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Introduction

Dr Thomas Olsson, Lund University, Sweden

High quality university teaching and student learning is favoured by a scholarly approach to the teaching and learning process. The National Higher Education Conference held at SEEU in June 2012 was an excellent arena for scholarly discussions of various aspects with relevance to quality of learning and teaching. I had the pleasure and honour to participate in the conference with a keynote presentation about rewarding excellence in university teaching. It was an inspiring day and I was very impressed with the high quality of the sessions and the intensity and depth of the discussions.

Teachers and researchers from universities all over Macedonia presented interesting projects and contributed to an increased awareness of the importance of a scholarly approach to university teaching. I would also like to mention the students' posters, where they discussed topics like usage of technology, metacognition in higher education and the effectiveness of teamwork. Indeed impressive and very promising for the future!

The conference was the first of its kind in Macedonia. The Rector of SEEU participated all day and the Minister of Education gave a speech. Both these actions were significant and clearly indicated the importance of the event. The conference was brought to an end with a panel of students putting forward their perspectives. I really liked the idea of actively involving students in a conference about education.

I am convinced that this conference has played an important role in highlighting the value of a scholarly approach to educational issues at universities and I wish SEEU all the best with future activities to improve the quality of teaching and student learning.

Preface

These proceedings derive from the presentations given at the National Conference on Quality of Learning and Teaching: Policy and Practice. The papers have been edited for linguistic coherence, but were not submitted for double-blind review.

The conference was held on 12 June 2012 on the Tetovo campus of South East European University. It brought together a group of scholars from across the Republic of Macedonia, representing numerous disciplines, faculties and universities. It was an honour for SEEU to host so collegial and thoughtful an exchange of ideas, and to provide a forum for discussing the assurance of quality in learning and teaching. It was pleasing to note that numerous presenters contributed to developing the scholarship of learning and teaching outside their primary research fields.

The papers cover a wide variety of approaches to quality enhancement, ranging from considerations of assessment to examinations of technology in the contemporary classroom. No attempt has been made to unify the specific themes of the papers into one specific topic; the participants of the conference felt that its strength lay in the variety and diversity of approaches, viewpoints, and methodologies presented. Accordingly, that variation is reflected in these papers, and the Editorial Review Committee has not seriated or ranked them. Their appearance in this volume is in no particular order. Several of these papers were translated from the original language of their composition into English, a policy that was announced in the initial call for publication.

The works here are the scholarship of their individual authors and contributors. They do not necessarily reflect the views of South East European University, nor of the editorial board of these proceedings. They have also been represented to the Editorial Review Committee as being original contributions that have not been published elsewhere and are fully compliant with all appropriate scholarly citation. The Editorial Review Committee has published these papers in good faith, but the responsibility for proper academic usage and citation remains with the contributors.

Some presenters chose not to submit their work for publication in these proceedings; we gratefully appreciate their presentations, and their contributions to the conference.

The theme of quality in learning and teaching is one of importance and investigation throughout international higher education. Universities around the world engage in frequent collaborative efforts to identify good practice and to root out poor strategies and approaches. It was therefore a pleasure for South East European University to contribute to this conversation by hosting scholars from around the Republic of Macedonia, and it is the hope of the Editorial Review Committee that this collection will help this discussion continue and develop.

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MOTIVATING STUDENTS THROUGH PRACTICE

Suzana Dzamtoska-Zdravkovska
University "Goce Delcev", Stip

The Motivation Phenomenon and the Role of Professors

Seen from the etymological point of view, the word *motivation* derives from the Latin word *moveō* (in English *move* + *-ation*), which means movement, namely driving force, action, stimulation, incitement, encouragement, reason for movement. Based on the behavioral theory, motivation refers to the dynamic driving force which comes from the inside. It represents a state of internal aspiration, which activates or takes the individual into action and enthusiastically encourages them to survive in it.

In fact, motivation includes both internal and external factors which stimulate desire and energy in people so that they are continuously interested and devoted to work, to their role and constantly put effort into achieving their goals. From the learning viewpoint, motivation includes the factors which instigate, organize, direct and determine the intensity and duration of the learning activities. This is very important in all stages of education, and especially when it comes to higher education. This is particularly relevant when secondary school students become university students and start facing such issues as a different way of learning, using more voluminous materials which have to be absorbed in a shorter time frame or having new subjects, content and theory at a much higher academic level compared to what they were used to before. In such a situation, lack of motivation can result in slowness in learning, poor results, resignation – frequently caused by loss of interest, will and self-confidence. The motivation phenomenon is of great importance for the teaching/learning process and its results, and can affect the action of other factors which are an integral part of that process. For example, the general or other specific abilities of certain individuals can be highly developed, but if that person is not well-motivated, then those abilities are endangered, disappear or get minimized. The opposite can also occur – certain abilities can be much improved with the help of good motivation (online: Muminoviq: 43).

In socio-cognitive theory, motivation is defined as an internal state which causes, orientates and maintains objective oriented behavior. Motivated students achieve academic levels based on their behavior which implies engagement in learning, making questions, asking for advice, consultation and active participation in classes and practice hours (Schunk et al., 2008).

For such an engagement of students, the role of the teacher is crucial. He can be a model whose teaching methods and knowledge transfer techniques, his experience and knowledge, motivate students and stimulate their enthusiasm, desire for learning and creativity; or teachers can also strangle good students if they insist solely on theoretical approaches without any observations, participation, practical examples and application.

At a time when the world is progressing rapidly, when the one-minute wait for the computer to boot up means a very long boring expectation, when action is the only thing that excites the youth, the more active engagement of teachers, oriented towards inspiration, motivation and excitement of students through their inclusion in a series of activities which will give them the opportunity to confirm and apply the learnt theory is more than necessary.

As Barbara Gross Davis mentions, "some students seem naturally enthusiastic about learning, but many need-or expect-their instructors to inspire, challenge, and stimulate them" (Davis, 1999).

"Effective learning in the classroom depends on the teacher's ability ... to maintain the interest that brought students to the course in the first place."

(Ericksen, 1978, p. 3, quoted in Davis, 1999)

The students' attention should be grabbed! This is the main challenge for every teacher. The student's driving force should be encouraged. The students should be personally engaged and participate in the process of study. In this way, their self-confidence and self-respect is strengthened, which is another role of a good teacher. All of this is very hard to achieve only by teaching theory in class. Where practice is included, then it is possible. That is where students' inspiration and greater creativity lies.

Application of Theory Into Practice: "Student Echo"

The application of theory into practice is a challenge for every teacher who strives to make students practically apply what they have previously learnt in theory. The practical application of knowledge is a confirmation of learnt items. The number of examples of newly-graduated students who face great difficulties in applying in practice their theoretical knowledge once they find a job is huge. We can only conclude that students have acquired the necessary skills and knowledge included in their study subjects if they have been able to upgrade and apply learnt theory during their studies through different practical sessions and internships.

An example is the students' newsletter "Student Echo" which was first published by the students of journalism and public relations within the Law faculty at Goce Delcev University in Stip in the fall semester 2011/12. It is evidence of the positive and motivating impact of practical work on students.

The idea for the newsletter came about as a result of the perceived inertia of students during their studies. They were all quiet, still with no self-initiative or creativity. They just used to come to classes and leave. Even though there was absolute silence and order during lessons, the feeling after their completion was that taught theory and words said remained within those four walls of the classrooms and did not get out by any means. When asked whether everything was clear to them, they always nodded their heads as a sign of confirmation. The feedback was always missing in terms of whether what was theoretically clear to them could also be implemented in practice. This was about key subjects in the field of journalism, subjects that deal with topics such as journalism genres, foundations of journalism, the way of functioning of print and electronic media and editorial policies. They were all subjects that were meant to help students become real professional journalists in the future.

Having experience as a senior journalist, I faced many situations in which I had to deal with newcomers, newly-graduated journalists, who had a serious problem with accomplishing their everyday tasks, without even being able to compile a very simple piece of information or a news item, process an announcement or transmit a declaration. I asked myself what was going to happen if these students, who proved to be good in theory, failed to perform their daily routine tasks in their new jobs.

We then started doing practical assignments during classes and practical lessons – writing news, reports, reportages etc. The results showed a serious mismatch between what had been learnt theoretically and what we were doing in practice. This was an alert to undertake urgent measures which would address the syndrome of sleeping beauties full of knowledge. That knowledge had to be learnt and applied at the same time. We needed to react concretely - to establish a real editorial and start writing, editing, publishing journalistic texts which would be assessed not only by the professor but by public opinion too. They had to become real journalists whilst being students. They had to experience the challenge of searching for actual topics, interlocutors, writing texts that would be published, text rejection, the fight for text publishing, text preparation and improvement, titles, subtitles, searching for suitable photos, and finally, feeling the best impact which is signing the text with their own names and surnames.

