

## LANGUAGE LEARNING AND USING STRATEGIES IN ESP

YOLANDA-MIRELA CATELTY<sup>1</sup>

**ABSTRACT.** *Language Learning and Using Strategies in ESP.* The concept of strategic competence is an essential component of the communication competence in a foreign language. It is intimately correlated with the main significance of language learning strategies (LLS) and language using strategies (LUS). In the context of the high level of English proficiency required/expected from the technical universities graduates to have initial access to the labour market and then to develop successful careers, tertiary education actors, such as ESP teachers, should contribute to the increase of the foreign languages teaching/learning process effectiveness. This can be done, as we maintain in this study, by introducing in the ESP course a cycle of activities whose main aims are to raise the degree of awareness and acquisition, in a motivated manner, of LLS and LUS, by the students. Our learners should be supported in identifying, maximizing and refining their strategic repertory of learning and using the foreign language at course and mainly at post-course levels, in an autonomous manner. Various ways of explicitly and implicitly including LLS and LUS in an EST course are investigated, as they were designed and applied in the author's educational context. Possible extensions, suggestions and recommendations as regards the introduction of LLS and LUS in ESP courses in general have emerged from the research findings. These are presented with a view to sharing fellow ESP teachers' opinions.

**Keywords:** language learning strategies, language using strategies, ESP, life long learning, learning autonomy, strategic competence, employability skills, engineering students.

**REZUMAT.** *Strategii de învățare și utilizare a limbii în Engleza pentru limbaje specializate (ELS).* Conceptul de competență strategică este o componentă esențială a competenței de comunicare într-o limbă străină. El este puternic corelat cu semnificația principală a strategiilor de învățare (SL) și a celor de utilizare a limbii (SU). În contextul nivelului înalt de cunoaștere a limbii engleze la care se presupune că se situează absolvenții universităților tehnice pentru a pătrunde pe piața muncii și a construi cariere de succes, profesorii de ELS, ca actanți principali în învățământul superior, trebuie să contribuie la creșterea eficienței procesului de predare/învățare. Acest lucru se poate realiza, după cum se susține în studiu, prin introducerea în cursul de ELS a unui ciclu de activități menite să ridice gradul de conștientizare și însușire de către studenți, în mod motivat, a SL și SU. Aceștia

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<sup>1</sup> Associate professor at POLITEHNICA University of Bucharest - Faculty of Engineering in Foreign Languages. E-mail: yolandamirelcatelty@yahoo.com.

trebuie sprijiniți în a identifica, amplifica și rafina repertoriul lor strategic atât la curs cât și ulterior acestuia, în mod autonom. Sunt analizate diferite modalități de a include implicit și/sau explicit SL și SU în ELS, în formele create și aplicate în contextul educațional descris. Din datele cercetării emerg posibile extensii, sugestii și recomandări privind introducerea SL și SU în cursurile de ELS la nivel general. Acestea sunt prezentate în scopul inițierii unui schimb de idei între profesioniștii domeniului.

**Cuvinte cheie:** strategii de învățare a limbii, strategii de utilizare a limbii, ELS, învățare continuă, autonomie în învățare, competență strategică, abilități de angajabilitate, studenți din învățământul superior tehnic.

### **Introduction – the need of reshaping ESP courses in response to the society’s requirements**

This study has stemmed from the concern of a teacher of English to answer the demands of her time. The current society is characterized by fast change and huge challenges, both for graduates striving to enter the labour market and for their teachers, who should try to identify, in their capacity as researchers, appropriate directions of optimization of the teaching/learning process, which is implicitly conducive to enhancing the students’ learning efficiency.

Our attempt has been to design a personalized methodological approach, to carry out empirical research to test our hypotheses, to demonstrate that it may be a successful one and to recommend it to fellow language teachers in order to have it adapted to their own educational contexts and further refine it. One good argument in favour of this proposal is the fact that learning a foreign language comprises, beside semantic content, emotional and motivational semiotic aspects, which take specific shape on account of context, type of curriculum and different ESP profiles. Thus, it is obvious that the study of a language reflects interwoven declarative, pragmatic and contextual aspects.

