English Teaching within the Framework of Recent Technologies and the New Information Order

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Abstract: - Proficiency in foreign languages requires more than mere acquisition of lexical units and grammar rules: engineering students face new communication codes, different traditions, specific habits and mentalities, original achievements in point of civilisation, and modern perspectives of development. Therefore, especially in the learning period, students aspire to another cultural model that includes linguistic information as well as specific attitudes and organisational/interpersonal skills. Prospecting learning markets in an attempt to identify dissatisfactions with the traditional framework in teaching foreign languages, I found that students and their professors manifest increasing interest in Open Distance Learning for obtaining the first university degree, a second degree, or a specialization that might help them change their career/profession. Other potential students need to improve their level of knowledge in their present field of work, or they want to get a different part time job, therefore they only need a certificate, and to this purpose they select ODL as less time consuming, as they already have the necessary background of knowledge and skills to successfully pursue the course.

Key-Words: - foreign language teaching for engineering, e-learning, new information order, digital archives

1 Introduction

Teaching languages has become a priority not only for individual development and growth, but also for keeping up to date in one’s profession, in view of recent technological progress and emerging hierarchies within the new information order. The first printing machine generated rapid socio-cultural change in its age and had an enormous impact on the way people approached both knowledge transfer and communication with others. In short, the possibility to print books helped to bring about - while avoiding the perils of technological determinism - a radical epistemic shift never imagined before.

Society today faces the same challenge, due to a similar technological development in computers, CD-ROMs and the internet, which have provided the general public with new forms of text. However, it is difficult to predict the future of the epistemologically changed and challenged culture nowadays, or its impact on the publishing industry. Within this new information framework, there are novel ways of experiencing textuality, and, more importantly, there are other types of non-linear texts, part of our culture, that have made readers ready for such an epistemological shift. This fact opens new possibilities for understanding and adjusting to the quickly reshaping world around. On the other hand, multimedia textuality has been culturally present before the current technological developments had taken place. How do online technologies and markets affect the relationship between publishers and the academic community they serve? Does online distribution offer a more direct route authors/markets, or are publishers and additional facilitators needed in the supply chain? Who provides investment in this sector? What about fares? What are the opportunities, the costs and the risks associated with academic publishing online, and how do publishers address them? Do online environments reduce or increase the commercial constraints on scholarly publishing? These are some of the questions to be addressed from the perspective of publishers actively involved in producing innovative online programs for the academic market.

The manner in which technological change and its social impact corroborate to permanently alter the academic data landscape is also worth noting.Digital environments are not just a surrogate for the traditional ones. While in part theoretical at present, there still are specific changes going on, or developing in the near future, particularly in libraries and other culture / information repositories. Consequently, new thinking, new roles, and new models for people / global audiences have emerged.
2 Problem Formulation

Within certain disciplines in the world of scientific research, publication practice has been dramatically altered over the last decades, by the development of archives of research papers, which serve as a means for ensuring rapid publication of research for academic authors, and grant free access to the same research for peers around the world.

2.1 Archives

The most prominent such archive, a model for many others, has been arXiv.org, originally based at Los Alamos National Laboratory, which moved to Cornell University in 2001, serving researchers in the physical sciences. It emerged from the practice of pre-print exchange within many physical sciences disciplines in the print era, and suits the working habits of researchers in this very fast-moving field. In time, however, the archive began to include not only pre-prints of papers submitted to the scholarly journals in physical sciences, but also online versions of papers accepted for publication in those journals (which the community concerned knows as post prints). These latter papers are therefore identical to the versions of articles that appear in the publishers’ electronic versions of journals in the field, which, of course, are also taken on subscription by many academic libraries. They are allowed for publication in the free archive by means of a copyright waiver agreement existing between publisher and academic author. It shows the mechanism by which research publication could generally be transformed by use of the Internet. The example of arXiv has already been copied in a number of other disciplines.

Recently, the Open Archive Initiative has developed an Internet protocol which allows federated searching across a distributed cluster of such archives, hosted on servers in individual institutions, thereby making possible virtual archives in all disciplines. In this environment, the academic library emerges as the most obvious candidate to assume the role of research publisher on behalf of the institution, because of its existing expertise with metadata creation and management, its role in digital document preservation, and its existing arrangements with publishers. The Open Archive Initiative is now transforming the practice of research publication in all disciplines, making the entire corpus of research literature freely available to researchers, irrespective of their purchasing power. Libraries should play the leading role in this scenario, and they must consider that the increasing input of journal publishers - still very important in providing quality control of research publication - might have to be adapted.

2.2 Property rights

True, the new state-created property rights are intellectual rather than real, but once again things which were formerly thought as common property or un-com-modifiable (outside of the market) are covered with new newly extended property rights. The public is faced with a world view which imagines that property is the answer, and that more property rights automatically bring more progress and innovation. To restore the balance, we need to re-imagine and re-invent (the opposite of narrow-minded property) the concepts that delineate the outside of the intellectual property system and the realms of the common and the public domain.