The first issue of the Newsletter was published in December 2011, the next in March 2012 and the third in June 2012, in compliance with the planned dynamics of publishing the newsletter every three months. The name was chosen by the students themselves. The editorial of the first issue said that "the newsletter is a product of knowledge acquired during our studies; it is a combination of creativity, ideas, beliefs and findings of students of journalism and public relations. It got its name as an inspiration from the voice that never stops and spreads to the horizon – *the echo* – which touches every corner on earth with no barriers at all".

The students had different roles on the editorial board: editor-in-chief, vice editor-in-chief, editors, journalists etc. There were also sections in the editorial such as education, culture and sports and recreation. Everyone, according to their own interest, chose a certain rubric. The method of work was professional, led by the principles of objectivity and impartiality. The students-journalists also followed the technical and graphical preparation of the newsletter, its delivery to printing up to its final publication and distribution.

With only one text, the students went through all the stages: selection of text design, decision on whether it was going to be a piece of news, a report, an interview or reportage; getting in touch with the interlocutor, executing the interview or the questionnaire; recording with Dictaphones, downloading the recorded part by selecting what was important and what wasn't, preparation of texts with title pages, titles, subtitles, inter-titles, search for adequate photos, writing photo legends, etc. Every single text went through all the possible procedures. If something was missing, the text was returned for improvement. There was no place for

improvisation. “We want to get to public opinion, we all have our own responsibilities for every single written word on the newsletter pages” one of the students, the newsletter editor, said while addressing their colleagues. There was as much responsibility, dedication and enthusiasm as one professor might wish for, under conditions when the deadline for submitting texts was known, and when all other deadlines were precisely set. Students of all three years participated in the project. All of the dilemmas related to the quality and content of the texts, meeting deadlines, fulfilment of publishing terms and requirements disappeared. What could be seen from that moment on was constructiveness, teamwork, exchange of ideas, agreement and helpfulness among each and every member of the working groups.

There is no doubt that the preparation of the newsletter for publishing required additional efforts and engagement which consisted of students communicating via telephone, mobile, email and social networking sites. The professor was more than that in the whole process: he was part of the editorial board, who was always available for editors and journalists of the students’ newsletter. Questions and consultations became part of the everyday dynamics which were dictated by the students themselves, being very interested and eager to achieve the ultimate goal.

The students showed their creative spirit, which they learnt about in theory: they were persistent, curious, open to change, new experiences, motivated and with a good sense of humor. All of them were willing to sign their full names and surnames. But that was where students could also learn. Not all of the texts could be fully signed. Of course there was the part of “disappointed initials”. However, they were also happy when they could finally see their results in the newsletter. “There is no better feeling for a journalist than of being able to see your own text published under your full name and surname”. These were the words of one of the students who was excitedly looking at his own text, commenting that he had already been congratulated by several of his friends and colleagues for the published text.

Results: Increased Activity and Engagement

The overall activity and engagement in creating the newsletter “Student Echo”, from the beginning to its publication, showed excellent results. The first and most important was that the students had to play the role of real journalists. An additional stimulation was the feedback that they received for every single written text – addition, modification, better explanation, getting more interviews, shortening the texts, correcting certain information, eliminating possible biased opinions, removing inadequacies, improving the structure of journalistic texts, paying attention to language and linguistic elements and documentation of texts with photographs.

All of this resulted in:

- strengthening of self-confidence (the quiet students were transformed into energetic and creative people who used their initiative and expressed their opinions for various different situations and issues in a very courageous way; they asked about anything that was not clear to them during lessons, got into debates, discussions on current issues and problems; they analyzed and compared the theory met in subjects of journalism and mass media with the practical work of the existing media);
- additional stimuli and motivation to attend classes regularly;
- dedication and better participation in classes;
- maximum engagement in mastering the theory.

By creating the newsletter, the theory was implemented effectively in practice. The basic principles of professional journalism such as objectivity, impartiality and reality were implemented. The journalistic rules such as eyes wide open, curiosity, objectivity, additional information, additional literature, good preparation, personal control, self-confidence, the overcoming obstacles and elimination of obstacles of an emotional nature, non-rejection of strange or bad ideas, were also implemented. They were not only learnt by heart, but rather experienced and confirmed. The journalistic meta-skills, such as reporting, writing, correct source citing and impartiality, which were discussed in theoretical classes, were also mastered.

The students learnt to have a clear perspective, to see events in an unbiased way, to recognize things within their working context, without previously-confirmed interpretations. They learnt how to be there – at the scene, keen to be open-minded, to see things clearly from different perspectives, to have sympathy to a level that wouldn’t block their objective positions of information; to be devoted to the truth, while respecting equilibrium and correctness.

Publicity

Apart from this, the students began to pay attention to the print and electronic media on a daily basis, by commenting on and comparing the way of transmitting a certain piece of news or a report, analyzing the texts, titles, pages and reports in informative programs broadcast on local and national TV stations.

It was especially important that the publication of "Student Echo" made it possible for the students to see practically how public relations work, which was in fact a practical implementation of the acquired knowledge in subjects dealing with public relations and media. On the occasion of the publication of the first issue of the newsletter, a press conference was organized. The students of journalism and public relations took part in the process of compiling and sending the announcement to the media as well as contacting them by telephone; they also organized the press conference themselves including all of its stages – preparation, refreshments, additional announcement delivery and materials.

It was very important to the students that their newsletter gained a lot of publicity. Its publication did not resound only within the university campus; it caused a lot of interest in many media (local and national) which reported upon its publication. It was everywhere on the news and internet sites. After the publication of the first issue of the newsletter, the students were called to take part in a morning program organized by the Macedonian Radio-Television (MRT) where they could talk about their activities and engagements during the whole process. There was also participation in other TV stations, including TV Alfa and the local stations which cover the region of Stip and the surrounding area.

The first issue of the newsletter was also mentioned as news in one of the most popular lottery shows in Macedonia, "Jumbo Bingo" in TV Kanal 5 led by the celebrity Igor Dzambazov, who commented on the first drawn ball with number 1 by saying that it was the same as the first issue of the newsletter "Student Echo".

Then the second issue was published. With only two published issues of "Student Echo", the students excitedly commented: "Professor, we have become famous!" The following numbers went on to be published every three months during the whole school year – December, March and June. The texts were evaluated, every following issue was compared to its predecessor, the students themselves could see the improvements from one issue to the other and they concluded that every new issue of the newsletter was better than the previous one, although they had to admit that the very first issue would always remain in their minds as the favorite one!

Radio and TV News

The university radio UGD FM has its doors open to our students, even though professionals work for it. This especially applies to students of journalism and public relations. This is an exclusive opportunity to practice radio-journalism. The publication of the newsletter motivated the students to play an active role in the work of the radio. They started having new programs and the older students who were already working for the radio gained even more motivation to go on with their successful job in the radio.

Once motivated, excited and full of enthusiasm, the students did not stop there. In May 2012, they started a new project. It was even more ambitious than the first – the student news in the local TV station TV Iris – Stip. The project which went on for two months consisted of broadcasting a 15-minute news program, prepared and led by the students of journalism and public relations, once a week on Saturdays, after the central news program on the above-mentioned TV station. The main role in this project was played by the third year students from our faculty. In agreement with TV Iris, the whole crew and the technical equipment were available to them. The student-journalists went out into the field, recorded, asked people for statements and opinions, and prepared reports for different current events and developments in Stip and the surroundings. They also created TV stories insisting in this case to see the events from a completely different perspective and give their own comments and impressions about the story in question. The students themselves presented the news on TV. They took turns so that everyone had the possibility to see him/herself in the role of a TV news presenter. The students' comments were that working with the newsletter, getting engaged in the university radio and being part of the students' news was the most precious experience they had during their studies. "We became journalists even during our studies", was what a student said while defending her diploma paper upon her graduation from our university.

Conclusion

The students' motivation, their encouragement and stimulation to participate in different activities during their studies depends on the teachers: "The journalist is a holder of the inquisitive research spirit, mind and heart, prone to talking, discussing, reading and writing, listening and being listened to, seeing and being seen" (Andrevski, 1994:29). This is just one part of theoretical development in journalism. The same approach can be generally applied to most students. The students have the potential and have their own creative spirit. The professors just have to motivate them so that those affinities and abilities become visible.

There is no doubt that in order to realize such projects, as was the "Student Echo", the support from the respective department and university is of special importance. Financial means are necessary and for such a project, these were provided by the Students' Parliament. Also, there is a need for technical support which was provided by the UGD FM radio. Without this kind of support, there is less chance of realizing any kind of project, regardless of the wish and will expressed by the students and professors. What is also very important is the size of the students' group. A project like this or a similar one can be carried out with a group of 30 students. If there are more, the teamwork gets difficult, as do the coordination and supervision.