The diachronic evolution of the current period is subjected to a dynamic of change, and education must answer and even anticipate the future. This is currently happening in various forms, from change as innovation at macro educational level, to the subtle changes at micro-educational plane. The unifying elements of all the directions of change should aim at creating a ‘nation of learners’ (Brock, 1993).

Twenty years before the beginning of our millennium the directions of evolution of education were already anticipated (Naisbitt, 1988). They would cover decentralization, long term perspective, autonomy, self-help, alternative options, participatory democracy. As to the objectives of education at the

beginning of the 21<sup>st</sup> century, they should be the imperative of training enough qualified labour force for the demands of an economy of the informational type, achieving a positive relationship between optimization of education and global competitiveness, increasing the role of Humanities – a significant part of which is played by English proficiency (Naisbitt and Aburdene, 1990).

One can conclude that an important relation exists between anticipative and predictive elements, with knowledge becoming one of the major resources for the survival of society; hence, the development of the so-called *knowledge economy*, where the know-how, i.e. human intelligence, stands for the most important value. The permanent focus on innovation and efficiency has been conducive to giving priority to *learning*, given the very high pace of renewing the world's treasure of information – 90% of the products created today become obsolete and disappear in a matter of years! This has generated the concept of *lifelong learning*, which opens up new horizons for education and its role. A key idea in our postmodern times is the *reconceptualization of vocation* (Mizrach, 2000), seen as a growth experience. The major trend of our contemporary society is the person who is able to *monitor* their own education, with the educator assuming the role of *facilitator*. People should start *learning about learning* in order to achieve their own transformation. In this respect, one can find confirmation in the ideas contained in the majority of educational policy documents worldwide, from which we selectively quote:

- *maximizing the learning experience* (Academic Policy Committee, 1998);
- launching the *lifelong learning strategy* (Scottish Executive, 2003);
- technology development as a factor of pressure in the demand for technological competence, conducive to implementing a *stimulating learning environment* (Komives, 2004);
- educational *tailoring*, based on concrete contextual factors – admitting that learning is holistic and adapted to the various types of intelligences, requiring the adequate change of teaching and continuous evaluation (Magolda and Terenzini, 1999);
- a main objective of education should be the promotion of foreign languages teaching that should reinforce *independence of thought and action*, as well as responsibility and skills aiming at *social integration* (Council for Cultural Co-operation Education Committee, Modern Language Division, 2004).

### **The strategic repertory in language courses – theoretical background**

One main component of *communication competence* is the concept of *strategic competence*, which is closely connected with the *language learning and language using strategies* (LLS and LUS, respectively). The concept of

*strategy* has been defined by numerous authors; still, it is not yet completely crystallized. They are seen as *strategic polyphonies* (Oxford, 1990), *macro vs micro strategies* (Larsen-Freeman and Long, 1991), while some emphasize the potential terminological confusions between *strategies*, *substrategies*, *techniques*, *tactics* and *moves*, proposing a *continuum* along which the various terms regarding the core concept of strategy should be placed (Cohen, 1996).

As to *learning strategies*, they were seen as 'behaviours of a learner that are intended to influence how the learner processes information' (Weinstein and Mayer, 1986), while *language learning strategies* are seen as *steps* taken by the learners to aid the 'acquisition, storage, retention, retrieval and use of the new information' (Oxford, 1990). LUS cover retrieval, rehearsal, cover and communication strategies, focusing on *interlanguage*, which is the level of proficiency attained at a certain moment by a learner (Cohen, 1996). We consider that in doing research on LLS and LUS, a useful approach may be that of attempting to characterize the range of strategies that are relevant for a *certain* student/group of students within a *certain* well defined educational context.

