Methodical commitment of education
in Information technology and English language

Mariyka Petrova, Ilina Ivanova

Abstract: This paper proposes methodical guidelines and integrating learning activities for effective and quality education of students in Information Technology and English Language by enriching the educational content of both disciplines. This work considers the educative and extra-educative activities with an accent placed on quality and competent acquire of specific terminology of the discipline of Information Technology of professional English. The style of organizing and teaching the education material is consistent with the specific of the subjects studied by the students. The proposed way of interdisciplinary commitment builds on the skills of the students to work with computer systems, increases their motivation and active learning in both disciplines.

Key words: Interdisciplinary commitment, Methodical binding units, Educational applications, Integration, Information technology, English language.

INTRODUCTION

The rapid development of the science and technology, the dynamics of growth of world economic and the continuing process of globalization pose new requirements and tasks of higher education [1]. The Lisbon Strategy for growth and employment education and training have a central place and are a key element in further action to achieve the 2020 targets. It emphasizes that Informational and Communication technologies (ICT) should be more explicitly addressed in teaching and learning [4]. Of course ICT is not a panacea, but they help greatly to overcome a lot of the problems in education and science at this in a natural, informal and friendly manner, while engaging the minds of learners, provide greater opportunities for teachers and allow more adequately teaching the complex matter through interactive multimedia examples [3]. New modernity require to reduce the accumulation of information and theoretical facts and to give emphasis on the practical application of the material which is provided for the study on the State Requirements. To create an atmosphere where the students solve real practical problems, to solve the problems it is necessary theoretical knowledge to be used correctly. If this problem requires theoretical knowledge to be from several different disciplines it can feel interdependence of the studied material and to understand that learning is a necessity caused by specific life reasons [5]. The discipline Information Technology (IT) is very suitable in this respect (Rahnev, 2010) because it allows realization of various functions

➢ new methodological means of teaching;
➢ a tool for change in the organization of education;
➢ an aid of the students to have knowledge and skills in the subject;
➢ Computer diagnostic, control and evaluation of the knowledge, skills and competencies in education [2].

This paper considers the opportunities of interdisciplinary commitment on purpose to enrich the quality and expand the educational content of IT and English Language (EL) of the students from Branch Razgrad of Ruse University "Angel Kanchev" with educational - qualification degree "Bachelor".

EXPOSITION

Integration is a complex pedagogical process with a structure that consists of two or more **disciplines (D1, D2, D3)**, bounded by **common methodological binding units (MBU)** and positively affects on the psyche of the students, showing that having knowledge is not an end in itself (Figure 1).The curriculum of the studied specialty of the students is an important factor in determining educational goals, knowledge, skills and competencies which should come in the methodical development of Interdisciplinary commitment (IDC).
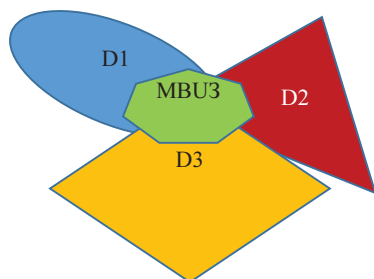
**Figure 1. Structure of interdisciplinary
commitment of three disciplines**

Analyzing of the content and didactic training of IDC which will be used in the education of the students carry out in a team of teachers of the respective subjects (D1, D2, D3) and in this case these are teachers in IT and English. A decisive factor for efficient use of IDC is to increase the active role of the student (learning by doing). The activity is seen in several aspects, active, mental and practical work in the field of IT, activity in the process of English learning and activity in the detection of IDC with special disciplines from the curriculum of the studied subject. The practice shows that the future engineers are more motivated to study the planned educational material from IDC, if it helps to acquire important skills for their studying profession.

