translators and interpreters with a solid instruction in information literacy. As a first step, here we introduce a model for information literacy specifically intended to develop the information competence of this community of users. The model is a gathering of skills, competences, knowledge and values, and it is based on the cooperation between the authors' expert knowledge of Information Science and professional translation practice.

**Originality/Value of paper:**

This paper puts forward the first proposal for information literacy applied to translation training hitherto.

**Keywords:** information literacy, information competences, information skills, translation

**CLASSIFICATION:** research paper

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## 1. INTRODUCTION

In today's world, information is a resource that is becoming increasingly important and uncontrollably abundant. Its exponential growth means that half the information that is currently available has been gathered in the last fifty years. But it is not only the amount and massive stockpiling of data that keeps our society in constant evolution, rather it is the rational, orderly, productive and intelligent use of information that constitutes the primordial factor driving development. Organisations, enterprises, social groups and, in a word, individuals have the capacity to transform all that mass of information into intelligent knowledge and productive know-how.

We have shifted swiftly from the Information Society to the Knowledge Society, in which the greatest capital lies in human beings' capacity to think and to create, in what is known as *intellectual capital*. Ideas, individual or collective initiatives and thoughtful and creative effort are the great value of our society. And this enormous potential is increased when it is shared –something that is made possible by the information and communication technologies, which enable human beings to become interconnected by networks so that they can combine their intelligence, knowledge and creativity. There is also talk of the new *knowledge economy*, which is characterised by its being an informational, global economy that is arranged in a network and in which knowledge and information are no longer abstract entities but are, instead, deposited in material form in the human brain.

All in all, following the information literacy research framework outlined by Edwards, Bruce and McAllister (2005), we would locate our research (in progress) in the sector of higher education INFOLIT research: we develop work that investigates information literacy in a specific discipline (translation and interpreting), developing qualitative research with university students, trainers and professionals (in the next phases, and thus also working on INFOLIT research in the workplace) related to this field, in order to understand their information behavior, needs and uses. Our goal is to develop (and also evaluate in future stages) an information literacy program designed for this community of practice, as a final outcome that can be effectively applied in order to benefit the training and professional work of translators and interpreters. We certainly agree with Edwards, Bruce and McAllister (2005: 47) when they say that:

Our position is that the IL [information literacy] research agenda should be seen as practical and real – it is about real people doing real things in real-life contexts. That is the strength of our research. Our opportunities are waiting to be created and taken.

In this paper we attempt to define the INFOLITRANS conceptual model for fostering information literacy in those who work as professional translators and are training to do so. [INFOTRANS is an acronym formed from INFORMATION Literacy for TRANSLATORS. In Spanish it is called ALFINTRA, from ALFabetización INformacional para TRAductores.] This is a core element in the broader research project currently being carried out, in which we are studying users with an empirical methodology that is eminently qualitative.<sup>[1]</sup> The results of this study will help us to validate the model, to adjust it and improve it as a service for the target community of users. As such, it is a step towards the future that remains open to review, reconsideration and improvement from a perspective that, above all, seeks to achieve the highest possible quality. It is a lively, dynamic model that is applied in the classroom setting and takes shape there. Indeed, its practical implementation, which is already under way, is what is allowing us to evaluate the learning and training outcomes, part of a research in progress.

In other words, putting it into practice, as we have outlined here, is what will enable us to enhance it and to detect its strengths, as well as any weaker points that need improving. INFOLITRANS has essentially been designed as a holistic, transversal proposal in the integrated training of translators and interpreters. However, we are aware of the need for further reflection on the possible specific needs for the specialty of Interpreting from the point of view of information literacy.

## **2. INFORMATION LITERACY: A need and a challenge for translators**

Under this heading we outline, briefly and in the first place, the main features and potentialities of the INFOLIT paradigm as an educational and pedagogical concept (following Andretta, 2006), and as the framework in which we locate our work. We then go on to offer a succinct description of translation from a strategic, skills-based perspective, so as to be able to comment from that vantage point on how information competence is to be situated within translation (macro)competence.

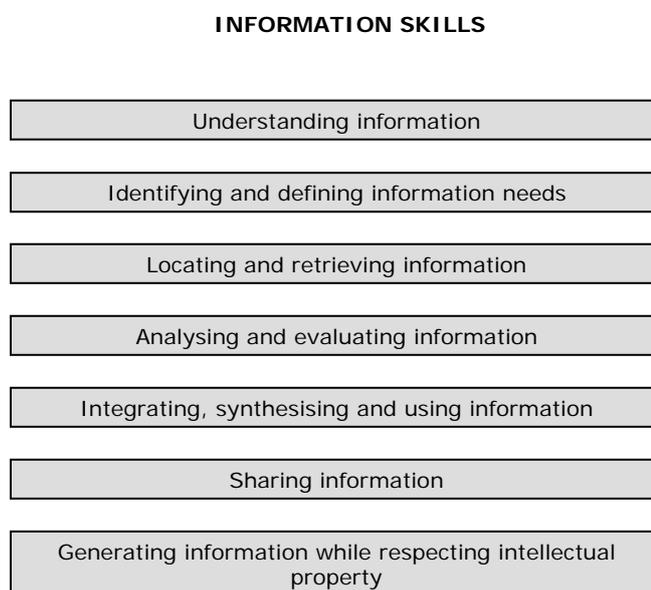
### **2.1. THE INFORMATION LITERACY PARADIGM**

The terms ‘information literacy’ (INFOLIT) and ‘information literate’ were coined by Zurkowski to refer to people who are able to solve their information problems by using relevant information sources and applying relevant technology (Zurkowski, 1974). Since then they have been defined many times. Indeed, information literacy has been gaining in importance in academia since the 1970s, and a review of the literature available reveals a wealth of articles that deal with defining it, designing instructional methods for teaching it, and assessing student achievement.

Associations in the United States (ALA, ACRL), the United Kingdom (CILIP, SCONUL), Australia (CAUL), Australia and New Zealand (ANZIIL) and Spain (FESABID), among many other countries, are beginning to acknowledge the increasingly important role INFOLIT plays as a catalyst for lifelong learning. Also worth mentioning here are the different research projects that are being carried out, such as the setting up of the European network for INFOLIT: ENIL, *European Network on Information Literacy*, <http://www.ceris.to.cnr.it/basili/enil/index.html>, or the important boost resulting from the International Meeting of Experts in Prague from 20th to 23rd September 2003 (URL: <http://www.nclis.gov/libinter/infolitconf&meet/infolitconf&meet.html>, which was promoted by UNESCO. The «Prague Declaration», which was drafted as a result of that meeting (see Information Literacy Meeting of Experts, 2003), proposed including INFOLIT within the United Nations Literacy Decade (2003-2012).

The most frequently cited definition is probably that of the *American Library Association* (ALA, 2000) – an institution that has also played a pioneering role in proposing standards for information literacy. This definition reads as follows: «Information literacy is an understanding and set of skills enabling individuals to recognise when information is needed and to have a capacity to locate, evaluate, and use effectively the needed information». It highlights the interaction between the individual, society, library and information services, information and communication technologies, research, information and evaluation, and critical reasoning. Information literacy forms the basis for lifelong learning (Ward, 2006). 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, to become more self-directed, and assume greater control over their own learning.