The main aim of LLS is oriented towards developing the *communicative competence* (Oxford, 1990); it is maintained that, in order to enhance efficiency in language learning, *affective* and *social strategies* play a major role, naturally in close relationship with the other types of strategies. *Strategic competence* has been understood as an ability of selecting efficient means of achieving an act of communication, enabling the listener/reader to identify the aimed referent (Yule and Tarone, 1990), the manner in which people manipulate the language to attain our communication aims (Brown, 1994), or a completely separated element of the communication ability, whose role is that of an executive function (Bachman, 1990).

A brief survey of the evolution of *language teaching pedagogy* is necessary at this stage, seen as a radiography of the more recent trends in the literature, in order to clarify what we, teachers and designers of our own (ESP) courses, can retain from each of them and integrate them in a logical, well justified from the pedagogical point of view, construct of our own. Thus, with the generation of the concept of *communicative competence* (Hymes, 1972), which was conducive to the *Communicative Language Teaching – CLT* ideas, a shift towards *socio-centric* views in language teaching methodology took place. However, against the developments of our contemporary society, the expansion of IT and a globalizing market, in the 1980s it became obvious that an *eclectic* view – grounded on the new the pedagogical perspective – was to emerge.

The current stage is characterized by a strong theoretical and principled rationale, with the options verified in practice and permanently reshaped, in order to enclose in a coherent manner the *synthetic* and *analytic* elements of the proposed syllabus (Hadley, 2001). We should visualize these

options on a *continuum*, ranging from content based *synthetic* approaches, with extreme types focusing on the language structure, to those identifying and teaching the language for specific contexts, for instance ESP or EAP. Within the *analytic* models, the focus is on those skills and strategies learners need in order to acquire the language optimally – stress on *learning*.

*Eclecticism* encourages the teacher to use elements originating in a *variety* of models, as what really matters is to teach one's students 'how to learn' and 'how to think in various ways' (Saphier and Gower, 1997). That will also contribute to harmonizing teaching with the learning styles of the students, while simultaneously trying to enlarge their learning strategies repertory. The main directions of the new paradigm in language teaching stress: *learner's autonomy, cooperative learning, curricular integration, emphasis on meaning, diversity, teacher as co-learner and alternative evaluation* (Jacobs and Farrell, 2001). Important questions emerge, regarding the way we should modify our teaching models in order to be able to face the demands of the labour market, as well as the possibilities of maximizing lifelong learning opportunities. One constraint is *time* available to structurally change the curriculum and the instruction methodology; others, which should be taken into consideration, refer to inertia in accepting change or potential conflict states.

Teachers should permanently keep in mind the question whether, although they are indeed concerned with adapting their approach to the society's evolution in order to foster a permanent attitude aiming at optimization, it may be useful to question oneself, from time to time, if whatever they are already doing could not be carried out by adopting a different path, which perhaps they have not been able to identify yet (Wolverton, 1994). We consider that the *reflective* teacher, using the researcher's specific tools, should play a decisive role in the dynamic triad *self-information/experiment/feedback*.

Assuming this role, we aimed to include LLS and LUS in a coherent systematic manner in the teaching of EST to our engineering students, with a view to checking if this approach might be conducive to increasing the efficiency of the teaching of English. This can be done either by having a separate course of the *learning to learn* type (Ellis and Sinclair, 1989), by embedding strategy awareness raising activities within the language course proper, or by combining the two possibilities – which is what we tried in our educational context. There are numerous authors that underline the advantages of the latter approach (Nunan, 1991). The students can become aware not only of their favourite manner of learning, but also of the fact that they are given options of both the *what* they should learn and the *how* they should learn. It is quite probable that such an approach will encourage learners to become more flexible in learning, to experiment new ways and thus enrich their personal strategic repertoire.

## LLS and LUS in ESP – a proposal

In what follows a brief presentation is made of the research designed and carried out by the author among the Computer Science Faculty students the Bucharest Technical University. Our main aims as regards the EST course for second year students were: (i) to attain a homogeneous communicative competence level of B2/C1 in CEFR terms, and (ii) to help the trainees develop a rich LLS and LUS repertory, which they should be able to further enrich at a post-graduation stage.

