ICT IN THE LANGUAGE CLASS – THE STUDENT'S PERSPECTIVE

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Abstract*: The paper has stemmed from the need of the language teacher, who is also a materials/course designer, to study the engineering students' viewpoints and perceptions of an ICT based foreign language class features. A Student Questionnaire was designed and administered to students of different faculties and levels in the author's educational context, by means of which the trainees' opinions were required as regards the manner and usefulness in which ICT means are used in their faculties in general, for various disciplines, as well as their own views and approaches to the use of computers in their study. The results are discussed with a view to identifying the most efficient paths of implementing ICT in the English language classes in tertiary education.*

Keywords: *ICT in language class, student questionnaire, ESP, CLIL, efficiency in education*

I. PAPER RATIONALE AND LITERATURE BACKGROUND

One important role of education is to endow learners with the type of skills and strategies that can ensure their career success in the contemporary knowledge society. Therefore, it is essential that teachers should permanently focus their interest on identifying the best ways of contributing to their students' development. As a foreign language teacher at tertiary education level in a technical university, the author of this study has developed a particular interest in finding the most efficient paths of implementing ICT in the language classes.

This study has therefore originated in the concern for readjusting the approach to the use of ICT in the foreign language class in accordance with both my own views as a teacher/ researcher/materials designer/course developer and my students' ideas, opinions and suggestions about their needs/wants/interests as regards the course and the post-course period, when they have to cope with the demands of their jobs, while continuing to increase their foreign language proficiency. It is important, we believe, that the students have a 'voice' that is taken into consideration when teachers devise the instructional process. Hence, one main aim of this study is to investigate the manner in which students perceive the impact of computers in a concrete educational context. The results are of interest at the moment when teachers design the implementation of ICT in their classroom practice. An equally important purpose is that of analyzing the students' perception of the role of ICT in their education, in order to be able to optimally tailor the use of ICT in the language class, in such a way as to incorporate, in a more or less explicit manner, a variety of strategies of using the modern technology available in order to enhance learning. Eventually, this learner and learning centred approach should be conducive to ensuring a good degree of learner/graduate autonomy at the post-course level, by providing them with lifelong valid strategies.

Such an analysis is a useful component in the teacher – student relationship, with both actors readjusting their ideas and/or actions by learning from one another. It is true that for a teacher *learners' feedback* is of high significance at all stages of the instruction process, from materials design, through teaching and to evaluation. It may contribute to attaining the ultimate

priority/objective, i.e. progress/success. Reversely, this goal cannot be achieved if the teacher does not permanently (re)adjust their views on the approach to the teaching of the course, as prompted by the critical assessment and suggestions of improvement coming from the learners.

The positions identified in the literature discussing the way ICT is used in the teaching of various subjects, such as that of [4], rightfully show that we can speak about a 'continuum' of teaching styles and approaches, ranging from *instruction* to *construction*. As regards the reasons why education in most countries tends to invest in developing ICT use, Higgins [6] shows that it is not only an enhancement of efficiency that matters in response to society's demands in terms of professional skills, as well as in improvement in the quality of the students' learning, but equally important motives are to reduce teacher workload, diminish bureaucracy in the teacher/student relationship outside the class and make full use of Internet resources. The literature on *the ICT role in learning* has long debated on the possibility to collect evidence on the positive influence of ICT on the process of learning.

Another issue that has been discussed lately concerns the manner in which ICT should be used in order to *enhance* learning. Summing up results of research done so far, Higgins [6] discusses several key points: (i) even if ICT *does* make a difference in learning, studies maintain that the connection between ICT supplying and its implementing is positive, but not so strong as other innovative approaches in education; (ii) a higher effect is always obtained if the use of ICT is carefully designed and effectively integrated. The latter means, on the one hand, that what matters is the manner in which ICT is used by both teacher and students, and, on the other hand, that different other possibilities of attaining progress should not be disregarded.

In [5] reinforcement can be found of the general idea that ICT is beneficial for education for a range of *reasons* (dynamism brought to the class, allowing independent learning to a higher extent, thus being conducive to putting learners 'more in control of their learning'). However, we fully agree with the author that warns against the danger that teachers may begin to consider that ICT can be the 'answer for everything'; moreover, it is added that a combination of modern and more traditional pedagogical methods - well justified for each context, we should add - is a better solution in the search of efficiency. Also in [5] three key issues are suggested, in order to render the use of ICT in class efficacious, viz. *interactivity* (learners get higher control of their independent learning process), *suitability* (ICT should be seen as a 'tool', interactive, dynamic and with high potential in returning educational benefits, if used properly), and *backup plan* (if a computer fails, always have a plan B of the 'traditional' type to replace it). The last points emphasize one important idea that we would like to introduce here, namely that whilst the teacher stays open to new technologies, reflecting and designing new ways of implementing them in their contexts, they should, at the same time, never lose sight of the fact that in education the main actors are human beings, for whom the affective/social aspects matter quite much.