The above-mentioned example is in fact a strong confirmation that practical application of theory is one of the ways to achieve greater student motivation. The students get motivated through practice because in that way they are able to touch and feel the profession which they are going to do in the future. In this case, they "tasted" the journalistic profession. After all, by reading newspapers none could become a journalist. By making one – yes.

As the students themselves wrote in the newsletter, "theory without its practical application can quite often float in the air… we managed to prove practically what we had learnt in theory, we managed to join our desires and give way to our creativity which can be seen on these pages…"

In conclusion, we will mention part of the editorial text from the third issue of Students' Echo: "We really touched our profession, recognizing in this way its challenges and beauty, proving to ourselves that we CAN implement in practice what we learn in theory!"

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IMPLEMENTATION OF THE EFQM EXCELLENCE MODEL FOR THE EVALUATION OF QUALITY IN HIGHER EDUCATION— STUDY PROGRAMME FOR TRAFFIC AND TRANSPORT, FACULTY OF TECHNICAL SCIENCES, BITOLA

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Introduction

Quality assurance represents a global trend in higher education systems, leading to the provision of a wide range of mechanisms for ensuring continuous quality control and improvement. It is realized by way of internal assessment of higher education institution activities and external evaluation, mostly conducted through quality assurance agencies.

Internal assessment is, primarily, a responsibility of higher education institutions. It means that they should introduce mechanisms for systematic quality assurance of their activities, in correspondence to the national higher education system and basic characteristics of the evaluated institutions. It is very important that the applied mechanisms are in correlation with external quality assurance as well.

The EFQM (European Framework for Quality Management) Excellence Model and its version implemented in higher education (the TRIS model), are tools used for improving the performance of various organizations. So, through a process of continuous assessment of two basic areas, (enablers and results), institutions identify strengths and weaknesses which result in progress-oriented alterations to their activities.

The TEMPUS CUBRIK project (No. 158999 TEMPUS-EC-SMGR 2009-4688/001-001), among other objectives, is being implemented in order to recommend a future quality assurance framework (with institutional assessment as its integral part) that meets the European Higher Education Area standards.

One of the activities foreseen within the CUBRIC Project was institutional assessment of partner universities and this was conducted on the study program of the Traffic and Transport Department at the Faculty of Technical Sciences – a unit within the structure of *St. Kliment Ohridski* University – Bitola.

This paper presents the results of the EFQM Excellence Model application in the above-mentioned self-evaluation process. The main goal was to introduce the way of adjusting this common methodology to the self-evaluation process, to the national higher education system and basic institutional characteristics as well.

Understanding and Assessing Quality

A wide range of mechanisms related to assessing quality are available these days with various definitions and methodologies applied. According to Webster's Dictionary, *quality* is defined as "a degree of excellence" and "superiority in kind", whereas "the degree of excellence of something" and "general excellence of standard or level" are the ways of citation of this term in the Oxford English Dictionary. In accordance with ISO 9000:2005, *quality* is "the extent to which a set of inherent characteristics meets the requirements". So, the level of fulfillment of various stakeholder expectations is maybe the basic understanding and broadest definition encompassing different analyzed areas (manufacturing companies, software and information production, service providing businesses).

Which methodology for quality evaluation is to be applied and when, largely depends on the perception of quality. The methodology involved is to be well-defined, based on examples of best practices in similar areas, easily applicable, sustainable, reliable, flexible and adaptable to the dynamic issues and needs of all stakeholders.

Quality Assurance in the Higher Education Area

The concept of quality has always been given an important place in higher educational activities. In the course of the 1990s, in line with the changes introduced in academic-societal relations, quality was given even greater significance. Namely, contemporary universities turned into business enterprises, facing various fiscal realities, competitive markets, and challenges deriving from the variety of stakeholder needs and requirements.

Hence, the actual conditions prevailing in the academic environment are characterized by stakeholders' (students, academic staff, employers, society) complex performance processes combined with various needs and expectations deriving from them. For instance, students are interested in a stimulating environment in which to obtain their education, develop a sense of responsibility and find employment after successful graduation. Teaching and working conditions are very important to the academic staff, in line with career improvement opportunities and the benefits they receive. The employers seek well-qualified graduates with market-oriented knowledge and skills, and society seeks employable well-trained graduates.

The way of perceiving quality in higher education derives from the above-mentioned complex activities performed by the universities. In the broadest sense of this concept, it can be viewed in relation to the customers, as a degree of satisfying the expectations of both service providers and service beneficiaries in the area of higher education.

Beside this basic approach, there are others as well according to which quality is perceived as exceptionality or in conformance with academic, service and quality standards and in relation to the purpose of the institutional service.

Due to the numerous definitions of quality, there are many approaches to quality assurance in higher education deriving from them. Usually, they are divided in two different sets:

1. The determination of quality as based on standards.
2. The institution sets up its own procedures for achieving the specified purposes (fitness for purpose).

Bearing in mind these circumstances, in order to explain and correctly position the role of quality in the academic environment, it is necessary to clearly define and take into account the important criteria for each stakeholder in the process of quality assessment. (Green, 1994).

Comparative Analysis of the Term Quality in Business Organizations and Higher Education Institutions

As a consequence of different basic characteristics of the activities in the above fields (business and education), differences in the way of understanding the term of quality appear on the surface.

The essence of the quality concept in the business sector depends on the type of its activity. For example, in manufacturing companies, quality means "zero defects", i.e., the attention is focused on controlling product variability. On the other hand, the perception of quality in service providing businesses is more comprehensive, taking into consideration the emotions, expectations and experiences of the customers - in one phrase, consumer satisfaction.

The main reasons why quality is perceived differently in the business and the academic sectors are:

- Difficulties and various ways of measuring quality in an academic environment (as a result of different, complex and tightly interrelated factors affecting the quality and the different views on it)
- Customers with different requirements and expectations (students, graduates, academic and non-academic staff, society, government, employers).

St Kliment Ohridski University – Bitola and Quality Assessment

Some ten years ago, higher education in the Republic of Macedonia underwent major reforms mainly due to the Bologna Process, but also due to adjustments to society and market needs. In the area of quality assurance, various measures for evaluating the universities were introduced, such as: quality assurance system and instruments, capacity building and human resources development.

In accordance with the National Law of Higher Education, quality assurance represents a legal obligation

of all universities in the Republic of Macedonia. The high degree of significance that *St Kliment Ohridski* University – Bitola attributes to quality is incorporated within its mission: to create an integrated university with quality assured in all segments of its functioning, thus having recognizable values in the higher education area in the Republic of Macedonia, placing the student in the focus of the university functioning (www.uklo.edu.mk).

EFQM Model-Practical Tool Towards Excellence

In order to support the development of a quality assurance system and the structures of the University in Bitola, as a CUBRIC partner, self-assessment of a study program of the Traffic and Transport Department, Faculty of Technical Sciences was carried out. The EFQM Excellence Model was used as a method for assessing quality.

The EFQM (the European Model of Excellence) was developed by the European Foundation of Quality Management, as a tool for continuously managing quality in various organizations, business or non-profit. Because of its concept, the mentioned model is easily manageable, accessible and helps in organizing the self-assessment process with a view to identifying strengths and areas in which changes can be made. As is obvious from the very name of the model, its fundamental concept is excellence. Bearing in mind the basic principles of its operation (Figure 1), the aspiration of the organization is to achieve sustainable excellence in its activities.

The model is based on the evaluation of nine areas of interest based upon the "enabler" criteria, (an analysis of how an organization carries out its activities) and four "results" (its achievements). This provides an organization with the opportunity to produce results based on customers, people, and society by means of leadership, policy and strategy, human and other resources, partnerships and processes (Figure 2).

In accordance with the achieved level of quality in various areas, there are five phases of development:

- Activity-oriented: the lowest level of the development process, absence of a systematic approach, no clear policy and strategy, individual initiatives, decisions and responsibilities
- Process-oriented: short term policy, procedures used for implementation of the policy plans, team work intensified
- System-oriented: medium term policy, system approach in planning, execution and adjustment of the processes
- Chain-oriented: strategic and medium term policy, the people it refers to are involved in the process of development, comparative analysis of other similar organizations
- Total quality management: long term concept of the future organizational development, constant improvement of the actions, comparative analysis of other organizations striving towards achieving a leading role, quality management as a basic characteristic in the overall activity of the organization.

The results pertaining to the institution's activities were obtained using the method of scoring, implemented per branch at every segment of the analysis.