We started from the intention to check if, within the context of the high expectations of technical graduates required by the labour market, the *level of efficiency* of the language teaching/learning process could be increased by: (i) *embedding* in the pedagogical cycle a series of activities mainly aimed at increasing the level of awareness and acquisition, in a motivated and participatory manner, of the LLS and LUS by the students, and (ii) by helping the learners to identify, maximize and refine their *strategic repertory* after the language course in faculty was over. We also wanted to identify optimal ways of developing our students' communication competence by including LLS and LUS in various manners in the ESP course and to check the extent to which the approach could ensure the students' progress. Confirmation of our intentions was necessary in order to design a future *English for Computer Science Students* module comprising LLS and LUS development activities.

Against this background, an Experimental Module was designed by the author – ECSexp, at upper intermediate/advanced level, mainly focused on developing reading and writing skills. It was different from the Witness module (ECSwtns) – a pre-existing EST one, of the communicative type, as it included – in a systematic manner – original or adapted activities, aiming mainly at developing LLS and LUS, which were incorporated in various manners in the module. The 14 practical courses are briefly presented in Table 1.

**Table 1.**

### Experimental module

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| C<br>O<br>U<br>R<br>S<br>E | <b>EXPERIMENTAL MODULE – ECSexp</b>   |
| NO.                        | <p>LEGEND</p> <ul style="list-style-type: none"> <li>▪ Main seminar objectives (<b>Ob.</b>)</li> <li>▪ Seminar Plan (<b>Pl.</b>)</li> <li>▪ Materials/means (<b>Mm.</b>)</li> </ul> <p><b>NOTE:</b> All seminar elements covering the teaching of LLS and LUS elements are given in <i>bold italic</i>.</p> |

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| 1 | <p><b>Ob.:</b></p> <ul style="list-style-type: none"> <li>- <b>Announcing the general structure and the aims of the experiment, asking for the students' consent to participate in it;</b></li> <li>- General introduction of the ECSexp objectives and requirements (resources, homework portfolio and grading procedure). <b>The requirements of keeping a learner's diary to be included in the Portfolio is added, but it will not be included in the grading scheme.</b> Discussion on the particularities of the technical lexis specific to the IT field. Skills of reading the technical text – selecting the appropriate manner of reading as accounted for by purpose (scanning/skimming)</li> </ul> <p><b>Pl. :</b></p> <ul style="list-style-type: none"> <li>- <b>Presentation of the EST Prosper course book and of the COMPUTERS unit.</b></li> <li>- <b>Warm up group activity – task: to list domains of computer use and to orally present results by group's spokesperson. IT specific lexis section: based on the electronic Macmillan dictionary with display on the class screen (derived homework: students are to prepare a 5-7 IT terms list and the definitions found in the online dictionaries for them, they jumble and bring them to class as a task prepared for their colleagues to solve during the following seminar (students creating a learning activity themselves for vocabulary acquisition by their peers) .</b> Reading of a technical text on Virtual Reality, with various tasks, involving passing from one reading subskill to another (fast reading for gist, reading with attention to each detail to identify certain information) – <b>brief discussion on the reasons for approaching a text in various manners in terms of purpose. Explaining the rubrics of the seminar diary. Completing the diary for the first seminar.</b></li> </ul> <p><b>Mm. :</b> * EST Prosper Course book – Unit 5/Computers ; * <u>Multimedia laboratory</u> : displaying objectives and tasks on class screen – and <b>displaying the diary format on the class screen (this will be recurrent at each seminar end-completion time 4-5 mins.)</b></p>                      |
| 2 | <p><b>Ob.:</b></p> <ul style="list-style-type: none"> <li>- <b>Analyzing the way homework was done (difficulty, identified solutions, usefulness). Reading of an online text with solving questions – solving the Felder –Soloman test of determining the student's own learning style. Derived homework (writing): analysis of test results in accordance with a series of given (learning strategies you confirm you use, recommended/suggested test strategies which you consider worth trying/reason why it is important to expand the personal repertory of learning strategies/manner in which this can contribute to increasing the quality of one's own learning).</b></li> </ul> <p><b>Pl.:</b></p> <ul style="list-style-type: none"> <li>- <b>class discussion on topic – purpose is to sensitize students in analyzing own learning in comparison with colleagues' approaches; before taking the Felder test: discussion in view of sensitizing the learners on the learning in technical fields and on the study of a foreign language (results are collected in a table on the class display ). Examples from seminar: <u>For technical domains</u>: writing for understanding/continuous or frequent or repetitive learning. <u>For the foreign language</u>: reading of various texts, learning vocabulary by various procedures, systematic preparation for test taking.</b></li> <li>- discussing vocabulary issues in the Felder-Soloman test. <b>Solving the Felder-Soloman test in the IT laboratory with series of 8-9 students as individual work; in parallel, in the other multimedia room the rest of the students read a text on getting familiar with the main types of learning styles and their description. (Test results are recorded in the lab computer for further use). Homework is explained</b></li> </ul> <p><b>Mm. :</b> * <u>Testul Felder-Soloman available online at <a href="http://www.engr.ncsu.edu/learningstyles/ilsweb.html">http://www.engr.ncsu.edu/learningstyles/ilsweb.html</a></u>; * <u>Multimedia Laboratories of department</u>; * <u>Explanatory texts</u> regarding learning styles are selected by the instructor according to quoted site.</p> |