The literature [6] also underlines the *time* factor in introducing ICT in the class, as it takes time to teachers to choose from among the range of means at their disposal, adapt to them and acquire the skills to use advanced technology professionally. At national curricular level, this should mean time to get training, experiment, research on the issue and disseminate results rapidly - in this respect, ICT might seem *effective* in the short run, which may actually equal *practical* and *ready to hand*, but will it also prove to be *efficient*, able therefore to accomplish longer term purposes? It all depends on how well justified its use is from the pedagogic perspective, we believe. Thus, Cox et al. [2] list some of the main causes of *failure in using ICT in education*: lack of understanding of the 'need for educational change', reluctance to the need to accept ICT in their teaching, lack of training in the manner they should readjust pedagogical views in order to appropriately accommodate the use of ICT, perceiving the use of innovative ICT as a potential threat to their (long) established routine and, therefore, considering it undesirable and a sign of losing control of the instructional process. Potential solutions to overcome these hindrances are suggested by [2], which we sum up hereinafter:

- if integrating ICT is carried out following a *long term policy* of the education institutions, then there are better chances of gradually developing its appropriate use in various subjects;
- teachers should be given time to take in the training, develop their expertise in this area, then experiment in practice and make the necessary corrections prompted by feedback from the students;

- teachers should join professional networks, and identify and make full use of different means of receiving support.

When the *acceptance* by the user of ICT is discussed, from the perspective of both teachers and students, a reliable signpost in understanding the phenomenon in depth could be the 'technology acceptance model', developed in [3], which postulates two factors that matter: *perceived usefulness* and *perceived ease-of-use*. Moreover, if we contextualize this model to our current information age, then we agree with Brown [1], who shows that it is particularly ICT that is capable to offer students learning forms appropriate to the contemporary period and to the future, while 'freeing up time for higher-order learning opportunities'.

Identifying the most useful ways of using ICT in the language class cannot be fully productive if the voice of the students, the main recipients of this innovative pedagogical approach, is not listened to. However, as emphasized by Neal [7], research studies on the learners' opinions about the use of ICT in relationship with learning are not numerous, although to 'capture the reflective voice of students' could make a difference in studying the relationship ICT – education. It is of equal importance to take into account the fact that the teacher should identify with the learners in order to be able to help them improve learning performance.

The teacher should orchestrate *polyphonies of strategies* (cognitive, metacognitive, memory related, compensatory, affective and social), as they are called by Oxford [8], for their students, and this is possible only if they learn as much as possible about their learners' perception of the use of ICT in class.

II. THE STUDENTS' VIEWS. DESCRIPTION OF RESEARCH

In order to capture the students' insights on the introduction and use of ICT in their disciplines of study, as well as their ideas on the use of computers in/outside the university, a small size research project was designed and implemented. The project methodology is discussed briefly below. A range of methods were used to collect evidence from the respondents. Thus, a six-item *questionnaire* (see Figure 1) was designed.

Figure 1. The *ICT in Education* STUDENT QUESTIONNAIRE

1. Tick (√) in the list below that ways the computer is used by your professors. You can tick more than one way.
a.   Computer as a tool by means of which the course is taught
b.   Computer as a tool by means of which the course applications are taught
c.   Computer as a means of searching information on the Internet
d.   Other – please specify...
2.   List the subjects that you are currently studying in faculty. For each of them, mention the ways in which the computer is used by the professor and evaluate the usefulness of these ways (with *4 = very useful; 1 = not useful*). Write your answers in the table below:

SUBJECT	WAYS OF USING THE COMPUTER	LEVEL OF USEFULNESS
...	......	

3. List the ways in which the computer helps you in learning for the faculty – both in class, and outside it – explain how this happens:
4. What other purposes, beside study, do you regularly use the computer for? List the first 3-5 ones, providing details.
5. Reflect on your courses and seminars: are there any activities that are performed by means of the computer and which you would like to perform traditionally, without the computer? If Yes, which ones and why? If Not, which ones and why?
6. And reversely: are there any activities that are performed traditionally, without a computer - and which you would like to perform by means of a computer? If Yes, which ones and why? If Not, which ones and why?