The following diagram sketches the basic skills that should be taken into account in an information literacy framework:



**Figure 1: Basic skills in information literacy**

Indeed, knowing how to select and make sense of information and use it in order to solve problems, deal with new situations and continue learning are key issues in the teaching and learning scenario in contemporary society, above all in universities and as currently recognised 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.

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 without limiting itself to them or to any particular technology or set of technologies. Understanding, meaning and context must be central themes, as Bawden (2001) puts forward.

All in all, information literacy is an important «generic skill» which allows people to engage in effective decision-making, problem-solving and research. It also enables people to take responsibility for their own continued learning in areas of personal or professional interest.

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). This author highlights the need to enable conceptual thinking and proposals for action in this field in order to move beyond an instrumental conception based on practical skills and competencies. He also states that they should be complemented with a rigorous understanding of INFOLIT as a phenomenon located in culture and society that is grounded in the ways in which communities construct meaning and the activities they carry out. In this regard, Tuominen, Savolainen and Talja (2005) argue – in our view most convincingly – that information skills cannot be implemented independently of

fields of knowledge, and that they must be achieved within 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 communication technologies, the professional learning context and the instruction in specific knowledge required for each area.

On similar lines, a recent study by Maybee (2006) argues that if proposals for training 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. Our research certainly aligns itself with that viewpoint. Indeed, certain generic information skills are shared by different user communities, but what we are concerned with is to centre ourselves specifically on a given community, namely that of translation and interpretation students.

We tend to agree with the relational paradigm put forward by Bruce (1997). In her groundbreaking work this author conceptualises information literacy first and foremost as the strategic and continually evolving acquisition of information skills, which cannot be fostered solely on the basis of a (necessary) educational program but which must receive feedback from the perspective of the users in context. We also share the opinion that it is necessary to integrate the user dimension when working in the area of information literacy; in other words, the proposals must be shaped so that they can be targeted effectively towards particular communities of practice, which in our case are translators and interpreters.

It is undoubtedly becoming increasingly important for translators to know, organise and manage information flows in a suitable manner, if are to be able to exercise their profession properly. They need to know how to gain access to and use information and must also be capable of adapting to new situations and solving problems efficiently in their context. It is therefore important to endow the translator with a wide range of problem-solving skills and competencies. We believe that the most suitable global framework is the information literacy paradigm, which lies within a changing media environment where information is growing, complex and, in most cases, unstructured and dispersed.

## **2.2. TRANSLATION SEEN FROM A STRATEGIC COMPETENCE-BASED APPROACH**

We consider translation to be largely an operation involving the analysis of contents, within the context of human communication, the new media and the role they play in the transmission of information. From this *structural* point of view, the contents include the channels and limitations of flows of information, communication processes and their social functions. Generally speaking, translation processes are carried out in two fundamental steps: the first is a bottom-up phase, where data is interpreted, and the second is top-down, in which these interpreted data are restated in a new linguistic-cultural context (Pinto, 2001).

But if the reader infers, the writer presupposes, and just as inference is the key to the first interpretative phase, so presupposition is the core of the second declarative phase. In actual fact, and although we cannot speak of a strictly symmetrical relation, presupposition and inference correspond to each other as follows: the translator must infer what the author of the source text has previously presupposed and then he or she

must also presuppose what the reader of the target text will have to later infer. A good translator will deploy a series of good strategies when it comes to inferring as a reader and presupposing as a writer; both qualities must be considered as being equal in a hypothetical appraisal of their relative importance.

In tune with the idea that the function of a text is its use or application in a particular context or situation, the *functionalist approach* in translation states that there is no absolutely correct translation outside that context, thereby ruling out the traditional notion of *linguistic equivalence* and fostering the concept of *functional equivalence*. Instead of proposing norms and principles for translating, it is far better to encourage a strategic attitude within the translator that is adapted to each situation depending on the links or relations between the text unit, different contexts, the function of the source text and the function of the target text in their respective cultural situations. From this point of view, both the translator and the target reader play a far more influential role in the processes of translation, which have to be seen as strategic decision-making with different solutions to the distinct problems posed according to the different criteria that have been established (Schaffner, 1998).

Strategies, as a plan of action at the service of translation processes, trigger a series of mental activities or operations (selection, organisation, elaboration, production) that enable the translator to process, organise, retain and retrieve the original informational material, while also planning, regulating and assessing those same processes according to the aim that was previously set. These are necessary or useful competencies, that is to say, a set of processes or steps that can facilitate the acquisition, storage and/or usage of information. The strategies are of a heuristic and flexible nature, and the process of choosing and adopting them is influenced not only by variations in the translator's objectives but also by the characteristics of the text. These are linked to what has been called procedural knowledge, which refers to the executive skills directed towards the action and which depend to a large extent on the translator's qualities and interests.

A strategic model of the translation process must combine the two processes of *interpreting* ('bottom-up') the source message in the light of the schemata stored in the translator's memory, and of *stating* ('top-down') that information after it has been interpreted in the light of the aims and contexts of the translation. The quality of the target text, understood as meaning the degree of satisfaction experienced by its readers, will to a large extent depend on the balance between these two phases of the translating process.

Competencies are repertoires of behavior that are observable and can be transferred to the day-to-day working environment and which some people master better than others. They represent a line joining the individual characteristics, attitudes and qualities that are required to undertake particular professional tasks (Levy-Leboyer, 1996). Although the quality of competence can vary, there are certain keys that can be used to distinguish a good professional, such as for example, his or her capacity to transfer knowledge, capacities and behaviors in varying and unexpected situations, as well as his or her capacity for organisation and conviction that inspire the highest degrees of trust.

The concept of *competence* appeared on the scene over twenty years ago, in relation to the requirements (knowledge, attitudes and skills) that uphold professional, personal and life success.

The concept of competence is, without a doubt, multidimensional. Briefly, a competence is a combination of personal components (knowledge, cognitive skills,

motivation, attitudes, emotions), social components (knowledge about contexts) and behaviors (actions, conduct, initiatives).

Competence-based instructional development was highlighted by the DeSeCo project about defining and selecting competencies (<http://www.portal-stat.admin.ch/deseeco/index.htm>, which was promoted by the OECD: Organisation for Economic Cooperation and Development, Rychen & Salganik, 2003), a groundbreaking study in this area of work and its applications in training. This project sets out by asking what key competencies are needed for a person to be successful in life and live in a responsible manner, and for a society to deal with present and future challenges.

DeSeCo divides the key competencies required for personal and social development in contemporary society into three broad categories:

- Interactive use of tools (e.g. language, technology). This block would include competence in the management of knowledge and information (information literacy)
- Interaction in heterogeneous groups, after acknowledging the diversity that surrounds us
- Autonomous action, after acknowledging the need for autonomy and responsibility

According to the DeSeCo project, reflection is the heart of the key competencies (OECD, 2005: 8). Reflection, as a critical practice and attitude, is a core characteristic of the key competencies, one of which is without a doubt information literacy.

Today, competencies come to the fore in university education when questions are raised about the convergence between the educational system and the actual circumstances and contexts of the labor market and methods of production. Thus, the new methodology used in university teaching pays special attention to the axis of the concept of the European credit ECTS and that of competence, from a student-centered perspective.