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| 3 | <p><b>Ob.:</b><br/> - <i>discussions with class on previous homework – with a view to raising awareness of students on diversity of vocabulary learning strategies; discussion based on individual style analyses and general conclusions on the dominant group style – implications for teaching; explicit activities of discussing various aspects connected to language learning, included in and based on the matrix of oral communication, reading, listening, etc. – equal priority is given to aspects of linguistic study proper and to those regarding the increase of the learners’ own capacity of analyzing and of optimizing, by solving those activities, their own strategic action in learning.</i></p> <p><b>Pl. :</b><br/> - <i>discussions on various cases on previous homework; participation of each student in presenting their Felder test results based on homework – opinions; creating the group profile with the archiving of the data for each group; free discussions on the strategic approach in learning technical subjects and foreign languages.</i></p> <p><b>Mm. :</b><br/> * EXCEL Course book - Unit 1 – Learning a Language</p> |
| 4 | <p><b>Ob.:</b><br/> - <i>various manners of approaching language learning by solving speaking, reading and writing tasks</i></p> <p><b>Pl. :</b><br/> - <i>speaking activity, focused on the good language learner’s behaviour (Good Language Learner – GLL); speaking activity, focused on motivation in language learning; speaking activity, focused on the various strategies of organizing one’s own learning; speaking activity, focused on the role of homework</i></p> <p><b>Mm.:</b> *EXCEL Course book - Unit 1 – Learning a Language</p>   |
| 5 | <p><b>Ob.:</b><br/> - <i>reading of a text with a high level of difficulty, practice of understanding at word/sentence/paragraph levels; listening to a lecture excerpt in the IT field, with flow chart note taking; words/phrases in relation with their role in the technical text; oral presentation of a technical process on the basis of notes taken in class (derived <b>homework: prepare a description of a process in the IT field, which you will present to your colleagues, who will take flow chart notes)</b></i></p> <p><b>Pl. :</b><br/> - <i>activities in the High Tech and Higher Education section on COMPUTERS; listening to a technical lecture with two tasks: flow chart note taking and extracting connecting words, followed by their classification in terms of their role in the technical discourse.</i></p> <p><b>Mm.:</b> * EST Prosper course book – Unit 5/Computers and <u>audio tape (native speaker)</u></p>  |
| 6 | <p><b>Ob.:</b><br/> - <i>discussion on the role of grammar in language learning; causes of the most frequent mistakes of Romanian students;</i><br/> - <i>differences between fluency and accuracy; voting by colleagues of the best language learner of the group - GLL will have to prepare for an interview, on the basis of a set of questions given by the instructor.</i></p> <p><b>Pl. :</b><br/> - <i>discussing causes and importance of errors of grammar; students correct a set of sentences containing typical errors and make notes on whether they are specific for them, as well as trying to determine their causes; students prioritize typical errors identified, based on the extent to which they can obstruct communication in English (fluency); discussion with whole class on the role of fluency and accuracy in communicating in a foreign language; correlated with the previous activities, voting of the best language learner. Instructor indicates main interview points to prepare for next seminar interview</i></p> <p><b>Mm. :</b> * <u>original activities of author</u></p>   |