IDC does not see the entire educational material of the disciplines but only particular educational modules. Methodical system (Figure 2) is developed according to a selected educational module by the teachers.
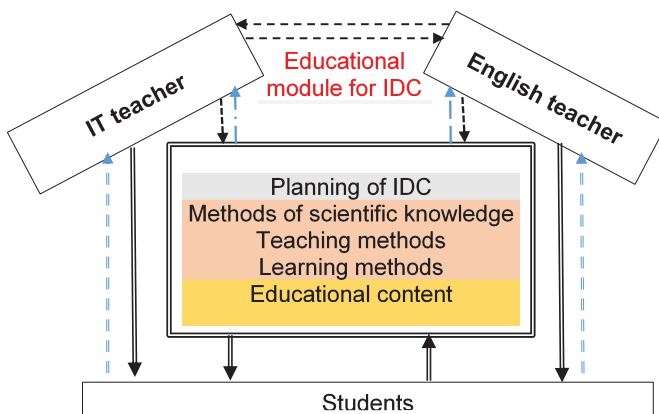
Figure 2 Methodical system of Interdisciplinary

The fact that the basic terminology used in the IT discipline is in English (commands, menus, help, using the resources of the Internet, etc.), furthers to become aware the relationship between both disciplines. Teaching English for special purposes with a focus

in IT could be included in some of the classes in IT, in English or in some individual work of the students. In advance IT and English teachers should develop a scheme for MBU and their integration into learning activities of the students. The sequence of learning activities is consistent with the main methodological principles for both disciplines underlying in MBU. The main activities in Foreign Language Teaching are listening, reading, translation, writing, communication (dialog communication), etc. The variety of methods and forms of teaching in MBU motivates and increases the activity of trainees. Planning of Interdisciplinary commitment could begin by conducting surveys. The aim is to collect statistical material about the initial knowledge and skills of students. The next stage involves summarizing the collected statistical data, analyzing them and forming conclusions, characterizing the approaches for the organization of content and algorithmic process of teaching MBU. It can be done frequency distributions for the data of the students in elected indicators (as the length of learning English until IDC, level of computer competence and knowledge, using Internet resources, etc.) Properly and competently application of the analysis techniques and statistical processing of the data from MS Excel (Analysis Tool Pack) with possibilities of graphical and tabular presentation (Table 1, Fig. 3) are of great importance for the optimal development of the methodology for IDC.

Table 1. English language studying

Years	Frequency	%	Cumulative %	Years	Frequency	Cumulative %
0	14	34,15%	34,15%	0	14	34,15%
4	8	19,51%	53,66%	4	8	53,66%
8	6	14,63%	68,29%	12	8	73,17%
12	8	19,51%	87,80%	8	6	87,80%
16	4	9,76%	97,56%	16	4	97,56%
More	1	2,44%	100,00%	More	1	100,00%

Table 1 and the graph in Figure 3 show that according the criterion of the length of English language studying for students during the school year 2014/2015 there is a big differentiation. The number of students who have never studied English was significant (34%), but there are those who have been studying the subject for a long (12 years - 19.5%, 16 years - 9.76%). This is a prerequisite the methodical planning of the school work for MBU to include teamwork activities in which the "advanced" students to support their colleagues who now start learning the language. The differentiated approach in teaching and learning work permits to avoid delaying the learning process of the students with higher knowledge for those who have not studied English before.
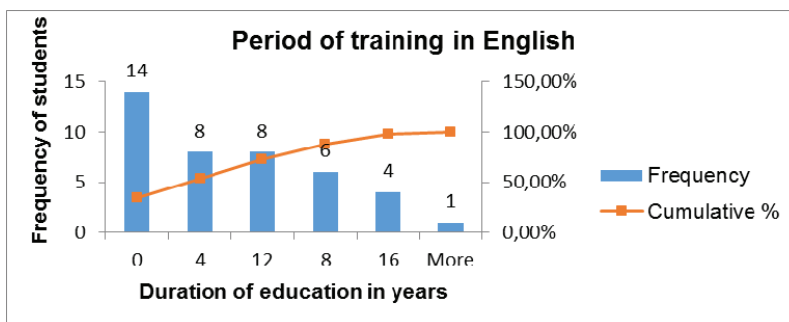

Figure 3. Frequency of students learning

To be suitable for studying the selected material must be processed didactic by both teachers. This means:

➢ Studying of best pedagogical practices and successful methodological guidelines in Bulgaria and abroad for the integration of English teaching and IT in educational activities in both disciplines and education as a whole;

➢ To analyze the quantity and the logical structure of the prescribed study material in MBU. To consider the ways to integrate concepts and commands, terms of hardware and software organization of the computer systems; for different types of applications and their use in education and employment opportunities after graduation, the use of electronic records, antivirus programs, Internet,etc.