The questionnaire was meant to collect evidence about:
- ways teachers of various subjects make use of ICT in teaching (Q1);
- evaluation of ICT usefulness per specific subjects (Q2);
- students' uses of ICT in/outside university for learning purposes (Q3);

- further purposes in using ICT beside learning (Q4);
- preference of mainly traditionally taught courses (Q5) versus ICT supported courses (Q6).

For triangulation purposes, and implicitly an increase of the research validity, 7 semi-structured *interviews* and one *focus group* were organized, and *essay* writing as homework was assigned. In fact, almost one half of the author's Bachelor and Master level students (120) were administered the questionnaire, a sample size which can provide certain tendencies with a relatively good level of accuracy. The sample who answered the questionnaire in class consisted, as can be seen from Figure 2, of a variety of first and second year student levels and profiles studying English or Russian.

The foreign language courses were mainly of the LSP type (English for Science and Technology; English for Professional Communication; Russian for Science and Technology) and of the CLIL type (Scientific and Technical Communication in English).

Although there are differences in the students' characteristic features, our main interests were to:
- seize *common* trends specific to all engineering students,
- capture some *specific* differences, analyze their *causes* and *pedagogic implications* upon teaching, as we could thus obtain a picture across several levels of study and profiles.

Figure 2. STUDENT QUESTIONNAIRE – Sample Structure

No.	Category	Information
1	*Level of study*	**2 : Bachelor and Master**
2	*Profile of study*	**5 : Electrical Engineering (Nanotechnology) ; Computer Science ; Computer Science in English; Transports ; Interdisciplinary studies - automated translations**
3	*Years of study*	**Ba : Year 1 ; Year 2** **Master : Year 1 ; Year 2**
4	*Foreign language*	**2 : English (96 respondents) ; Russian (24 respondents)**
5	*Type of foreign language course*	**2: LSP (65% of respondents; CLIL (35% of respondents)**

The data obtained by applying the instruments created were of both *quantitative* and *qualitative* type. The quantitative analysis of the questionnaire responses provided the following data. ICT is used to teach: courses (75% of answers), applications (62%) and Internet search for information (55%). Among other uses (Q1.d) the students listed: sending course via e-mail, graphics, providing software applications examples, musical background in class, YouTube and online dictionaries.

Students rank the use of ICT in most subjects (the percentage of teachers using modern technology is of around 75 for each profile's list of subjects) as level 3 or 4, in a consistent manner per each distinct group. Scores are quite high, while lower ones were recorded mostly in those more abstract subjects, such as Mathematics or Physics, which corresponds with their preference for traditional teaching methods for these subjects – for over 4o% of the respondents, in spite of their being proficient ICT users, which is expected as normal for engineering students.

Their proficiency can explain the numerous ways the computer is used for learning (Q3). Thus, inside the university the list comprises: getting the courses and applications in class, taking notes on laptop (although two students mention that not all professors like this!), whilst outside the faculty they mention: homework, applications, e-course books, search the Internet for explanations to points remained unclear from the course. One student uses a fashion term to emphasize the role of the computer – considered a 'must have' for any Computer Science students.

The students' answers to Q4 reflect the high significance of the computer for the learners in the educational context studied. Thus, they mention over 20 generic purposes for which they use ICT beside study, out of which the following scored over 75% of respondents: socializing, watching films, listening to music, reading news and other information types.

Lower percentage (around 20 – 30%) was obtained for the following purposes: getting information about fields of interest other than school and/or hobbies, e.g. web design, gaming, playing

chess, studying foreign languages, creating 3D virtual reality. A third category can be generically labeled as communication purposes, as it includes chatting, blogs, forums, as telephone, visual communication, e.g. Skype, electronic payment and translations – all with 15% to 20%.

The last two questions (Q5/Q6) were seen in a sort of mirror relationship with one another, and they were meant to get the learners to reflect on the best ways of receiving course input in function of the type of subject. As these were qualitative data, the answers should be analyzed on main categories of opinions and understood in their mutual relationships. In general, most students (75% +) prefer the current approaches for most subjects.