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| <p>7</p>  | <p><b>Ob.:</b><br/>- watching video film with note taking on several tasks simultaneously</p> <p><b>Pl. :</b><br/>- students watch film and <b>they can choose the number of activities they feel they can solve simultaneously (1 to 4 with an increasing level of complexity and difficulty);</b> derived <b>homework:</b> detailed description of a technological process</p> <p><b>Mm. :</b> *<u>Video film <i>A Visit to Madame Tussaud's</i></u>; * <u>original activities of author</u> (detailed note taking on a technological process, the biography of a personality, recognizing personalities in the film, listing them in a table based on categories and finding answers to pre-addressed questions).</p>  |
| <p>8</p>  | <p><b>Ob.:</b><br/>- developing reading skills in terms of purpose; writing the copy for an advertisement of an IT product (students begin to solve homework in class); <b>recording of the GLL student interview in the presence of colleagues.</b></p> <p><b>Pl. :</b><br/>- reading a text about advertising techniques and identifying types activities; oral description of ad examples and identification of advertising techniques; discussing main parts of an advert by awareness raising questions; assigning <b>homework; recording GLL interviews on tape.</b></p> <p><b>Mm.:</b> * EST Prosper course book – Unit 5/Computers; * <u>activities adapted by author based on a section of <i>Themes</i></u>; * <u>audio tape for interviews in IT lab</u></p>   |
| <p>9</p>  | <p><b>Ob. :</b><br/>- writing technical translations from English into Romanian; discussing typical technical translation errors; <b>during the translation activity, the students fill in a Word document, called WORKING PROTOCOL (rubrics: difficulties encountered during translation/solutions adopted)</b></p> <p><b>Pl. :</b><br/>- <b>students work in pairs on translating two texts, avoiding the case when two adjoining pairs get the same text, they work on computers, completing the working protocol at the same time; the various solutions adopted are discussed and commented upon: dictionary, logical deduction from the context, questions to peer or to the instructor, etc. (derived homework: finishing the translation and the protocol and enclosing them in the Portfolio)</b></p>  |
| <p>10</p> | <p><b>Ob.:</b><br/>- <b>raising students' awareness of the main lexical, morphological and syntactic aspects encountered in translation;</b> translation into Romanian of a <i>Help</i> type menu; translation of a text into English – the text was first translated into Romanian by a colleague in a group of three; finally comparing the translations with the original; <b>discussing the degree of freedom of the technical translator.</b></p> <p><b>Pl.:</b><br/>- <b>best versions of the homework translation are discussed as well as the solutions mentioned in the Work Protocols; original activities of sensitizing the learners on the following linguistic aspects: semantic confusions (false friends), word order, solutions in translating technical terms that are difficult/impossible to translate or that can generate confusions;</b> the translation from English into Romanian is done; the text already translated into Romanian by a group member is taken over and translated back into English; <b>group discussion, followed by class general discussion – drawing conclusions on the relatively low degree of freedom of the technical translator.</b></p> <p><b>Mm.:</b> * three <i>Help</i> menus from online sources; * <u>original activities of the author</u></p> |