### **2.3. INFORMATION COMPETENCE IN THE FRAMEWORK OF TRANSLATION COMPETENCE**

In short, in any process of transfer, the translator will have to develop information competence in addition to the other competencies that make up the so-called *translation competence*. In other words, they will have to acquire the capacity to seek out information that is based on knowledge, abilities and skills. Thus, authors such as Vienne (2000) consider information competence to be of vital importance within the framework of translation competence. A similar view is expressed by Pym (2003), who, reviewing the available bibliography on translation competence, stresses the importance of translators' instrumental ability when consulting sources, as well as, above all, the need to be able to evaluate them in a critical fashion in today's electronic age.

According to these researchers the most relevant skills a translator needs are, first of all, knowing how to analyze the translation situation and, second, knowing how to draw up an *information research strategy* to fit that translation situation.

Without a doubt, information competence is essential right from the outset of any process of translator training, as part of the one of the basic general aims of learning defined by Hurtado Albir (1996: 35) for teaching translation, namely the assimilation of the fundamental principles underlying the professional translator's style of working.

This author subdivides this general objective into three specific aims: the translation market, the translator's tools and the stages of producing the translation. Hurtado highlights here the importance of making students familiar with the sources of documentary material that are of use to them, as well as the importance of knowing how to assess them in order to make translation decisions with a critical mind.

It is undoubtedly interesting to note how information competence has been conceptualised within the framework of translation competence, which has been the subject of a number of studies, some of the most important of which have been those conducted by the PACTE group and Dorothy Kelly in Spain.

The PACTE group, at the *Universidad Autónoma de Barcelona*, has stressed the significance of instrumental subcompetence within the framework of the process of acquiring translation competence (Hurtado Albir, 2001: 394-408). The translation competence proposed by PACTE includes the following range of (sub)competencies: communicative competence in the two languages, extralinguistic competence, transfer competence, professional competence, psychophysiological competence and strategic competence. Within the holistic framework put forward by PACTE, and for the purposes of this study, we are interested in highlighting the instrumental and professional competencies. On this matter PACTE states the following:

Instrumental and professional competence is made up of the knowledge and skills related to the professional practice of translating. It includes several fields of knowledge: 1) knowledge and use of all kinds of sources of information; 2) knowledge and use of the new technologies; 3) knowledge about the labor market and conduct of the professional translator (Hurtado Albir, 2001: 396).

Strategic competence also includes information research strategies (planning the search for information, knowing how to select it, and so forth), while in the extralinguistic competence training in Information Sciences is essential. In any case, the model for acquiring translation competence proposed by PACTE is dynamic, and a salient point is the interrelation and feedback among all the competencies, since they all interact in order to resolve the problems that arise during the translation process.

Hurtado, however, also clarifies on the proposal and points out that the subcompetencies are not equally important. According to the research conducted by the PACTE group, strategic competence seems to be above the other subcompetencies, and its role appears to be one of regulating and compensating the others.

On the same subject of interrelation among competencies, but from a systemic perspective, another important approach in our country is that defended by Dorothy Kelly (2002: 14-15). The subcompetencies she describes as being part of the translation (macro)competence are communicative and textual; cultural; thematic; professional instrumental; psychophysiological; interpersonal and strategic. For Kelly, these subcompetencies would be arranged hierarchically and could be represented by a pyramid with strategic competence crowning the peak. For the purposes of our work we highlight the professional instrumental:

*Professional instrumental subcompetence*, which includes the use of all kinds of sources of documentary material, the search for terminology and the management of glossaries, databases, and so forth, as well as the utilisation of the software applications that are most frequently used in the professional practice of translating (text processing, desktop publishing, databases, Internet, e-mail), together with other tools such as fax, dictaphones, and so forth. It also embraces

knowledge that is fundamental for the management of professional practice (contracts, tax obligations, estimates and invoices, etc.) and the professional code of ethics and membership of professional associations.

In Kelly's proposal, information competence appears as part of several of the subcompetencies mentioned by the author, since, as we see it, it is part of the cultural subcompetence and the thematic subcompetence, alongside its particular importance in the professional instrumental subcompetence.

It has been suggested that information competence somehow hovers above several of the subcompetencies that were outlined in order to configure translation macrocompetence, apart from the one it clearly fits best (*professional instrumental*). Indeed such a claim has been confirmed to a large extent by the conclusions reached in the study promoted by the ANECA in order to propose a Degree in Translation and Interpreting as part of the reforms deriving from European convergence (ANECA, 2004). What we are interested in highlighting is the fact that the final report on the project suggests a number of important considerations with respect to Information Sciences in translator training. Indeed, in (almost) all the professional profiles included in the report<sup>[2]</sup> (general professional translator, linguistic and cultural mediator, liaison interpreter, publishing reader, editor, proof-reader or reviewer, lexicographer, terminologist and linguistic project manager) the need to be trained in the (conceptual and technological) management of information and documentary material is constantly highlighted. The capacity to manage information stands out as one of the main generic core competencies. Among all the specific competencies that the report classifies as being disciplinary (knowledge), professional (know-how) or academic, emphasis is placed on the fact that one of the specific competencies required by the translator and interpreter is the skill to search for information and carry out documentary research.

To sum up, the importance of the need for instruction in information science within the field of translator training is undeniable, both from the strategic approach we have put forward here as well as in the more important proposals for translation competence in Spain. As we see things, information literacy can, to a large extent, act as the matrix and the support for the basis of that strategic competence which must essentially be present in all translation competence.

### **3. A PROPOSED MODEL FOR *INFOLITRANS* (*Information Literacy for Translators*)**

Taking into account that information literacy includes the whole range of experience and use of information in all its forms, and so it is necessary to detect which forms and modes are relevant for different situations, the translator must be competent in everything related to the use and generation of information in order to:

- Understand the information, by comprehending its structures and the ways of generating knowledge
- Detect and define his or her information needs in a precise manner
- Know the methods and techniques that are best suited to locating and identifying information resources
- Evaluate and filter the information that is retrieved in order to ensure its validity, reliability and relevance
- Incorporate this information selectively within the personal knowledge base so that it can be used effectively and on a continuous basis

- Share knowledge by exchanging electronic files, communicating in discussion lists, setting up collective virtual platforms, and so forth
- Generate information, while fostering the skills required for fluent, correct, logical and well-structured writing or communication in general.

In addition to the knowledge and material aspects that are needed, it is also advisable for translators to be trained in a series of competencies and skills that enable them to handle, process, access and use information, so that they can make decisions about an information mass that is becoming increasingly more heterogeneous and which requires constant confirmation of its authenticity, validity and credibility. We know that high performance work environments need professionals who are information literate. That is to say, they require workers who are trained in managing and sharing resources so that they can work in a cooperative, productive manner with others and also use information in electronic environments.<sup>[3]</sup>

In this sense, in addition to having a thorough knowledge of the subject matter to be translated, the professional translator will also have to attain a series of *key competencies* and certain *generic skills* in order to do his or her job. In this connection, we propose the INFOLITRANS model, which we conceive from an integral perspective and which we present in cascade, from the more contextual elements up to its concrete embodiment in teaching proposals: main facets, key skills, generic abilities and learning objectives for the deployment of those skills, all of the above being interrelated and integrated into the translation process.

The INFOLITRANS is located in an applied context in which various factors coexist (here we draw our inspiration from Bruce, 1997), i.e.: knowledge, technologies, resources and processes. These facets require the development of a series of correlated competences and skills, namely: cognitive, informative-digital, communicative and procedural-strategic.