2.3 Supporting cultural diversity

This seems to be an important question today, as boundaries could easily be crossed, willingly or unwillingly, with good or bad intentions. Scotland's cultural institutions jointly set up an organization to digitise highlights of their collections, organize and deliver them on the National Grid for Learning and the People's Network, and manage the resulting digital Intellectual Property Rights. Contributors to the Scottish Cultural Resources Access Network (SCRAN) include Libraries, Archives, Museums and the Heritage. Digitised assets contributed to SCrán are governed by a licence agreement protecting the contributors' commercialisation rights while ensuring unrestricted access, free at the point of use, for members of participating educational institutions.

As we move forward into the Information Age, with the Internet its founding technology, many seem to fear that, like other mass media before it, the web will lead to homogenisation of culture & lowered standards. Nevertheless, by means of exploiting technology, it is possible to support cultural diversity (e.g. passing on traditional skills and narratives, letting people have their say, celebrating diversity within a modern nation, virtual reversal of the Diaspora, virtual repatriation of cultural icons, local access to national treasures, national identity from local resources). Born digital phenomena, such as NetArt, should then be considered, and the public should decide whether it is possible or desirable to preserve for future display something that can be, by nature, subversive/distributed/evolving/ephemeral.

2.4 Rewriting history

A discourse upon methods should take into account historical knowledge & practice and the implications of electronic data. Electronic data were compiled by historians. This has sometimes had a subversive effect on the historical narrative of many
nations. Such work depends heavily upon the techniques of list processing, record linkage, coding of social data and sampling strategies. These all exploit computers and their capacity for handling large amounts of data in a pattern seeking manner. The critique of these methods is, as yet, ill-developed. An increasing number of documents are available in electronic form, which provides opportunities of analysis and access, but also problems of quality control. Some sciences already require data to be made available on a web site. Archaeology has an electronic journal. The historian of the recent past has entered a world where information was created and preserved by electronic means - often to be accessed only via a dated technology. This poses major problems regarding source criticism and exploitation. The quantity of information created and stored in vast electronic warehouses is vast as well, and it is impossible to read it all. New strategies will be required to survive in such a world. Some of these strategies are usable by historians, often by exploiting the new e-data in innovative ways. Historians’ responses to e-data vary from caution, to enthusiasm, or to clear hostility.

2.5 Curating the World Wide Web

The web is already as diverse as the printing press, or even more so. It has effectively ended the post-modern era by creating a global meta-narrative. We are now post-modern and always connected, but as the tower of babble replaces the Tower of Babel how will we find empirical truths in this web? As multinational corporations re-brand and re-spin ever more of the WWW, how can we distinguish between information and manipulation?

Education seems to be the solution. Then we can explore the links between Intellectual Properties and Internet Protocols in addressing the future of the academic archive in the new hierarchies nowadays.

3 Problem Solution

Some significant projects developed within this framework include the use of digital archives as a resource for both students and instructors. It has several purposes: for students, it provides all of the features of web-based instruction - primary and secondary texts and materials (on-site and via links), asynchronous discussions, and archives of student essays; instructors have further access to an archive of syllabi, asynchronous discussions with other instructors, and essays on pedagogical strategies by senior faculty members. The database does not constitute a single course; rather, instructors are free to create their own syllabi of assigned readings.

3.1 Digital archives for student & teacher use

In constructing such archives authors have to address typical challenges posed by digital records. Accessibility issues include: data transfer rates and certain materials provided on CD, for increased speed; duplication of primary texts on the main server vs. the use of off-site links; loss of valuable secondary sites from the World Wide Web. In addition to the usual copyright issues, they have to deal with intellectual property rights with regard to student essays and instructors’ syllabi. As time goes by, they face questions on what to do about rarely used resources and format migration. This approach provides a new model of accessing digital textual resources focusing on feedback and individual perspective in readers’ behaviour, editorial policies and technology. Under best circumstances, this frame is supplemented by an online digital library offering qualified, multilingual access to textual resources. Even if it offers full-text reading as starting approach, non-linear reading is the main activity for most readers. In order to achieve this, quality in e-texts (completeness and reliability) and in transcription procedures is required. Next to copyright, e-texts quality seems to be the key issue in the editorial policy of digital libraries. The digital library sets validation criteria and eventually becomes a centre of expertise for editors & publishers, proving the potential of critical editing, editors, and editions, regarding 3 main aspects in the traditional scholarly paradigms: recensio, collatio and emendation. Online libraries actively work on the issue of universal access vs. copyright materials and on the new role of editors & readers in the creation of virtual editions.