Figure 1: EFQM The Fundamental Concepts of Excellence (1999-2003), available (on-line) at

https://noppa.aalto.fi/noppa/kurssi/35e00500/materiaali/35E00500_efqm_concepts.pdf, (Accessed, June 2012)

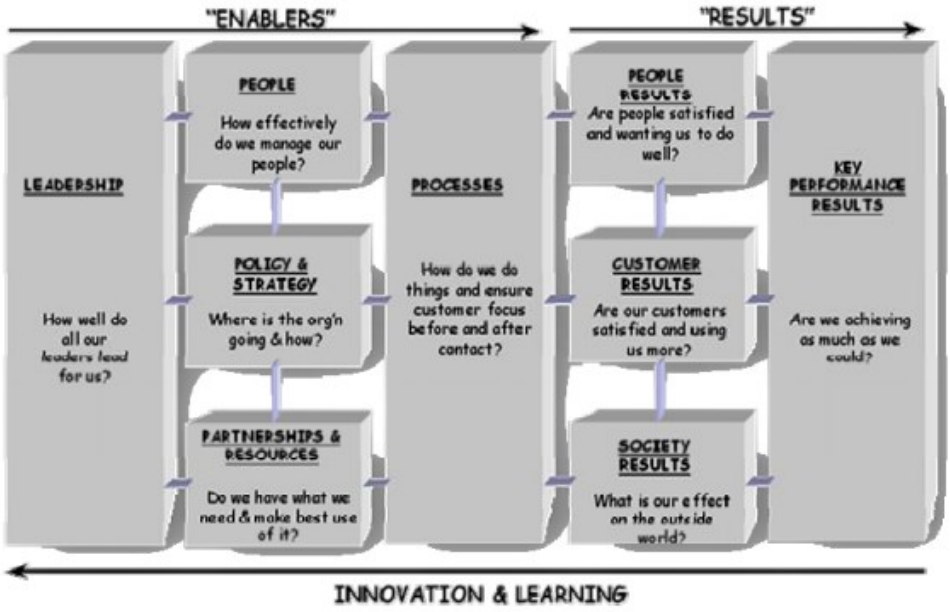

Figure 2: The EFQM Excellence Model

Arjomandi, M. Kestell, C. Grimshaw, P. (2009) An EFQM Excellence Model for Higher Education Quality Assessment available (on-line) at http://aaee.com.au/conferences/AAEE2009/PDF/AUTHOR/AE090149.PDF, (Accessed June 2012)

EFQM – Basis for Systematic Measurement of Quality in Higher Education

Having in mind the very concept of EFQM, as well as the activities of other European universities, this model is adopted to serve as a tool for assessing quality in the higher education sector. The adjustments made to the model were mainly based on the knowledge of its basic characteristics as different from those of business organizations, (the meaning of the term excellence is different, quality depends on various factors, it is not so easy to measure quality, products and clients are not so clear, institutional hierarchy is less expressed) (Chapter 2.2).

The concept of the model for quality improvement is, as stated above, based on nine criteria. They are further divided into a number of sub criteria, (Table 1), including the key processes in higher educational institutions, such as: education, research and social service (Fig. 3 and Table 2).

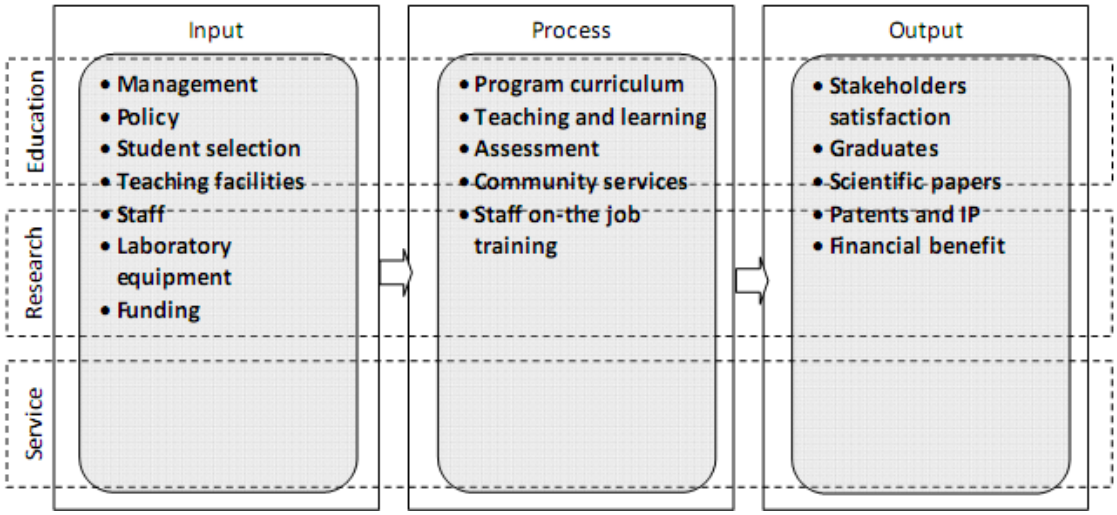

Figure 3: The EFQM Excellence Model in Higher Education

Arjomandi, M. Kestell, C. Grimshaw, P. (2009) An EFQM Excellence Model for Higher Education Quality Assessment available (on-line) at http://aaee.com.au/conferences/AAEE2009/PDF/AUTHOR/AE090149.PDF, (Accessed June 2012)

Table 1: Sub-criteria in EFQM Excellence Model "A Framework for Excellence" available (on-line) at www.dti.gov.uk/quality/excellence (Accessed June 2012)

Criterion	Sub-criteria
Leadership	a. Leaders develop the mission, vision & values and are role models of a culture of excellence b. Leaders are personally involved in ensuring the organisation's management c. System is developed, implemented & continuously improved d. Leaders are involved with customers, partners & representatives of society e. Leaders motivate, support & recognise the organisation's people
Policy & Strategy	a. Policy & strategy are based on the present & future needs & expectations of stakeholders b. Policy & strategy are based on information from performance, measurement, research, learning & creativity related activities c. Policy & strategy are developed, reviewed & updated d. Policy & strategy are deployed through a framework of key processes e. Policy & strategy are communicated & implemented
People	a. People resources are planned, managed & improved b. People's knowledge & competencies are identified, developed & sustained c. People are involved & empowered d. People & the organisation have a dialogue e. People are rewarded, recognised & cared for
Partnerships& Resources	a. External partnerships are managed b. Finances are managed c. Buildings, equipment & materials are managed d. Technology is managed e. Information & knowledge are managed
Processes	a. Processes are systematically designed & managed b. Processes are improved, as needed, using innovation in order to fully satisfy & generate increasing value for customers & other stakeholders c. Products & services are designed & developed based on customer needs & expectations d. Products & services are produced, delivered & serviced e. Customer relationships are managed & enhanced
Customer results	a. Perception measures b. Performance indicators
People results	a. Perception measures b. Performance indicators
Society results	a. Perception measures b. Performance indicators
Key performance results	a. Key performance outcomes (lag) b. Key performance indicators (lead)

Table 2: Sub-criteria in EFQM Excellence Model for higher education, worked out by the authors of the paper, based on www.dti.gov.uk/quality/excellence, (June 2012)

Criterion		**Sub-criteria**
Processes	Education	a1. Analysis of demands and wishes of parties concerned(career profile) a2. Editing educational view a3.Editing educational program a4.Developing training branches a5.Internationalization a6.Devising tests and examinations a7.Planning a8.Organization of the learning environment a9. Organization of research and field experience a10.Student activities a11.Lecturer activities a12.Student and study career coaching a13.Educational evaluation a14.Service by educational supporting services
	Research	b1. View on research b2. Research program b3.Acquiring and contracting b4.Realization b5.Reporting and publication b6.Evaluation b7.Partnerships and internationalization
	Social Service	c1.View on social service c2.Program for social service c3.Acquiring and contracting c4.Realization c5.Evaluation c6.Partnership and internationalization

4.0. Institutional assessment of Universities - one of the CUBRIK activities

One of the activities that strengthens quality assurance systems at the Partner Countries Universities, as a basic objective of CUBRIK, is institutional evaluation through application of the EFQM model. The self-assessment at St Kliment Ohridski University – Bitola was conducted on a study program of the Traffic and Transport Department, Faculty of Technical Sciences, in October 2011. The method of obtaining data of evidence involved surveying stakeholders realized via the application of various questionnaires.

Self-Assessment Procedure—Application of EFQM Excellence Model

In accordance with,

- the basic concept of EFQM, and
- the core activities of the Faculty of Technical Sciences, thus involving the Department as well (education, research and service),

an analysis of the following fields of interest:

- leadership, policy and strategy (planning within EFQM stage),
- management (performing stage), and
- results (evaluation stage),

has been conducted.

Leadership, Policy and Strategy

Leadership and Policy and Strategy are two fields of interest in the stage of planning, (being the first element of the total institutional management). Leadership involves the three faculty bodies: the Teaching - Scientific Council, the Dean and the Dean's Office.