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| 11 | <p><b>Ob.:</b><br/> - <i>sensitizing students by means of euristic activities, and discussion after each of them, as regards the strategies used in solving them;</i> paragraph writing observing requirements specific to English language cultures in preparation for argumentative essay writing.</p> <p><b>Pl. :</b><br/> - <i>solving of a series of euristic activities, by means of which the students should identify the essential structure and requirements as regards paragraph writing</i></p> <p><b>Mm.:</b> *original communicative writing activities; * <u>eight original awareness raising activities on paragraph writing and the best language using strategies</u></p>  |
| 12 | <p><b>Ob.:</b><br/> - argumentative essay writing in accordance with requirements of English speaking cultures.</p> <p><b>Pl. :</b><br/> - homework paragraph writing checking (<i>discussing errors under document camera and projecting them on class screen</i>) ;<br/> - <i>a range of original activities meant to show students: (1) the currently met difficulties in approaching essay writing, (2) ways of discovering rules of structure and style of argumentative essays, by finding answers to awareness raising questions at the level of discourse/coherence/cohesion of the text, (4) the use of brainstorming and mind map strategies;</i> writing the plan/then the full essay text, using the information identified in the previous activities (continued as <b>homework</b>).</p> <p><b>Mm. :</b> original awareness raising activities on the argumentative essay writing process and the best strategies of generating ideas, organizing thematerial, planning the structure and using specific language for that text type</p> |
| 13 | <p><b>Ob.:</b><br/> - more on argumentative writing essays (by checking homework); administering <i>Student's Questionnaire</i></p> <p><b>Pl.:</b><br/> - checking essay writing (<i>discussing errors under document camera</i>) ; <i>students are guided throughout the process of generating a topic for the argumentative essay, by working stages, with checking at the end of each stage (topic, controlling idea, formulating the main sentences) ; then they propose their topic to partners in class as homework (they start writing in class);</i> administration of <i>Student's Questionnaire</i> ; collecting <i>Portfolios</i>, which also include <i>student's diaries/term</i></p> <p><b>Mm. :</b> * original activities ; * <i>Student's Questionnaire</i> created by author.</p>   |
| 14 | End of term test   |

The empirical research was of the experimental action type, with an ameliorative purpose. The researcher/teacher designed both modules, as well as the manner of transmitting all the necessary information for their class implementation, and the range of data collecting research instruments: pre-test and post-test, portfolio requirements, student questionnaire, interviews, student diary format, case studies a.s.o.

Both quantitative and qualitative data were obtained, and the principle of triangulation of data was applied in processing and interpreting them. The modules were taught both by the author and another teacher, who followed the author's instructions and maintained similar experimental conditions. The

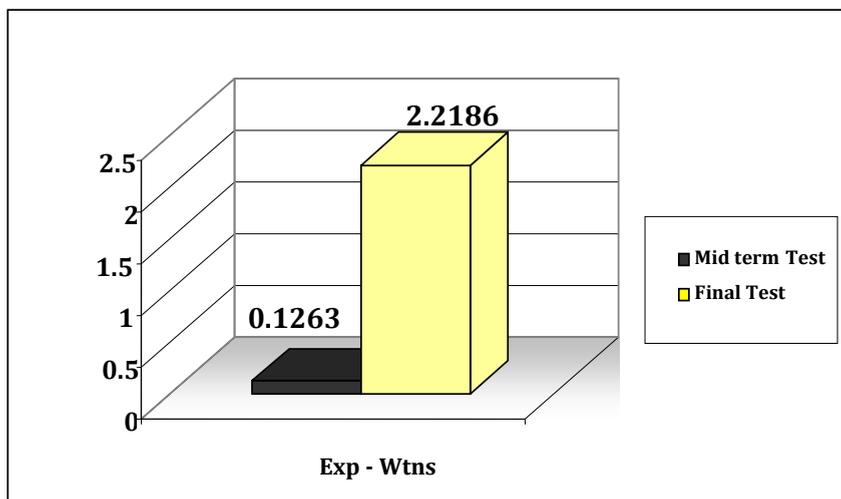
purpose of this procedure was to verify the possibilities of extending the experience of integrating LLS and LUS into an ESP course by other teachers. In order to maintain a good level of the experiment ethics and accuracy, both the witness and the experimental modules included the main 'backbone' of the common activities for each course/ objectives/topic/skills. Whenever LLS and LUS were included in the experimental module, the time allotted to them in class was compensated – with the witness module – by supplementary activities reinforcing the course content. Although control over a series of variables that might have affected its accurate results was strictly maintained throughout the experiment, still there were certain (foreseeable, but acceptable) limitations, mainly as regards the differences between the personal and professional profiles of the instructors involved in it. These limitations were also kept under control by having detailed lesson plans for all courses, classroom observation sessions and a strict observance of the content and teaching approach. The sample comprised 200 second year students of the Computer Science Faculty, with 114 in experimental groups and 86 in the witness ones. The experimental scheme was of the pre- and post-test types, with a control group.