3.2 The audiovisual heritage

Cinema, television and other visual media heritage are a special category in modern archives. Some paradoxical contradictions appear with strong evidence in the relation of such media products with the social need of preserving a common public thesaurus. Despite their mechanical reproducibility (and maybe because of it) these documents are confronted with an intrinsic physical fragility, due to the ephemeral nature of their supports. Digital processing results in extremely easy reproduction, transport and access to audiovisual documents, but at the same time their manipulation, security and certification of originals become a real problem. The market value of original products is also related to the quality of preserving the master product, so there is a strictly economic/industrial dimension to the archive. On the other hand, the scarce practice and high cost of restoring originals is worrying today not
only for film museums and cultural institutions, but for all right owners, for publishers and distributors. Do audiovisual documents belong to the community, as they constitute a non-negligible sum of knowledge, cultural identity and educational content? Or are they private, individual intellectual property? Is their common interest value sufficient to annihilate their being a source of profit? Considering all such contradictions and debatable issues, trying to bring together the many different players involved in the future of audiovisual heritage seems worthwhile. Engineers, rights owners, archivists, entrepreneurs, individuals and collective users, everybody should acknowledge that there is no private, single way to solve this problem, as it is a global challenge, that must be dealt with via large, open social dialogue.

Online broadcasting means covering territories, unifying populations, and connecting outposts. The implementation of online TV & radio altered governmental techniques of public memory production, offering a non-linear system of storage/recollection, where users can select 'programs' or 'memories' for themselves at any time, and can add their own voices to interactive forums which are also archived. It fundamentally changed former relations between geography and memory.

3.3 ODL and the new information order

The new information order influences daily life, social networks, trade, libraries, archives, culture industries, copyright and intellectual property. It facilitates knowledge and development on the one hand, but, on the other hand, it may create a disparity in information capital between the educated and the uneducated, between the rich and the poor. It may also affect cultural diversity and press freedom. In this context, open distance learning is both a product and a facilitator of the new information era.

The term distance education refers to teaching and learning situations in which the instructor and the learner are geographically separated; therefore they rely on electronic devices and printed materials for instructional activities. This form of education is characterised by:

- The quasi-permanent separation of teacher and learner throughout the whole length of the learning process (this distinguishes it from traditional face-to-face education);
- The influence of an educational organization both in the planning and preparation of learning materials and in the provision of support services (this distinguishes it from private study and teach-yourself programmes);
- The use of technical media (printed materials, audio, video or computer) to unite teacher and learner and to carry the content of the course;
- The provision of two-way communication so that the student may even initiate dialogues with peers and the teacher (this distinguishes it from other uses of technology in education);
- The quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals, with the possibility of occasional meetings for both didactic and socialization purposes.

It has often been stated that at least 70 % of distance education provision falls within the area of distance training rather than university programs. Academic focus has tended to blur the increasing importance of distance courses, even though many of the programs run by open universities and university departments worldwide are for certificates and diplomas, rather than degrees, and might be considered as part of training provision.

Of particular importance in distance training is the general acceptability of the courses for technical and vocational qualifications. At university level, on the other hand, the long struggle for recognition by conventional universities of Bachelor degrees got via ODL is well known. In certain countries it is still impossible to get a university degree by ODL and in others one cannot pursue the whole program in the format of distance education.

3.4 Current situation in Romania

Romanian education undergoes profound changes, searching for an identity to better serve future needs. Restructuring curricula, using new and alternative textbooks, setting optional courses, implementing European standards & ODL and redefining the interval of obligatory school are only some of the important steps taken in order to modernize instruction and assessment in our cultural system. Evaluating student work and trying to match it with societal expectations is a key point in improvement. Students' responses are considered a clear efficiency parameter in the teaching process. Modern research intends to focus on actual testing, grading and interpreting of school results and their implications, pointing out if and how knowledge and skills can be quantified objectively; it is also useful to know to what extent tests offer appropriate and helpful feedback for teachers' activity. Evaluation is a system with interconnected components, and training & assessing evaluators also generate important, though indirect consequences.
3.5 Perspectives

Open distance learning has been on the increase for about a decade, on the one hand providing good opportunities for various categories of people to further their knowledge and/or acquire a degree, but, on the other hand, excluding other potential students for economic reasons (fees, access to computers and the Internet, poor regions with high unemployment).

University teaching has become increasingly available to high school graduates and the problems emerging now are the ones regarding certification of studies in various forms (ODL, e-learning, private universities and colleges, state universities). Other problems stem from the evaluation standards, from the students’ degree of responsibility in learning and from their capacity to discern on their own between important knowledge and quickly fading details, as modern trends in professions, education and daily life change rapidly.