The organisation which we thus present is developed from our perspective on information processing. Our approach is multiparadigmatic, while at the same time laying major weight on the sociocognitive perspective (Allen, 1991, Jacob & Schaw, 1999, Zins, 2007), taking into account the character of the document, and therefore of the information itself, as a multifaceted phenomenon arising from the combination of four basic factors: substantive content (cognitive, semantic), situational content (strategic), addresser's attitude to the reality and addressee's attitude to that same reality. The efficient processing of information is based on the bidirectional analysis of both documentary content and information needs.

The INFOLITRANS model that we propose here is an enhanced extension of that put forward by Pinto (1999, 2005). It is the result of the negotiated fusion of our integrating view of documentation based on our backgrounds, which combine knowledge in teaching information studies, experience in the area of information science applied to translation, and our experience as professional translators. It is a multi-faceted model, designed for the new virtual work environments and competence-based.

Learning to become information literate takes time. It is necessary to understand the purpose and the context of the task and to know how to use the information and communication technologies to locate and retrieve sources. We must also know how to consult them and assimilate their contents, which involves comprehension of both the concepts and the interrelations and then synthesising and representing the information in a suitable manner in order to build up a personal knowledge bank. The translator plays a

key role in the transfer process by becoming the producer of a new document that represents the source text, which is to fulfill a certain function in the target context. As a professional, the translator must have a thorough knowledge of the foreign language and be in possession of transfer competence and intercultural competence; he or she must also be information literate and have a full understanding of the subject material and the specific context of the source text, as well as knowing how to communicate its content-form within the context of a new situation. As we have said above, the translator must be trained in and capable of handling and using information in all its forms and varieties.

As is stated by Barnett (1994: 39), society makes it known to higher education that academic preparation is not enough to deal with life. Nowadays students need to be taught «transferable skills» so that they can find a place in the job market and operate as competent professionals. This is what is emphasised in the above mentioned *lifelong learning* paradigm, where education goes on throughout the whole of the individual's life.

Thus, the current demand for transferable skills is a way of reminding higher education of its duty to society. In this regard, and given that all skills contain some combination of action and reflection, by acquiring transferable skills graduates will develop the capacity to adapt to changes in worldwide professional settings, the national economy and the labor market.

The service facet, somehow present in any facet of this model, enables us to study the systems of using information both from the information producers' and the users' point of view. Producers of information (editors of scientific journals, creators of databases, and so forth) are interested in offering services that are acceptable for most users but while controlling production and distribution costs (cost-efficiency). Users value the fact that their information needs are fulfilled satisfactorily, as well as the quality of the service they are offered (how they were attended to, professionalism, promptness, interest, and so forth), since they consider that information services have to be dynamic, accessible, homogeneous, useful and readily available.

From the service category information literacy must be taken as referring to the translator's capacity to make tailored and strategic use of information to his or her clients' benefit, thus helping to disseminate knowledge. This is certainly possible by means of the development of the facets that constitute the model: knowledge, technologies, resources and processes. The holistic articulation of all of them result in the service sphere. We are convinced that developing information skills will have a strong effect on translators' work, because they will be in the best of conditions to cope actively with all the processes related to the information cycle and more especially those related to the assimilation, creation and transmission of knowledge. Generic informational skills act as a channel to foster the key competencies that were mentioned above. Therefore, in accordance with the facets of the model and the competencies stated earlier on, the following informational skills can be highlighted, along with a series of learning aims and proposals for possible practical activities that can be applied to foster them in educational settings (and which have yielded good results in our own teaching experience).

Before describing the model, we offer the following diagram:

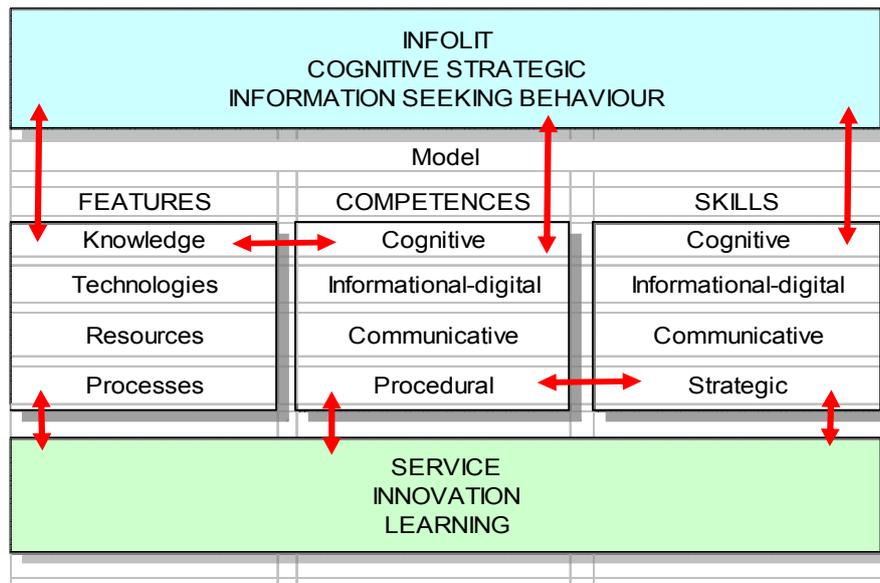


Figure 2: The INFOLITRANS model

### 3.1. KNOWLEDGE FACET – COGNITIVE COMPETENCE – COGNITIVE SKILLS

- *KNOWLEDGE FACET*

The translator must make a distinction between data, information and knowledge. Data are facts in their own right; information is the same as data in organised contexts and processed for a particular purpose; knowledge is a combination of interrelated information plus the guidelines that make it possible to take action.

Knowledge can be studied from different perspectives (Alavi & Leidner, 2001), that is, as a state of mind that enables us to know and understand by means of information; as an object that can be stored and handled; as a process, knowledge focuses on the application of experience; from the organisational perspective, knowledge is the key condition required for access to information and retrieving contents; lastly, we have the potential capacity of knowledge to influence action by developing competencies and strategies in relation to know-how.

In today's society, information has become a highly valued and much-used resource in economic, social, cultural and political life. However, the use of knowledge as the new source for generating wealth will completely change the structure of society, since it has gone from being a private to a public commodity. As stated by Drucker (1995), the world that is arising from this re-ordering of values, beliefs, social and economic structures, political systems and ideas will be different from anything we can imagine today. Users will pay for knowledge and value-added information. In consequence, we have moved swiftly from the Information Society to the Knowledge Society, in which the greatest capital lies in human beings' capacity to think and to create, in what is known as the *intellectual capital* of the organisation.

Literacy is understood here as being the translator's capacity to generate, collect, structure, design, manage and use a personal information and knowledge base as an ongoing aid to his or her work. The design of a personalised information system is important, as it must provide the translator with access to the relevant information and knowledge in an appropriate, reliable manner. At the same time, it must ensure that the

information is valid and that it can be used effectively. This process of construction and projection of knowledge will also be affected by the capacity for innovation, creativity and intuition of the translator, who will acquire new information about the theme (or rheme) depending on the documentary objectives, needs and perspectives.

- *COGNITIVE COMPETENCE*

This is based on acquiring the knowledge needed to perform the work of a translator, which includes multiple, diverse and heterogeneous knowledge depending on the situations that arise in the workplace, always specific. The translator will need to identify existing knowledge, be familiar with the appropriate terminology, and set down the path for solving new needs.