The innovative elements were represented by the systematic inclusion in the experimental module of a set of activities whose aim was raising the students' awareness of certain LLS and LUS of great usefulness, especially in their process of continuing to learn English after the course was over. This made us face the problem of options, as there are a range of ways of providing strategy-based instruction (Weaver and Cohen, 1994). We consider that the essential thing is to integrate LLS and LUS *directly* in the English lesson, both in an *explicit* or in an *implicit* manner. Our view is that strategy connected elements can be placed on a continuum, as regards the level of explicitness in their introduction in the foreign language lesson. Thus, (see Table 1) the student's diary (Course 1), the test of identification of one's own learning style (Course 2), the Good Language Learner's experience (Courses 4 and 6) are located at the quite explicit end of the continuum, while the translation protocol (Course 9), for instance, would be placed at a point closer to the mixed approaches. Finally, all the discussions, awareness raising tasks, writing strategies (Courses 3, 6, 7, 11) can be positioned towards the implicit end of the continuum, as they were embedded in courses mostly focused on ESP specific content – in terms of envisaged language and skills.

## Results and open conclusions

During the experiment a large amount of data was obtained, whose analysis was conducive to identifying trends and finding some initial answers to the issues of interest for us. The aspects analyzed by data triangulation

were as follows: *success in learning; level of communication competence in English; progress in the reading and writing skills; awareness of the learner's own LLS and LUS repertory; students' level of motivation and participation; students' assumed responsibility of their own learning process; optimization of the teaching process.* An example of the type of results obtained is illustrated in Figure 1.



**Figure 1.** Comparison between mid term test/portfolio delta and final test delta for the 2nd term (exp - wtns)

In it, the difference between the two groups at the mid term test and then at the final one is shown. Thus, if at the mid term test, after just seven weeks, there was a slight difference (0.1263) in favour of the experimental group, thus not yet statistically significant, only at the final test, after 14 weeks, was there any obvious delta of performance between the two groups (2.2186), which was significant from the statistical point of view.

The students' diaries also yielded a series of important conclusions. Let us exemplify with just one revealing excerpt: *'I learned the small steps you must pass through in order to write a logical paragraph in English'*.

A range of conclusive implications can be summed up, which should be as many potential open paths toward further optimization, as we are aware of the recurrence of the investigative scientific process aiming at enhancing efficiency. These should be seen as a framework, organized in a non-prioritized order, useful for future developments. Thus, the research has proved useful, as there was an optimization tendency, therefore the English course efficiency can be improved, being conducive to an increase in the communicative competence of

the students; there are good chances for the course to contribute to an increase of the trainees' learning autonomy level, if the most efficient ways of embedding LLS and LUS that are really useful to the learners are introduced in an appropriate manner, against the range of mid- and long-term needs of the students; the process can be successfully implemented in other educational contexts, as well, provided that the instructors receive adequate training, which could also contribute to professional – and personal – development.

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