The Dean's duty is to submit a report for his/her work to the Teaching - Scientific Council, at least once a year, and to propose an annual detailed plan and timetable of future actions, while the competences of the Teaching - Scientific Council are crucial for the total management of the Faculty.

The vision for the future development and continuous improvement of particular departments, (to create an institution that will provide high-quality professionals in order to support the development of the national society as a whole), and the mission, (to promote and develop the educational and scientific research activities in accordance with the needs of the country), are parts of the above plan.

University Policy and Strategy, ("contemporary, flexible study programs, transparent organizational structure, dynamic human resource management, active policy of social integration, creation of strong relations between the University and the business sector, support of new initiatives, stress on internationalization and implementation of quality culture in all segments of the University" – www.uklo.edu.mk), represent the foundations for Faculty action plans.

The mission, the vision and the specific goals of the Traffic and Transport Department actions are presented in the legal documents and User Guide.

So, its mission is continuous updating of study programs for the purpose of educating profiles, capable of foreseeing and solving the problems related to various parts of traffic and transport engineering.

The specific objectives of Departmental progress are the result of:

- the role of traffic and transport engineering in global contemporary societies;
- national needs for the education of engineers in various areas of traffic and transport;
- the latest trends in European education and the need for establishing compatible national systems.

Having in mind,

- the characteristics of the above fields of interest, (leadership and policy and strategy), and
- quality level evaluation, (EFQM Excellence model 2010),

the level of quality which was achieved in the first phase of Faculty and Department management is 7 (CHAIN ORIENTED).

In accordance with (TRIS-EFQM model version 4.2, from May 2003), this means that:

- the management is actively involved in the improvement activities of the entire organization
- the needs of the internal and external customers are given a central focus in the management system
- the management systematically evaluates its policy through comparative analysis with data obtained from other organizations
- the key organization processes are being adjusted on a regular and systematic basis.

Management of Processes

The main task of the Department is to produce high-quality engineering staff in the area of Traffic and Transport (various documents on the Faculty and Department level). This goal is accomplished through mutually connected processes:

- education
- research
- social service

The successful fulfilment of tasks related to education is based on (EFQM Excellence model 2010):

- development
- application
- support

Educational development encompasses actions, carried out in the beginning of the process of study program establishment, while the practical application of the obtained results is in the second phase of the education process. Supporting education is an element which reflects the possibility of using the Faculty and Department material resources.

Science and research are very important elements in the activities of both the Faculty and the Department. This means that they also represent an object of the self-evaluation process, together with various kinds of co-operational processes (social services) with the so-called third parties, (such as consultancy, economy etc).

In accordance with the high level of connection between education, research and activities in the field of social service, these three processes are evaluated together.

The process of educational development depends on:

- the Government's demands
- modern tendencies in traffic and transport engineering development worldwide and their impact in the Republic of Macedonia
- academic staff number and structure
- students' needs
- national economy and labour market demand
- alumni association requirements

These data are collected and processed on the basis of:

- Ministry of Education and Science legal acts
- cooperation with other generic higher-education institutions within the framework of Universities in Macedonia and abroad (bilateral, multilateral and interuniversity agreements)
- the capacity of the academic staff to recognize the required qualifications and competencies of the given profile
- students wishes and needs, mostly obtained through student surveys
- various forms of internationalization, such as mobility of academic staff and students
- participation in the realization of national, regional and international projects
- University "Program for cooperation between *St Kliment Ohridski* University – Bitola and the business sector"

- introduction of domestic and international professional demand, through a long-term bi-directional cooperation with various economic entities (cooperation with economy sector)
- inclusion of a number of professionals in the area of education and research process
- inviting professional lecturers delivering lectures in the course of the regular educational activities of the Faculty
- student practical training in accordance with the study program contents, which directly contributes to the modern way of study, providing valuable practical experience.

The basic element of educational application is the learning environment, and:

- the number of academic staff and its structure
- the number of non academic staff and its structure
- the number of students per staff member
- the forms and methods of teaching process
- the forms of testing and examination, as a tool for knowledge assessment
- manuals written by the academic staff in the last years
- the University, the Faculty and the Departmental ECTS coordinator whose role is to help the students throughout the entire process of study, clarifying the academic and administrative aspects of ECTS
- the Faculty WEB page where, among other things, a USER GUIDE for various study programs is published. In accordance with higher education standards, this GUIDE, consisted of :
- study program goals and objectives
- target groups
- study program structure and contents
- study time allocation
- acquired appropriate qualification
- study program sustainability and financing
- constant efforts of lecturers oriented towards improving and facilitating of the learning process (lecturer activity)
- monitoring of the practical application of knowledge acquired during study time (student and study career coaching)
- evaluation of education process, through the system of quality assurance

At the institutional level (higher education institution), two bodies are established within the system for quality assurance of the higher institution—the University Committee for Evaluation and the Self-evaluation Committee at Faculty and Department level.

Educational service provides student and lecturer support in the form of material resources:

- Computer laboratory equipment
- Study program specific laboratory.

As a result of scoring the educational process, the estimated level of quality is 8 (CHAIN ORIENTED).

This quality level, among other things, refers to: TRIS-EFQM model version 4.2, from May 2003:

- The educational perspective of the organization is being integrated in its general policy
- The results of international cooperation are integrated in the training branches. Their quality is improving over the years
- The organization compares its planning policy and learning environment to that of excellent organizations.

Based on the legal acts of the Government, University and Faculty, research is a very important activity performed at higher education institutions.

In accordance with the University annual plan for scientific research activities, the Department academic

staff members take active part in the process of preparing scientific research projects.

The results of planned scientific - research activities of the Traffic and Transport Department are presented in the form of:

- Total number of projects in the past years
- Participation in conferences, symposia, seminars in the past years
- Way of presentation.

Social service activities include joint work on preparing of projects, reports, studies, and in that way, introducing the requirements of a given profile in relation to the previously mentioned elements of the educational process.

The final result in the field of scientific research activities and social activities is 6 SYSTEM ORIENTED (TRIS-EFQM model version 4.2, from May 2003):

- The research view is consistently worked out in a research program embedded in the general organization policy
- The efficiency of the program is being systematically evaluated on the basis of measurements of performance
- The organization disposes the systematic procedures for the performance of research assignments
- The organization complies with an established publication policy
- The organization has a collective view on social service and constantly works on its improvement
- Internal and external parties concerned are systematically being involved in the realization of tasks for social service
- The development of partnerships and international cooperation is organized in the view of the general organizational policy.

Customer Results

The main objective of the Department staff activities is to provide high-quality professionals in the field of Traffic and Transport Engineering. The analysis of the so-called “facilitators”, given in the previous chapters, leads to the fact that the whole institutional activity follows a “user-oriented approach”. So, the student needs and expectations, in the form of perception facts and performance indicators, are in the centre of the overall Faculty and Department development.

Perception facts relate to:

- data obtained from the student questionnaires and student surveys. In such a way they are given an active role in the process of shaping the general educational contents of the Faculty and the Department.
- in accordance with the University Statute, (article 141), “student evaluation is carried out each academic year in May, simultaneously in all educational units of University”. Students have their representative in the University and Faculty Self-evaluation Committee (article 142). So, they take part in assessing the quality of the teaching and education process.
- membership in Student Parliament (student service);
- student participation in various Faculty bodies. Such an involvement provides their influence in certain segments of the Faculty and Department management.

Performance indicators are obtained on the basis of their requirements and their comments in the frame of perception facts mentioned.

The final result of the scoring process application in the field of student results is 7 (BENCHMARKINGS)

Taking into account the TRIS-EFQM model version 4.2, from May 2003, it means that:

- the organization compares the data related to the way the students perceive the study load and to their complaints with those of other organizations
- The results of these comparisons are being documented and used to learn from.

SWOT Analysis

Within the European system of higher education, the results of this kind of analysis are presented in a public and transparent way as strengths and weaknesses of the points of interest in total institutional management. Considering the fact that Traffic and Transport Department is part of the Faculty of Technical Sciences, those characteristics refer to the Department as well. Therefore, we are going to present the following:

Strengths of the entire Faculty activity:

1. In accordance with the development strategy, the Faculty of Technical Sciences management has clear mission and vision, for future Institutional development.

The mission is: To produce high-quality engineering staff capable of contributing to the development of knowledge in engineering, nationally and internationally, through a quality education offer and through scientific-research activities, to achieve results oriented towards global, sustainable development of the society.

The vision of the Faculty is to be among the best higher education institutions in the region.

2. The goals of the entire activity are clear, defined on the basis of the customers' needs, (students), and other internal and external parties concerned. Having in mind the European standards in higher-education, the basic goal which is outlined in the Institution Action Plan is to attain the highest quality in education and scientific research activities in the area of technical sciences. There are specific objectives incorporated within the plan, such as:
    a. organizing result-oriented study programme, driven by the needs of the society;
    b. enabling graduates to investigate and solve various professional and scientific problems;
    c. developing skills and abilities necessary to meet global challenges.