Bloom's taxonomy (1965), still used in the context of INFOLIT programmes, puts forward that the first skills that any student should develop are precisely the cognitive ones, before moving forward and be able to learn in a progressive way, until internalizing a skill (Häberle, 2001).

- *COGNITIVE SKILLS*

This embraces a set of cognitive skills that are needed in order to become familiar with the processes by which information is generated, organised and disseminated. Some of the most important include:

- The skill to understand the structure of knowledge and identify it, while distinguishing between the different types and categories of Sources of Information.
- Terminological skill in order to define and set the limits of the topic.
- Skill to process and integrate new knowledge, while identifying the elements that grant knowledge a scientific nature.
- Skill to manage knowledge within the heart of the organisation.

- *Learning objectives*

- To distinguish between data, information and knowledge by highlighting their properties and differences.
- To identify the key elements in the different categories of sources of information, both paper and electronic.
- To know and understand the instrumental value of the distinct types and formats of information that are available for the different tasks that the translator must perform while carrying out documentary research.
- To stress the fact that it is always a good idea to make use of more than one source of information so that the data can be contrasted and validated.
- To enhance certain reasoning skills that enable the translator to quickly identify the most important elements in each information resource.
- To understand the factors that restrict the usefulness of a resource, such as its time scope, type, language, content and presentation.

► *Proposed example of an INFOLIT activity*

Activity: *Familiarisation with sources of information and their use*

**Instructions**

Using three keywords, state the characteristics of these information sources and say what purpose you would use them for in your translation activity

**Exercise**

SOURCES	CHARACTERISTICS	USE
Monograph		
Theses		
Reports		
Official Publications		
Conference proceedings		
Lists of indexes		
Journals of abstracts		
Catalogues		
Bibliographical lists		
Lexicon		
Terminology banks		

**3.2. TECHNOLOGY FACET --DIGITAL-INFORMATIONAL COMPETENCE – DIGITAL-INFORMATIONAL SKILLS**

• *TECHNOLOGY FACET*

Information and communication technologies have enhanced the generation and exchange of electronic data and information by opening up new channels of communication that speed up the translator’s work. We can say that the Internet represents a second «Gutenberg Age», but with bytes and computers instead of paper and movable type. We have moved from conventional documents on paper to hypertext and digital publication in the web environment, and to a specific tagged language that is used to create them (HTML). This language allows material to be presented in an orderly, structured manner, as well as offering user-friendly visualisation regardless of the system employed. Electronic documents blur the boundaries between writer and reader: the latter can manipulate, modify and improve them to create a dynamic, open, flexible and creative space. They offer a new way of structuring information and organising knowledge, a dynamic interactive way of exploring the contents of documents in contrast to the linear and sequential scanning habitually employed with conventional documents (Lancaster & Pinto, 2001).

We believe that translators should be self-sufficient and judicious in handling the technologies as a platform for carrying out their work. They should be capable of using them effortlessly in order to focus on understanding the underlying concepts and on mastering the *basic skills* that enable them to solve particular problems, especially retrieving information, setting up networks and creating virtual work platforms.

In this aspect, information literacy is understood as meaning the use of information and communication technologies to support and improve the efficiency of the translator’s work as far as seeking, retrieving and disseminating information are

concerned. The translator should be made aware of the benefits of using an environmentally-friendly, ecological and innovative technology.

- *DIGITAL-INFORMATIONAL COMPETENCE*

This competence is centred on handling, filtering, processing, retrieving, evaluating and using information and knowledge, while identifying areas in which the effective use and sharing of information can be improved, which is indeed relevant in the work of translators. This competence is indeed a combination of:

- technological competence, which means being proficient in the use of the computer platforms and tools needed to do any translation work.
- information competence, which refers to using the techniques for organising, processing and retrieving information in an adequate fashion, always bearing in mind the clients' needs together with the aims and functions of the translation, so that the final rendering is in agreement with both the source text and the target system.

- *DIGITAL-INFORMATIONAL SKILLS*

Here we are referring to all the informational skills that translators must be able to apply fluently and autonomously when it comes to handling and using information in their work; special emphasis should be placed on everything concerning organisation, processing, searching for, retrieving and evaluating information. In this regard, the competent translator will have to train in the following skills:

- The skill to use sources of information, while being capable of distinguishing between the characteristics and uses of the different types of sources in the different forms they may take on. It would be advisable for them to be able to define search criteria, formulate suitable strategies and employ the necessary tools.
- The skill to determine and define the information needs, by setting the limits and expressing the work topic in an appropriate fashion in order to establish its objectives, scope and limitations. Translators should be aware of the value of the specialised staff in libraries and information services as an aid in this documentary work.
- The skill to utilise technologies, especially everything related to the use of office automation applications, designing information systems and the use of communication tools.
- The skill to evaluate information resources, especially electronic ones. The ease and freedom with which material can be published on the Internet make it necessary for the translator to adopt a series of criteria that help him or her to filter electronic material and thereby determine the veracity, credibility, reliability and, in short, quality of the information provided by this medium.
- The skill to process, organise, analyse, synthesise and filter information and later reorganise it with the aid of drafting techniques, graphic representation, controlled language and suitable summaries. Translators will have to develop the capacity to incorporate the information obtained into their prior knowledge as well as the skill to relate them with different subject and disciplinary fields.
- The skill to retrieve, locate and obtain information, with an understanding of the logic and structure of the main sources of information (indexes, lexicons,

glossaries, library catalogues, digital portals, and so forth), as well as the skill to use appropriate methods and strategies in each situation. In short, translators should be capable of carrying out efficient searches in databases and selecting suitable query terms (controlled vocabulary, use of Boolean operators and designing search strategies).

- The skill to represent information, which involves defining the strategic, cognitive and formal elements required to communicate new knowledge in written form and using graphic presentations, while respecting the authors' intentions.

► *Learning objectives*

- To be familiar with appropriate bibliographic tools (catalogues, repositories, bibliographies, editorial bulletins) in order to identify interesting documental resources.

- To train translators in searching for and retrieving information, with special emphasis on using different methods, techniques and tools to ensure high quality retrieval that enables them to check the information found against their information needs.

- To recognise the authority, objectivity and veracity of the information that is retrieved by establishing criteria regarding the quality of its contents.

- To be familiar with the different forms of storing information, both physically and virtually (libraries, research centers, national and international organisations and networks, among others), as well as today's methods of retrieval.

- To identify the mechanisms used by different sources to transmit information.

- To learn how to recognise and extract suitable information from a text by identifying the most important concepts.

- To be aware of the specific requirements of documentary summaries and to be capable of distinguishing their different types and applications.

► *Proposed example of an INFOLIT activity*

Activity: *Acquiring a methodology for the critical evaluation of digital resources*

**Instructions**

It is becoming ever more necessary to evaluate the electronic resources that circulate on the Internet in order to be aware of the differences in quality and to determine their usability. This diagram offers a set of criteria and indicators which should be present in the content provided in the digital environment, together with an assessment scale which you may use for evaluation purposes. You may apply this scale of evaluation criteria for the analysis and quality evaluation of the following URLs: <http://www.mcu.es/bases/spa/isbn/ISBN.html>; <http://portal.unesco.org/culture/en/ev.php>

**Exercise**

Assessor \_\_\_\_\_  
 Name of resource \_\_\_\_\_  
 URL \_\_\_\_\_

CRITERIA	INDICATORS	EVALUATION

Authorship	Affiliation of author	
	Author data	
	Means of contact (e-mail)	
	Website mission statement and principles	
Up-to-dateness	Date created	
	Date updated	
	Current and updated information	
	Broken links	
Content	Incorrect links	
	Coverage	
	Accuracy, precision and rigour	
	Relevance	
Accessibility	Objectivity	
	Services provided	
	Compatibility of design with different browsers and screen resolutions	
	Compliance with WAI norms	
	Printer-friendliness	

Evaluation: Excellent (indicator cannot be improved on); Very good; Good; Low.