➢ Selecting educational and extra- educational activities which include MBU based on certain criteria (entry level of the learners, timing of the classes, characteristic of the study group, etc.);

➢ Providing of indicators to verify the effectiveness of the used MBU which have control capabilities, updating and optimization of integration in the current and coming years;

➢ Selection of appropriate examples, teaching aids, practical exercises and tasks for each learning module. Search and inclusion of students' ideas and suggestions.

➢ Development of electronic applications for educational activities in MBU with the participation of some of the students (if it is possible). It means the creation and use of multimedia files about the history of computers, presentations on the use of computer technology in subjects studied by the students, etc.;

Main activities of the students involved in MBU of IDC:

1. Preparing and maintaining an IT thematic dictionary with terms and commands in English. (Suitable for classes in IT, English and individual work.);

2. Preparing short text materials in English on various topics of training modules on IT. For example: "Architecture of modern computer systems," "Generations and classification of computers", "Peripheral devices in computer systems - types, uses, characteristics", "Windows 7 - the graphical user interface",etc. (Suitable for IT classes and for individual work.);

3. Linking the IT concepts and commands with the same definitions in English, giving an emphasis on specifics, characteristics and basic properties. **For example**, types of icons - folders, programs, devices, documents, and shortcut icons to justify competently and accurately differences and their common characteristics. **Another example**: What we call file, file types, are the icons files or not, how to recognize the files and what are their characteristics? (Suitable for English classes, but it is possible the application material to prepare in IT classes)

4. Taking pictures of various IT resources (local or global networks, laptop peripherals, writing e-mail, e-learning for students, job search on the Internet, etc.) which can be used for interviews, dialogues and essays in English by the learners. **Ask and answer**. (Suitable for English classes, but taking photographs can happen in IT classes);

5. As given definitions of concepts, commands, or terms of IT in English should indicate orally and in writing the relevant concepts and commands. Using approaches - **Listen and find, Listen and say, I'll Fool You (**I'll lie). (Suitable

for English classes, but it is possible the application material to prepare in IT classes);

6. Including IT terms and command in tests made in English classes. Students exercise to respond in writing to various questions in English. For example: "How to search file if you know the date of its update?", "What is the difference between the folder and the program?,etc. (Suitable for English classes EA, but it is possible the application material to prepare in IT classes);

7. Discussions on the basis of thematic images (photos, maps, comics, etc.). Making short dialogues, comments or descriptions in English using a set of concepts, commands, or pictures of individual thematic modules in the IT discipline. **Ask and answer**. (Suitable for English classes, but it is possible the application material to prepare in IT classes).

8. Doing crosswords using IT commands and terms. (Suitable for independent work in IT and English classes).

9. Using statements, False, True, Doesn't say structures with theoretical material from IT in English. For example: Computer mouse is software. Folder in Windows is hardware. ROM is volatile and the like. (Suitable for English classes, but it is possible the application material to prepare in IT classes).

CONCLUSION

Using MBU provides more complete and sound knowledge of the students. The elements of the update and supplement of the already mentioned IT facts, concepts, commands terms in English classes contributes to better quality of education and development of computer skills of a higher standing that will be successfully implemented in the next semesters in special subjects.

From a psychological point of view the use of MBU stimulates the meaningful thought provoking students to analyze and assess studied facts.

We believe that the proposed interdisciplinary approach of teaching and learning motivates, increases the activity of the students and makes them more confident in using information technology.

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About the authors:

Chief Assist PhD Mariyka Georgieva Petrova, Department of "Chemistry and Chemical Technologies", Ruse University "Angel Kanchev"- Branch Razgrad, tel.: 084-520004 e-mail: mgpetrova@uni-ruse.bg

Lecturer Ilina Kancheva Ivanova, Department of "Biotechnology and Food Technologies", Ruse University "Angel Kanchev"- Branch Razgrad, tel.: 084-520004 e-mail: iivanova@uni-ruse.bg