New information technologies have certainly revolutionized our lives, accelerating the rhythm of renewal by bringing knowledge closer to us and closer to practice. The social patterns of work association among individuals have changed dramatically, shifting from immediate face-to-face contacts to computer mediated ones, paradoxically increasing loneliness while potentially widening the number of possible associates.

Researching the impact of ODL on the new information order brings new perspectives on how graduates might find professional trajectories effectively in the context of e-learning, and how engineering students could make the transition from the classical classroom to the virtual one and, later on, to the different pattern of networking in the future career. It is of interest to see how modern pedagogy has to adjust itself in order to facilitate the development of human resources. In addition to this, it is of even greater interest to decide how to select relevant knowledge to be taught, how to support learning activities, how to guide instruction and education in this ever changing context. Furthermore, a genuine interest has become apparent regarding the topic of certification of results acquired in this system of learning. Are they comparable / better / inferior to the ones obtained in the common classroom? Why so? Are they reliable? What kind of a new breed of professionals is emerging and how does the general system cope with the situation?

Bringing the world’s library to one’s home is a huge step forward in the advancement of knowledge. Still, people should be taught and guided in how to deal with this impressive amount of data, at least at the beginning of their academic / professional life. If direct contact becomes scarce, how are teachers supposed to inculcate and stimulate active/moral/constructive/collaborative attitudes in students’ behaviour?

3.6 Impact of new information technologies on learning and formal pedagogy

It would have become obvious by now that current research should focus at first on answering some key questions concerning the impact of new information technologies upon learning and formal pedagogy. Open distance learning / e-learning seems to be an interesting and functional hybrid. The next step must be an attempt at defining a framework for the certification of results. It is both interesting and productive to investigate to what extend knowledge of a foreign language influences the outcome of open distance learning / e-learning and how it affects cultural diversity in the long run. When learning a foreign language the student aspires to a new identity and a new cultural pattern, trying to improve his personality according to the image he has taken as a model. So, learning another idiom mainly means a change of mentality and attitude, not only acquiring grammar information and many items of vocabulary. It is not to be regarded as a difficult barrier to overcome, but rather as a means of bringing people together and I consider that this very ability to communicate must be the starting point for every teaching and testing effort in this field. This will enable the graduate to make significant progress in e-learning, while keeping active and productive social skills.

Foreign language acquisition provides the necessary and appropriate circumstances for debates on cross-cultural and inter-cultural issues. Knowing and appreciating the values in other cultures as well as the ones in your own culture constitute the normal behavior of the modern man, being, maybe, the first step in avoiding conflicts, building trust and creating a constructive outlook on life. This is why learning foreign languages nowadays is far more than the old read ... write ... translate. It has become an attitude, and exams should take into account such active and emotional components as well.

The Baccalaureate exam is very important in learners’ intellectual life, connecting two distinct periods of development: one is high school with its purpose of completing the person's general cultural background, and the other is university, the time of high level specialization. This is the reason why, at the beginning, it had only the function of certification, but then got a function of selection, as more and more universities accept students
according to these results in various proportions. On the other hand, the modernization of requirements in this exam has been dictated by the need of getting closer to the world experience in testing and by the normal necessity of equilavating diplomas abroad. In such a context, high school teachers and university professors, both in classical or distance learning, should cooperate in drafting tests for quickly and clearly selecting the candidates and for avoiding the creation of artificial gaps between these two levels. We should note that reality imposed some changes on the ideas people used to have, and a foreign language nowadays no longer means only grammar and literature but it has become an auxiliary instrument in almost any profession, serving special purposes (medicine, law, economy, technology and so on) and more work needs to be done in this area.

4 Conclusion

Certain balance must be kept between tradition and modernity; no extremes have proved to be good so far, and exaggerations in one or the other of these approaches only diminished the progress and increased confusion. Emphasis should remain on communication in life-like situations, but writing should not be neglected only because it was overused before.

Another issue worth considering is implementing European standards of proficiency in scoring results at foreign language tests. So, should foreign languages be present in the Baccalaureate exam at all types of high schools as a means of ensuring a good start in any form of university education? Which are the most suitable methods and standards of assessing the students’ knowledge and skills? Which are teachers’ most frequent errors in tests and assessments and which are the favouring factors? These are normal, even if numerous questions emerging at the beginning of any research but there may be opportunities of clearing the details of such issues by means of documentation and sharing teaching experience with fellow colleagues, as evaluation is team work by definition.

Open distance learning together with the new information order impose a constant effort of discovering and refreshing the sources, completing the bibliography and re-reading the masterpieces from a modern perspective. Therefore the pains of renewal lie both outside and inside us, generating the impulse of going farther and further without ever forgetting the experience accumulated so far.

The future poses many challenges but also opens many possibilities and the interactive teaching of foreign languages can only help the development of future responsible professionals who will add an increasing human dimension to the framework of the new information order.

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