3. Policy and Strategy goals are objective-based.

4. Institutional management recognizes and carries out the processes which are vital to the future development of policy and strategy.

5. The management of the entire process of education (development, application and support) and final results of the Faculty and Traffic and Transport Department check are based on the facts obtained through the self-evaluation process of a study program and site visit report of the University of Alicante representatives:

a. The curriculum is created in compliance with the European standards of higher education
b. The curriculum provides opportunities for:
    - educating professionals in accordance with the contemporary national and global trends of Traffic and Transport engineering;
    - individual formation of professional profile by elective courses;
    - student mobility and improvement of their role in the educational process and research;
    - internationalization of curriculum as a result of staff and students mobility in international institutions as well as access to foreign literature;
    - higher efficiency of the study process higher level of professionalism of academic staff;
    - professors and accociates who, according to the number, structure and areas of expertise, completely match the demands of education and practical training of professionals in the area of traffic and transport engineering.
    - increased participation in national and international projects.
    - available premises and other resources
    - satisfactory level of logistic service organizations;
    - satisfactory level of access to modern technologies;
    - organizing student surveys;
    - high level of available information on the Faculty web page, information packages, University radio, University newspaper.

In accordance with the Self-Evaluation Report, site visit Report and the questionnaire result analysis, (as a part of Improvement Action Plan), the weaknesses/areas for improvement of the entire Faculty activity are the:

1. high level of traditional teaching methods as opposed to interactive, laboratory and practical work;
2. low level of cooperation with other institutions in realisation of teaching and research processes;
3. necessity for continuous purchase of software packages for realization of the teaching and research processes;
4. need for intensifying relations among the Faculty (Department), the employers and alumni associations;
5. necessity for introducing the students to the employment possibilities within the course of studies as well as following their career after they finish their education.

Conclusions

In accordance with the main objectives of the Bologna process, quality assurance in European higher education has developed an international dimension. That includes strengthening the cooperation between various universities, in order to define, develop and implement certain common criteria and methodologies in the process of internal and external quality assurance processes.

St Kliment Ohridski University - Bitola, as one of CUBRIK project (No. 158999 TEMPUS-EC-SMGR 2009 -4688/001-001) partners, is aiming at introducing improvement in the system of quality assurance of the Universities in the region (Macedonia, Serbia and Bosnia and Herzegovina).

The preparation and realization of the self-evaluating procedure in the Road Traffic and Transport study program, Traffic and Transport Department at the Faculty of Technical Sciences in Bitola, with the EFQM Excellence Model, is one of numerous project activities.

The strengths and areas for improvement of the complete activities realized by the Department staff members, resulting from the application of EFQM model and the conducted SWOT analysis (as an integral part of self-evaluation procedure) could serve as:

- a basis for further development of the Department and the Faculty in the direction of positively assessed charasteristics;
- recommendations for taking appropriate steps for overcoming the noticed weaknesses, creating the Improvement Action Plan, as a broader application of obtained results.

At the same time, the introduction of the EFQM Model, as a practical tool for establishing a system for successful continuous evaluation of the overall activities of the Higher Education Institutions, is considered highly beneficial for the above-mentioned process.

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CURRICULUM DESIGN FOR COMPUTER SCIENCES: SHRINKING THE GAP BETWEEN BUSINESS NEEDS AND ACADEMY

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Introduction

According to the National Academy for Academic Leadership[1], the curriculum is the heart of a student's university experience. The curriculum is the university's primary means of changing students in directions valued by the faculty. Curricula should be reviewed and, if needed, revised on a regular basis, better to serve the changing needs of both students and businesses. Therefore, we are being urged to reassess especially carefully the quality of our curricula.

This paper presents research that was completed about the gap between academic teaching and learning on one side and business requirements on the other. This gap is discussed in some research papers since shrinking the gap is a continuous concern of Computer Sciences (CS) curricula designers.

Machanick [1] introduces a starting point for debating the separation of principles and artifacts in Computer Science curriculum design. Gersting et.al. [2] give arguments for pushing programming out of the start of the curriculum. Sanders [3] argues that empirical exercises are a useful learning experience, but are often neglected. Crews [4] paid close attention to opportunities to supplement the established curriculum with new instructional technology and pedagogical approaches which will provide computer science students with an understanding of engineering principles. Lauwers & Nourbakhsh [5] bring the results of a survey of computer science educators to determine the dynamics and logistics of CS1 courses, the educators' attitudes towards aspects of their course, their interest in modifying their course, and their opinions about using robotics in CS1. Blank & Kumar [6] present a perspective on the design of a curriculum for a new computer science program at a women's liberal arts college. Tenenberg [7] presents the *Industry Fellows* project which involves a practicing college or university faculty member and practicing industry professional (the industry fellow) in the joint curriculum review, planning and delivery of a course related to the professional's domain of expertise. Fonstad & Lanvin's report [8] summarizes preliminary insights from the study on "European e-competence curricula development guidelines" regarding the crucial role of universities in developing e-competences of both those entering the workforce (e.g., from Higher Education) and those from the existing workforce. Gabaly & Majidi [9] present the IT penetration and skills gap analysis report in Egypt.

The first section includes an overall description of current challenges and trends that face the computer science departments worldwide. This section also embraces the ACM recommendations in building computer science and information technology curricula [10].

The second section takes in consideration the immersion of information technology training in the market, made by professional instructing companies. We have considered CompTIA[2] as our case study.

We prepared a survey with the aim of analyzing how our students found themselves in the market after graduation. A discussion about the results gained is presented in the third section of this paper; and conclusions and recommendations about these results are given in the last section.

Challenges, trends and recommendations

There are some challenges when designing CS programs in comparison to the other university curricula. The main challenges are the fast growth and change in the computer science field, together the number of the computing-related disciplines. CS programs, jointly with course syllabuses, should be adapted to new technologies that arise with remarkable speed.

The main dilemma when studying CS is should there be introduced more principles of the field or should students be taught according to the market requirements? In principle, syllabus designers are likely to make a balance between principles on one side and market requests on the other side.

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[1] http://www.thenationalacademy.org/readings/designing.html

[2] CompTIA is a non-profit trade association advancing the global interests of IT professionals and companies

The geographical context is also very important when preparing students for the market: should we prepare them for the local needs or should they get ready for the new market of the globalized world? The first tendency is training for the local marketplace, but more and more computer programmers tend to work distantly as freelancers. Further, IT companies often wish to open branches in countries that are different from those where the companies operate.

Nowadays computers and technology are everywhere and very often people mix the concepts *computer science* and *information technology*. Usually information technology refers to undergraduate degree programs that prepare students to meet the computer technology needs of specific fields like business, government, healthcare, schools etc. Computer science on the other side, offers a comprehensive foundation that facilitates students to fit to new technologies and new ideas. That's why these programs are sometimes criticized for failing to prepare students for market driven jobs.

ACM & IEEE Recommendations

With the objective of facing the above-mentioned challenges, ACM[3] and the IEEE[4] Computer Society have sought to provide curriculum guidance on computer science at approximately ten-year intervals. Their report articulated a set of principles to guide CS curricula design:

- *Computing is a broad field that extends well beyond the boundaries of computer science*. A single report that covers only computer science cannot address the full range of issues that colleges and universities must consider as they seek to address their computing curricula.
- *Curricula should seek to identify the fundamental skills and knowledge that all computing students must possess*. The curricula must attempt to identify and articulate the common themes of the discipline and make sure that all undergraduate programs include this material.
- *Curricula must strive to be international in scope*. Despite the fact that curricular requirements differ from country to country, the recommendations were intended to be useful to computing educators throughout the world.
- *Curricula must include updated professional practice as an integral component of the undergraduate curriculum*. These practices encompass a wide range of activities including management, ethics and values, written and oral communication, working as part of a team, and remaining current in a rapidly changing discipline.

Regarding course distribution, the recommendations report suggest that every curriculum should involve course concentrations that constitute the so-called *core knowledge* in computer science. These courses are concentrated on the following areas:

- Data structures
- Computers organization
- Algorithms
- Programming languages
- Databases
- Computer networks
- Operating systems

Despite the core knowledge, the report recommends that other additional courses should be defined to meet the specialization student needs and departments areas. These courses fit to the areas:

- Human-Computer Interaction
- Graphics and Visual Computing
- Intelligent Systems
- Information Management
- Social and Professional Issues
- Software Engineering
- Computational Science

[3] ACM is the world's largest educational and scientific computing society

[4] IEEE is the world's largest professional association dedicated to advancing technological innovation and excellence for the benefit of humanity

IT Training Companies and the Market

Nowadays, we are witnesses of a new kind of approach of individuals who wish to obtain a useful career in the IT industry. IT Training companies that offer specialized tutoring continue to realize growth in most of the countries of the world. Their courses are market-driven and offer job skills. This approach makes this industry competitive with the higher education industry. That is the reason way CS departments consider increasingly their methodology when designing skills-oriented subjects.