*Activity: Representation and summary of a text*

### Instructions

Starting out from the following text, Davenport, Elisabeth (2000) «Clinical guidelines and the translation of texts into care: overcoming professional conflicts concerning evidence-based practice». *Journal of Documentation*, Volume 56, Number 5, 2000, pp. 505-519, we would like you to acquire the skills needed to map your concepts and summarise it, following the international recommendations in use.

### Exercise

Select and rank the significant information contained in the document by identifying the most important concepts. Choose the main concept to create the conceptual map, taking account of the hierarchy of concepts and their interrelation via connectors. In order to generate the summary, follow the recommendations of ISO standard 214-1976 (on classification and length). Apply the macrostrategies of generalisation and integration so as to reformulate the information, and review its consistency with and appropriateness to the original text.

## 3.3. RESOURCES FACET – COMMUNICATIVE COMPETENCE – COMMUNICATIVE SKILLS

- *RESOURCES FACET*

Human, economic and material *resources*, together with *information* resources, are the fundamental pillars upholding the INFOLITRANS model. We will focus on information resources, that is to say, on all the sources a translator has to use in order to

research certain subjects or issues. These may be scientific-technological publications, documents from the press, unpublished documents, personal communications, grey literature, reference material, and so forth. There are many different kinds of sources of information, which can be grouped, essentially, according to their form and their content, regardless of whether they appear on paper or in electronic form (Cordón, López & Vaquero, 2001).

Information literacy involves knowledge of sources and being capable of handling them by internalising the skills of tracking down, locating, accessing and obtaining information. Translators have to define the limits of their information needs and identify the most representative key words so as to be able to formulate their queries. They also have to be capable of identifying a wide variety of types and formats of potential sources of information and using them in an independent and flexible manner. Furthermore, they must know how to reconsider the nature and level of information they need in each work assignment.

- *COMMUNICATIVE COMPETENCE*

This focuses on knowing how to act with others, interacting and sharing attitudes, thoughts, feelings, and so forth. It also implies knowing how to transfer knowledge whenever necessary, promote the dissemination of information, and set up virtual discussion and work spaces. Communication is a core part of the daily work of translators, and thus this competence is truly necessary in their INFOLIT training.

- *COMMUNICATIVE SKILLS*

Translators must develop the capacity to use all the resources at hand and communicate correctly both orally and in writing; they also need to be skilled in understanding the information they receive so as to be able to process it and then transfer it to another language using suitable vocabulary and respecting the ideas contained in the source text. It would be advisable for translators to be trained in some of the following skills:

- The skill to work in interdisciplinary teams; they should be familiar with the ethics underlying cooperation and working together, as well as the principles and techniques involved in group work, and how to recognise and deal with conflicts.
- The skill to work in a virtual environment that is free of boundaries and is integrated within networks, where each individual can create his or her own document, and then modify and reuse it whenever necessary. The Internet has become an important instrument for generating and transferring information as well as an important space for sharing resources.
- The skill to use the technologies to transmit knowledge, using office automation software for database management, for creating electronic information systems and for bibliographic management.
- The skill to communicate and recognise the value of communicating by identifying the habits that are adhered to in the area where the translator works (tendencies, terminology, writing styles, etc.).
- The capacity to be methodical, logical and orderly.
- The skill to generate high quality communicative products (i.e. translations) that match the source document and that follow the standard criteria for presenting information.
- Ethical commitment in the process of transferring and communicating information by respecting the intellectual property of the authors.

## *Learning objectives*

- To understand the value of informal contacts with other colleagues as an interesting information resource
- To be able to identify electronic mailing lists and virtual knowledge communities
- To know the rules for presenting information and the basic styles that can be used to do so
- To understand the possibilities and limits of automatic translation, thus taking care to maintain the quality and consistency required in a good piece of work
- To grasp and focus on the aims of the users/clients by being aware of their habits and preferences
- To foster the capacity to work in groups, to discuss different issues that may arise and to accept the opinions of others, especially experts, in a critical manner that is consistent with the principles of logic and scientific method

### ► *Proposed example of an INFOLIT activity*

*Activity: Critical debate in a virtual forum*

## **INSTRUCTIONS**

It is vital for a translator to know how to transfer knowledge and communicate in an effective, critical and respectful fashion, thus promoting the spread of information. We propose carrying out a virtual debate, using Virtual Forum (if this program is not available to students on the course, the teacher may create a specific forum, e.g. via Yahoo). The subject proposed is documentary training (information literacy) as a part of translation ethics and its relation to the quality of the final product. As an aid to the generation of ideas, we suggest the following reading:

- MARTÍN RUANO, M. Rosario (2005) «Los *caveats* a la panacea: El papel de la documentación en la traducción al trasluz». In: Sales Salvador, Dora (ed.) *La Biblioteca de Babel: Documentarse para traducir*. Granada: Comares, pp. 77-95.
- PINTO, María (2001) «Quality factors in documentary translation». *Meta. «Evaluation: Parameters, Methods, Pedagogical Aspects»*, vol. 46, n. 2, pp. 288-300.

## **EXERCISE**

In order to evaluate students' contribution to this activity (debate), the following criteria should be taken into account, given that the code of communication is the written language:

- Expressive quality of the written contributions
- Capacity for synthesis within the space available for each message. Encourage brief and concise messages consisting of a single, well-developed idea
- Degree of originality of the contributions
- Quality of communication and acceptability of the message to the rest of the group
- Achievement of the conviviality and seriousness appropriate to an academic and learning context

### **3.4. PROCESSES FACET – PROCEDURAL COMPETENCE – STRATEGIC SKILLS**

- *PROCESSES FACET*

The information resources that enter any information system are subjected to a series of encoding, organising, classifying and filtering processes, which add value and produce the required outputs and results from a variety of inputs. These processes embrace all the (integrated and interrelated) activities yielding added value that are necessary to obtain an information product and the service it renders. Informative-documental *processes* are intangible, heterogeneous, transitory and interactive, and must be aimed at satisfying the needs and expectations of the clients who they are intended for (Pinto, 2003).

Here, we take information literacy as meaning the execution of a spiralling, strategic process that deals with paradigms, models, methods and standards for processing, filtering and representing information, while control and evaluation mechanisms are incorporated as an element to provide feedback and improve the quality of the processes.

- *PROCEDURAL COMPETENCE*

This is based on know-how and on the application of knowledge within the professional setting, since a translator is also a processor of information who has to be proficient in the use of strategies and techniques for transforming and representing texts. The procedural competence of any professional translation, moreover, should include a proactive subcompetence, which refers to detecting signals from the environment in order to anticipate the new tendencies and needs of clients.