However, there are interesting exceptions which we wish to discuss in what follows. For a certain course (Programming), the delivery by PowerPoint is perceived as inappropriate by about 47% of the students taking it, for reasons that range from *'it's hard to concentrate on slides and teacher's explanations at the same time'*, through *'it's too fast, the impression is that we miss important information and it's superficially treated'*, and up to *'I'd rather have the theory traditionally'*. Some respondents make an interesting correlation between the type of subject and the optimal approach to the teaching/learning it, with/without computer: they go for traditional *'pencil in hand/chalk on blackboard'* methods for equations, Maths formulas, simple sketches, Physics problems, theory in general, and even essay writing for English. Foreign students (in the Electrical Engineering/Computer Science profile, who study in English) showed a higher (60% +) preference for traditional methods – most probably there are some causes in their background exposure to education that can explain this. Reversely, computers are considered more recommendable, by most students (92%) taking those courses, as a vehicle in teaching some elements of certain subjects, such as: animations – for the visual component, as well as films and images as additional material for a course providing cultural information. It seems that the learners, experienced ICT users, value the *'(inter)active'/'modern'* character of ICT used in class, which would make courses *'more interesting'*.

There were certain *limitations* of the research. Firstly, the scale was rather small, and the sample included many combinations of profile/level/year of study/foreign language/course type taken. However, as the main aim was to obtain a *global* perspective in its very broad lines, common to engineering students, the sample was sufficient to show general trends and directions. Then, the time at our disposal for the administration of the instruments was another constraint, as it was taken from the content teaching time, which may have slightly affected the quality or depth of some answers, although the teacher/researcher tried to maintain good control over this aspect. If we consider this stage as the piloting one, then more sizeable investigations could be organized per distinct profiles/levels.

An interpretation of the research results would reveal several *key points*: (i) most students use the computer especially for *'fun'*, and not for study outside the class; (ii) the misuse of PowerPoint in delivering a certain course points out to the lack of training of subject teachers, who have actually not been able to fully identify a well justified methodology from the pedagogical point of view; (iii) most students (83%) have adopted an open attitude towards implementing ICT in class; (iv) moreover, some (27%) are able to notice subtle differences, for instance what input matches what type of teaching better, what errors in delivering the course via ICT a certain teacher makes, or the requirement that the teacher follows a logical sequence from theoretical input delivered traditionally towards applications taught by means of the computer; (v) most students (80%) taking a certain course at master level, taught on computer, consider it *'boring and unattractive'*, hoping that a traditional method would change that – although again, this can be attributed, we maintain, to the teacher's lack of training in the correct pedagogical approach to the use of ICT in education; similarly, (vi) some students (12%) consider that the use of the computer in course teaching is advisable as *'it helps the teacher to compress the huge amount of input they must cover'* – a rather debatable viewpoint in terms of the quality and results of such an instruction process.

III. CLOSING CONSIDERATIONS

The research described above may be of interest for teachers of foreign languages and/or any other subjects, but also for students as main stakeholders of the tuition process. It is hoped that, by means of further suggestions, ideas, opinions and recommendations from fellow teachers interested in

implementing ICT in their classes, an *ideas-that-work data base* can be developed in time, including the following main principles: sound pedagogical justification for each teaching option, taking the learners into consideration at all stages of the process, permanent readjustments prompted by the context features, avoiding the use of ICT only for the sake of novelty, fashion or, to paraphrase an older acronym: **U**sing **ICT** for **N**o **O**bvious **R**eason, i.e. lacking purpose and hence motivation.

From the author's experience in using ICT in the foreign language class, it is important that the teacher foster the students' *awareness* of the necessity to develop an extended language learning and using strategies repertory, that should be then preserved by the learner in using ICT at the post-course stage, in order to continue to increase their proficiency in the foreign language. This aim can be attained by various means, some of which may seem of low importance, but we have chosen them to illustrate our point that even with a simple computer on their desk, teachers can help their learners to increase their learning quality and efficiency in a variety of ways, such as:
- writing just the beginning of a word, hangman game style, which encourages developing *problem solving* skills;
- using emoticons, in order to involve the learners and motivate them on the *affective* plan;
- using the keyboards for the Russian alphabet, displayed on screen in class, in conjunction/comparison with handwriting on the board of the same input, to develop the students' perception of *receiving/selecting* information from multiple sources and their capacity to *transfer* information from one format into another;
- encouraging students to create tasks for their peers, for *reflection, planning* and *creativity*.

In line with [4] and [7], we consider that ICT use devoid of pedagogical rationale could never be productive. To successfully implement educational technology, teachers must be ensured an encouraging *climate*. Individual learners' *needs* should be taken into account. Appropriate *strategies* can be developed in the students only if the teacher understands the learning process correctly and the university structures ensure an enhancement of the opportunities for learning to include the use of ICT.

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