Figure 1 shows the top ten IT priorities by company size identified by CompTIA' s State of IT skills gap study that was conducted to obtain a better understanding of IT skills demand and shortages [11]. The aim of this research was to find out which IT Skills are the most important to employers, and how well IT staff aligns with employers needs.

The top IT Priorities for 2012 are identified in the following fields:

- Cyber security
- Data storage/ back-up
- Updating aging computers/software for staff
- Networks/Infrastructure
- Disaster recovery/Business continuity planning
- Automating business processes through technology
- Mobility
- Web online presence, including e-commerce
- Collaboration
- Telecommunications
- Virtualization
- Data analytics/ business intelligence
- Cloud computing
- Social networking technologies
- Green IT

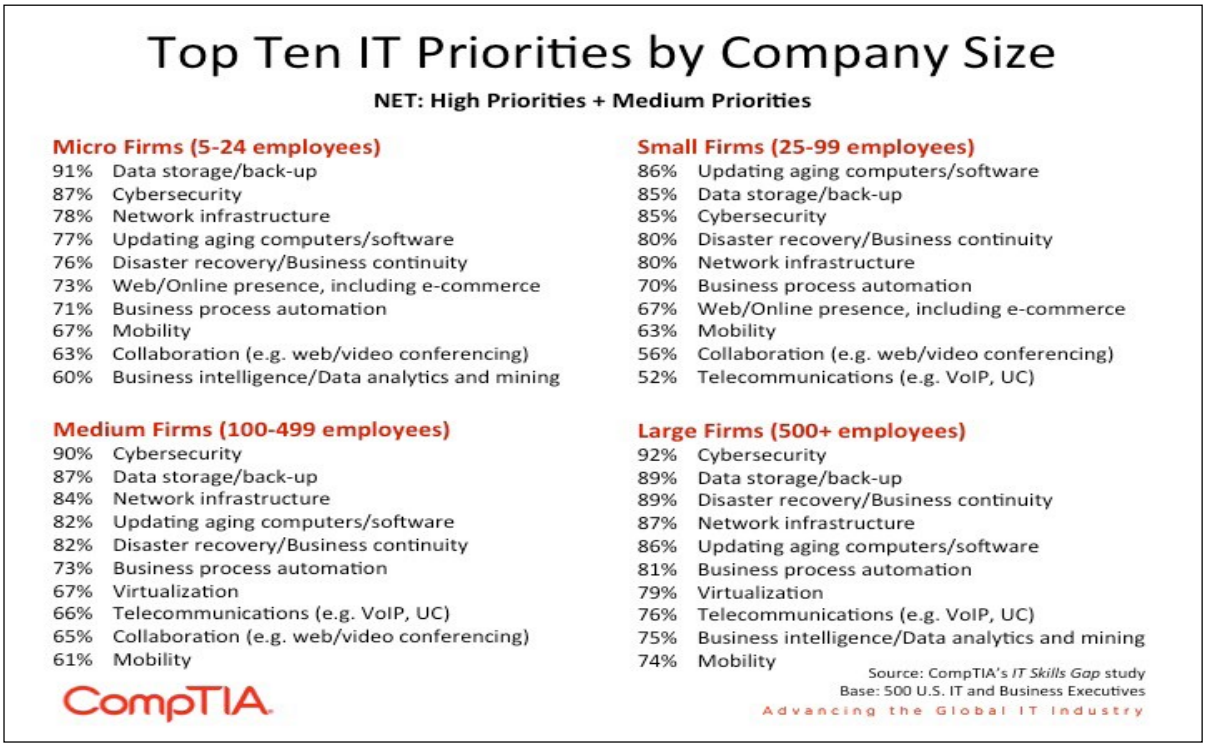

Figure 1. Top ten IT priorities by company size identified by CompTIA

Having in consideration the methodology and job skills preparation used by IT training companies, there are some new trends in computer science departments to integrate certificates in academic curricula. We will mention the case of the partnership between Baker University and New Horizons Computer Learning Centers which allows students to earn credits for New Horizons courses. Some programs offered in the frame of this partnership are:

- Graphics / Web Design
- CompTIA
- Microsoft Certified Desktop Support Technician (MCDST)
- Microsoft Certified Systems Administrator (MCSA) + Security
- Microsoft Certified Systems Engineer (MCSE) + Security
- Microsoft Certified Database Administrator (MCDBA)
- Microsoft Certified Solutions Developer (MCSD)
- Certified Ethical Hacker CISCO
- Certified Network Administrator (CCNA)
- CISCO Certified Network Professional (CCNP)
- Certified Information Systems Security Professional (CISSP)
- IT Project Management Project Management Professional (PMP)

Alumni Students Survey

After we have studied different CS programs, ACM & IEEE Recommendations and market driven IT training, we made a survey with the students that have graduated at South East European University aiming to understand how they fit in the market with what they have learned. 54 students participated in the survey. In this section are discussed students answers, comments and suggestions.

The first questions were about their current work status - working sector and working field. Figure 2 and 3 show the obtained answers regarding these issues. We can see that most of our students work in large companies (over 100 workers, 37% of the students) and middle companies (11-100 workers, 26% of the students). Self-employed and unemployed were 7% respectively. In teaching were engaged 19%, and in public administration 37%. No student was in a small company.

Most of our students' field work are *databases* (20%), followed by *web design and development* (18%) and *desktop applications* (14%). In *another field in IT* work 11%, and in *another field other than IT* work 5% of the students. No student works in *cloud computing*. The reason for that should be the fact that this area has not yet been used in the country and in the region.