- *STRATEGIC SKILLS*

This set of skills is related to the translator's capacity to express and formulate an information need and to communicate it to another person or to transmit it to an information system; it also concerns the capacity to organise and plan documentary work and the need to make decisions and solve problems in context. To this end, the translator will have to be trained in the following skills:

- The skill to carry out documentary research by learning to define the topic under study and to represent it with key words and concepts that are suited to information searches and decision-making. Translators should also have a certain knowledge of research techniques to help them do their job
- The skill to organise and plan their work, by means of an appropriate management of any information processes and flows, and fulfilment of datelines and objectives
- The skill to make decisions and to solve problems in context
- The skill to adapt to new electronic environments and manners of working by organising the information in such a way that it can be reused later on
- The skill to learn and innovate in the process of conducting documentary research for translation

- Concern for the quality of their finished work and of the documentary research process

► *Learning objectives*

To organise their work efficiently and to ask questions about the topic to be translated in order to guide the documentary work along the right path

To define the objective of the information need in order to determine what information is needed and the way it is to be used

To understand the importance of drawing up a well deliberated, structured plan for searching for the information that is needed

► *Proposed example of an INFOLIT activity*

Activity: *Problem-solving*

## INSTRUCTIONS

Translation is a constant process of decision-making. It is therefore essential to know how to deploy strategies for dealing with information needs, locating, evaluating and using information in a problem-solving context. As practice, we propose that you work on a fragment from the novel *Midnight's Children*, by Salman Rushdie, which presents students with a degree of difficulty in terms of language and content. (Note: select a suitable text depending on the group of students concerned. In all cases, make it a text that offers a challenge and will not be perceived as immediately accessible.)

## EXERCISE

The characteristics of this novel's hybrid discourse mean that you need to consult (and compare) sources of various types, such as:

- dictionaries
- encyclopaedias
- grammar books
- consulting experts, etc.

We are not asking you to translate the fragment into Spanish, but to carry out all the documentary work required to satisfy the information needs and prepare for the translation. Please draw up a brief report stating what processes you followed, with reasoned explanations, and what sources you consulted. Emphasise the problems you encountered and how you resolved them.

## 4. CONCLUSIONS AND FUTURE PROSPECTS

As we have already pointed out, the proposed model for INFOLITRANS is part of a research study with a wider scope that aims at probing deeper into the informational competence of translators and interpreters. Thus, together with the conceptual foundation we have presented here, based on a review of the bibliography and an in-

depth reflection, we are also conducting empirical research involving studies of users to examine the community of translation and interpretation practitioners at its three component levels, namely students, teaching staff and professionals. In our field work under way we are validating and adjusting this model: see Pinto & Sales (forthcoming); Sales (forthcoming), Pinto & Sales (unpublished).

To sum up, we could conclude by saying that information competence, as displayed in the open approach that we have put forward here, strongly favours translation competence, but must not replace it. The fact that a translator is well documented and/or knows how to use documentary resources and information sources in an appropriate manner must not lead us to assume that he or she is a good professional translator. Nevertheless, this information competence will make a decisive contribution to improving translators' abilities and skills in both the cognitive and linguistic aspects. The role of documentary research (referring to both the meaning and the form of documents) involves, above all, cognitive and linguistic activities. Translation is also a cognitive-linguistic task. From there it follows that the role played by such research in the functioning of translation processes is fundamental. We are convinced that information literacy is a prerequisite for continuous lifelong learning, since it enables learners to deal with contents with a critical outlook and to expand their knowledge base.

In the light of the competencies stated here and from our integrative, interdisciplinary perspective of information science, we believe that the training requisites for any translator should be oriented towards reaching certain minimum thresholds of abilities and skills in accessing and using information. We see this as being very important because translators' autonomy and part of their initial success depend on their skill to recognise when they need information and, above all, on knowing how to locate, evaluate and use it effectively (ALA, SCONUL). Briefly, a translator who is competent in information literacy must be capable of:

- understanding the elements involved in the communicative process of translation and social interaction with the professional setting
- understanding the flows of information that take place in society within and among individuals, organisation and countries
- determining the scope of the information that is required
- being familiar with information processing techniques so as to be able to gain more effective and efficient access to it
- acquiring organisational skills that favour optimisation in the workplace and incorporating the selected information into his or her own knowledge base
- evaluating information and its sources with a critical and discerning mind
- acquiring skills in retrieval that are based on a proficient use of the information and communication technologies, in order to explore all the facets that documentary cyberspace has to offer the translator
- learning skills in designing electronic information systems in order to generate standardised databases and data banks that can be reused in the creation of knowledge
- acquiring strategic skills based on knowledge of the organisation, enterprise or person that commissions the translation and on an analysis of their information needs, habits and consumption

- using information ethically and legally as an instrument for solving problems and making decisions

Information Literacy is an indispensable intellectual platform for understanding, filtering, evaluating and using information; it offers a systematic method of working to deal carefully with the pre-documentary, documentary and informational needs inherent in any translation assignment by providing a structured system of knowledge for selecting, organising, storing, filtering and retrieving information. Developing information competence in those who translate is, therefore, a necessary and extremely promising task.

This is what we propose to undertake in our present research. The model we have presented here is a theoretical-cum-applied nature, and it will necessarily have to be validated and evaluated in practice, in forms that we will take account of in future work. In the medium term, we will draw up a proposal consisting of INFOLIT guidelines in the context of translation and interpretation studies (based on the application of the present model), accompanied by a detailed action program and an assessment proposal for INFOLIT learning measurement. In this sense, as is put forward in the recent collaborative research of Bruce, Edwards and Lupton (2006), INFOLIT learning should be a process that focuses on a qualitative change in learners' awareness, rather than the measurement of skills and knowledge. Thus, it is relevant that students become aware of their initial strengths and weaknesses in information literacy, playing an active role in their own learning process. This is indeed our intention, which, it is to be hoped, we will try to transform into a real outcome.

## REFERENCES

- ALA (2000), *Information Literacy Competency Standards for Higher Education*. Available at: <http://www.ala.org/acrl/ilcomstan.html>
- Alavi, M., Leidner, D. (2001), «Knowledge Management and Knowledge Management Systems: conceptual foundations and research guides», *MIS Quarterly*, vol. 25 No. 1, pp. 107-136.
- ALA (American Library Association) (1989), *Information Literacy Competency Standards for Higher Education*. Available at: <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>
- Allen, B. (1991) Cognitive Research in Information Science implications for design. *Annual Review of Information Science and Technology*. Amsterdam, Elsevier Publishers, 26, pp. 3-37
- ANECA (2004), Final Report on the Project for the Design for the Degree in Translation and Interpreting in Spain. Available at: [http://www.aneca.es/modal\\_eval/docs/libroblanco\\_traduc\\_borrador.pdf](http://www.aneca.es/modal_eval/docs/libroblanco_traduc_borrador.pdf)
- Andretta, S. (2006) "Information Literacy: the new 'pedagogy of the question'?". In: Walton, Geoff & Pope, Alison (eds.) *Information Literacy: Recognising the need*. Oxford: Chandos, pp. 12-19.
- Bawden, D. (2001), «Information and Digital Literacies: A Review of Concepts», *Journal of Documentation*, 57:2, pp. 218-259.
- Bloom, B.S. (1956), *Taxonomy of Educational Objectives. Handbook I: The Cognitive Domain*. New York: David McKay Co., Inc.
- Bruce, C. (1997), *The Seven Faces of Information Literacy*, Adelaide, Auslib.
- Bruce, C., Edwards, S. & Lupton, M (2006), "Six Frames for Information literacy Education: a conceptual framework for interpreting the relationships between

- theory and practice". *Italics*, 5:1. «Information literacy: challenges of implementation». S. Andretta (ed.) URL: <http://www.ics.heacademy.ac.uk/italics/vol5iss1.htm>
- Corbeil, J.C. (1991), «Terminologie et banques des données d'information scientifique et technique», *Meta*, Vol 36 No 1, pp. 128-134.
- Cordón, J.A., López, J., Vaquero, R. (2001), *Manual de investigación bibliográfica y documental: teoría y práctica*, Pirámide, Madrid.
- Drucker, P. (1995), *Managing in a time of great change*, Truman Talley Books, Dutton.
- Durieux, C. (1997), «La recherche terminologique en Traduction: pour une approche hypertextuelle», *Meta*, XLII, 4, pp. 677-684.
- Edwards, S., C. Bruce & L. McAllister (2005), «Information literacy research: the consolidation of a theme». In: Middleton, M. (ed.) *Research Applications in Information and Library Studies Seminar*. CIS Research Reports No 7. URL: [http://www.csu.edu.au/faculty/educat/sis/CIS/epubs/info-lit-research\\_final.pdf](http://www.csu.edu.au/faculty/educat/sis/CIS/epubs/info-lit-research_final.pdf)
- Elmborg, J. (2006), «Critical Information Literacy: Implications for Instructional Practice», *The Journal of Academic Librarianship*, Vol. 32 No 2, pp. 192-199.
- Häberle, N. (2001), *Developing a framework for information literacy interventions*. [PhD] Johannesburg: Cape Technikon, Faculty of Education.
- Hurtado, A. (1996), «La enseñanza de la traducción directa 'general'. Objetivos de aprendizaje y metodología». In: Hurtado, A. (ed.) *La enseñanza de la traducción*. Castelló: Universitat Jaume I. Col.lecció «Estudis sobre la Traducció», no. 3, pp. 31-56.
- Hurtado, A. (2001), *Traducción y traductología. Introducción a la traductología*, Cátedra, Madrid.
- Jacob, E.K., Shaw, D. (1999): Sociocognitive Perspectives on Representation. Annual Review of Information Science and Technology. Amsterdam, Elsevier Publishers, 33, pp. 131-185
- Kelly, D. (2002), «Un modelo de competencia traductora: bases para el diseño curricular», *Puentes: Hacia nuevas investigaciones en la mediación intercultural*, no 1, pp. 9-20.
- Lancaster, F.W. & Pinto, M. (eds.) (2001), *Procesamiento de la información científica*, Arco/Libros, Madrid.
- Levy-Leboyer, C. (1996), *La Gestion des Competences*, Les Editions des Organisations, Paris.
- Maybee, C. (2006), «Undergraduate perceptions of information use: The basis for creating user-centered student Information Literacy Instruction», *The Journal of Academic Librarianship*, Vol. 32, No 1, pp. 79-85.
- OECD (2005), *The definition and selection of key competencies. Executive Summary*. Available at: <https://www.pisa.oecd.org/dataoecd/47/61/35070367.pdf>
- Pinto, M. (1999), «Competencias del traductor de textos literarios desde la perspectiva documental», *Terminologie et Traduction*, No 3, pp. 99-111.
- Pinto, M. (2001), «Quality Factors in Documentary Translation», *Meta. Evaluation: Paramètres, méthodes, aspects pédagogiques*, Vol. 46, No. 2, pp. 288-300.
- Pinto, M. (2000), *Documentación para la Traducción en la sociedad de la información*. XV Association Internationale de Bibliologie. Salamanca, AIB.
- Pinto, M. (2003), «Engineering the production of meta-information: the abstracting concern», *Journal of Information Science*, Vol. 29, No. 5, pp. 405-418.
- Pinto, M. (2005), «Alfabetización en información para traductores: Propuesta del modelo ALFINTRA». In: Sales, D. (ed.) *La Biblioteca de Babel: Documentarse para traducir*. Comares, Granada, pp.19-32.

- Pinto, M. & Sales, D. (forthcoming), «A case study research for user-centered information literacy instruction: Information behavior of translation trainees». *Journal of Information Science*, 2007
- Pinto, M. & Sales, D. (unpublished, research in progress), «Empirical research towards a user-centred information literacy instruction in the field of translation studies: The view of translation trainers».
- Pym, Anthony (2003) «Redefining Translation Competence in an Electronic Age. In Defence of a Minimalist Approach». *Meta*, XLVIII, 4, pp. 481-497.
- Rychen, D. S. & Salganik, L. H. (eds.) (2003), *Key Competencies for a Successful Life and a Well-Functioning Society*, Hogrefe & Huber, Göttingen.
- Sales, D. (forthcoming), «Information behavior of translation and interpreting students in Spain: A focus group study». *Journal of Information Literacy*, under referee process.
- Schaffner, C. (1998), *Translation and Quality*. Multilingual Matters, Clevedon.
- Tuominen, K., Savolainen, R. & Talja, S. (2005), «Information Literacy as a Sociotechnical Practice», *The Library Quarterly*, Vol. 75, No. 3, pp. 329-345.
- UNESCO (1996), *Education: The necessary utopia (The Delors report)*. Available at: <http://unesco.org/delors/utopia.htm>
- Ward, D (2006) «Revisioning Information Literacy for Lifelong measuring» *Journal of Academic Librarianship*, Vol 32, N° 4, pp. 396-402
- Vienne, J. (2000), «Which competences should we teach to future translators, and how?». In: Schaffner, C. & Adab, B. (eds.) *Developing Translation Competence*, John Benjamins, Amsterdam/Philadelphia, pp. 91-100.
- Zins, C., (2007). «Conceptions of Information Science» *Journal of the American Society for Information Science (JASIST)*, 58 (3), pp. 335-350.
- Zurkowski, P. (1974), *The information service environment relationships and priorities*, National Commission on Libraries and Information Science, Washington, DC.

## LINKS

<http://www.caul.edu.au/info-literacy/>  
(CAUL Information Literacy website)

<http://www.anziil.org/>  
(Australian and New Zealand Institute for Information Literacy)

[http://www.sconul.ac.uk/activities/inf\\_lit/](http://www.sconul.ac.uk/activities/inf_lit/)  
(SCONUL Information Literacy website)

<http://www.cilip.org.uk/professionalguidance/informationliteracy/definition/>  
(CILIP Information Literacy website)

<http://www.ceris.to.cnr.it/basili/enil/index.html>  
(ENIL, European Network on Information Literacy)

<http://www.infolit.org/>  
(National Forum on Information Literacy)

<http://www.ifla.org/VII/s42/>

(IFLA Information Literacy Section)

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<sup>1</sup> The results of the user studies that we have already conducted with students of translation and interpretation in Spain will be published soon in two works: Pinto & Sales (forthcoming), which includes information collected by means of a questionnaire, and Sales (forthcoming), which analyses the results obtained by implementing the focus group methodology.

<sup>2</sup> Except one – language teachers. In our opinion, however, this competence is relevant not only for any professional profile but for any citizen in today's information society.

<sup>3</sup> EDUCATE Consortium. INTO Info, 1998. Available at: <http://educate.lib.chalmers.se/index.html>