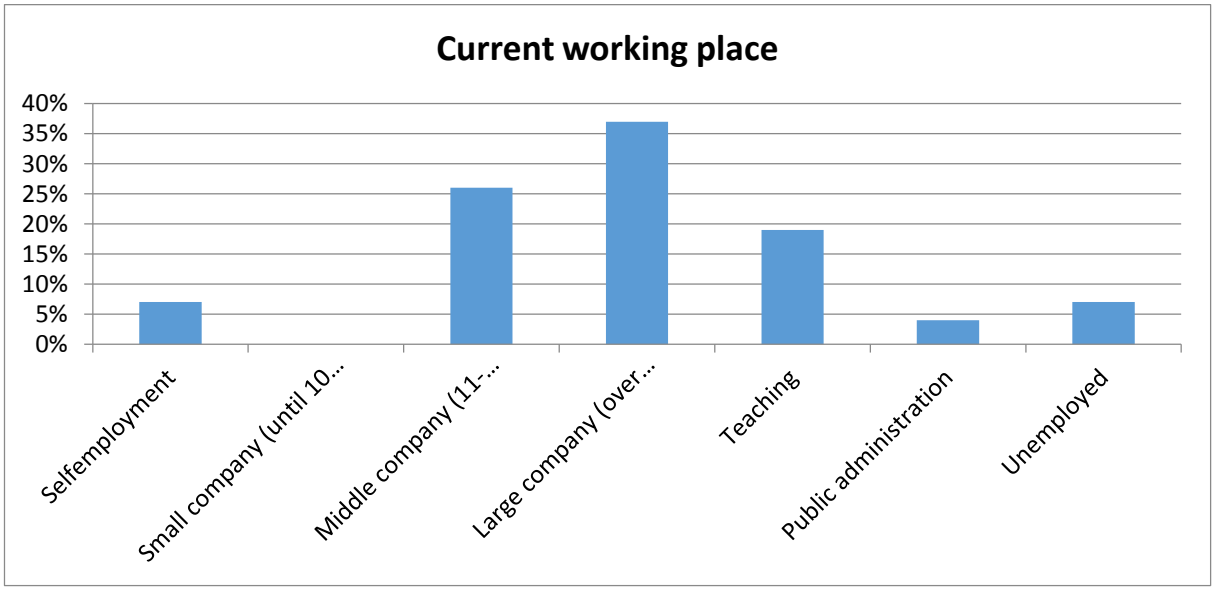

Figure 2. Current working place by company size

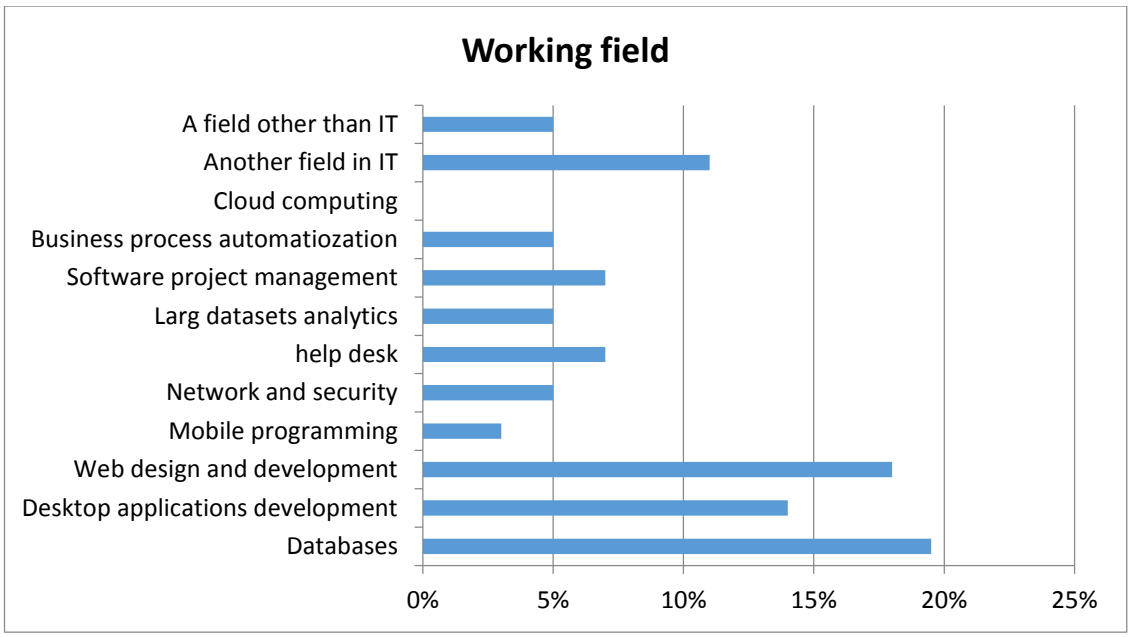

Figure 3. Current working field

The next question was about how well prepared they felt at the first employment moment. Figure 4 shows answers received where we can see that no one answered as *very little* prepared, and then there is a balance between *very good* and *satisfactory* answers. 11% of the students rated their preparation as *excellent*.

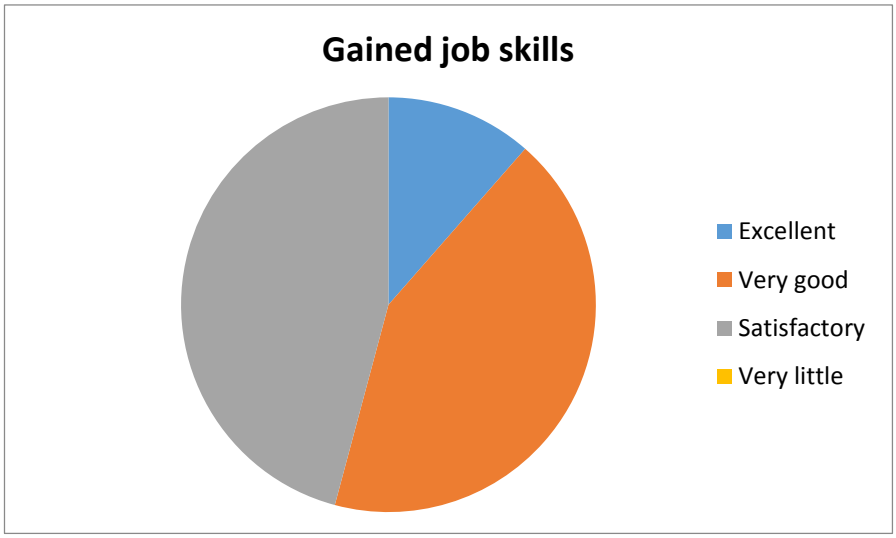

Figure 4. Obtained job skills

We asked students what they think about particular subjects, which of them should be studied deeply in the university. They answered as follows:

- Databases: 41%
- Desktop applications development: 44%
- Web design and development: 41%
- Mobile programming: 33%
- Network and security: 37%
- Large datasets analytics: 33%
- Software project management: 22%
- Business process automatization: 22%

A similar question was made for the programming languages: which programming language do they think should be studied strongly. The sequence by voting was: Java, JavaScript, PHP, C#, C++, Perl, Python, C.

The next three questions were about how they felt about knowledge gained regarding *databases*, *network & security* and *web design & development*. Figure 5 shows the returned responses. The highest scores go to databases (excellent 19%, very good are 52%, and very little only 7%). In the middle stays web design & development, with a small excellent score (4%), but the highest satisfactory scores (56%) and 30% very good responses. The worst situation is for network & security. This category has the topmost record for the *very little* responses 37%). It is interesting that excellent responses are higher for this category compared to the web design & development category.

As we mentioned, technical certificates integration is already a practice in some universities in the world. To our knowledge, such an integration is not a practice in this region's universities.

When we asked students what they thought about the possibility of professional ceritifications to be integrated in curricula, 81% of the responses were positive regarding this issue.

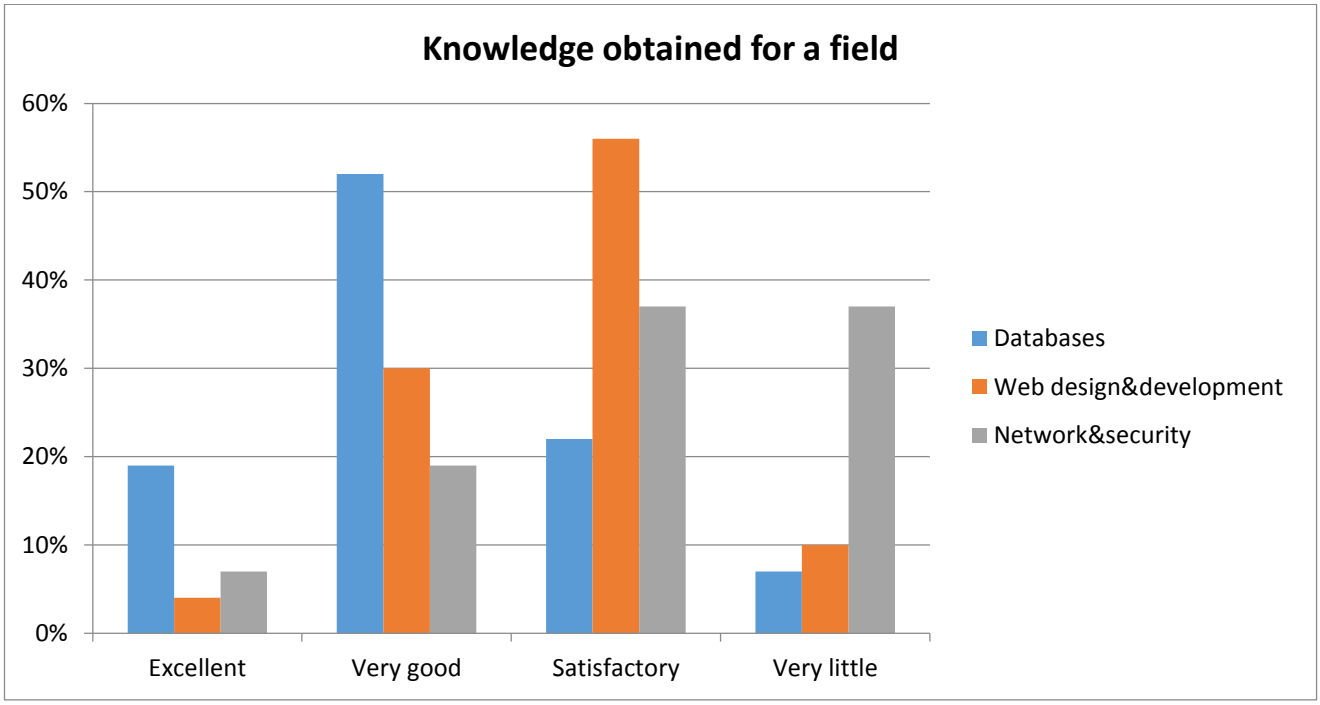

Figure 5. Knowledge obtained for a field

At the top of their preferences were Microsoft and Cisco (80 % voted for each of these programs). VMware followed with 40% of the total votes. Below are the responses for all provided certificate systems:

- Cisco: 80%
- CompTiA: 12%
- Microsoft: 80%
- Citrix: 12%
- VMware: 40%
- Red Hat: 20%
- Novell: 8%

The next two questions were about their opinion on offering training for graduate students and how they felt about teaching at SEEU – was there a good balance between the theoretical part and the practical part.

So, regarding the first question, 93% of students answered that they would like to have further training from the university, and only 7% of them did not agree with the long term training.

We asked students to give a score between 1 and 5 if studying at SEEU was practical or theoretical (1-very practical, 5-very theoretical). Figure 6 gives a visual presentation of their opinion regarding this issue. We can see that students overall opinion is that teaching could be more practical.

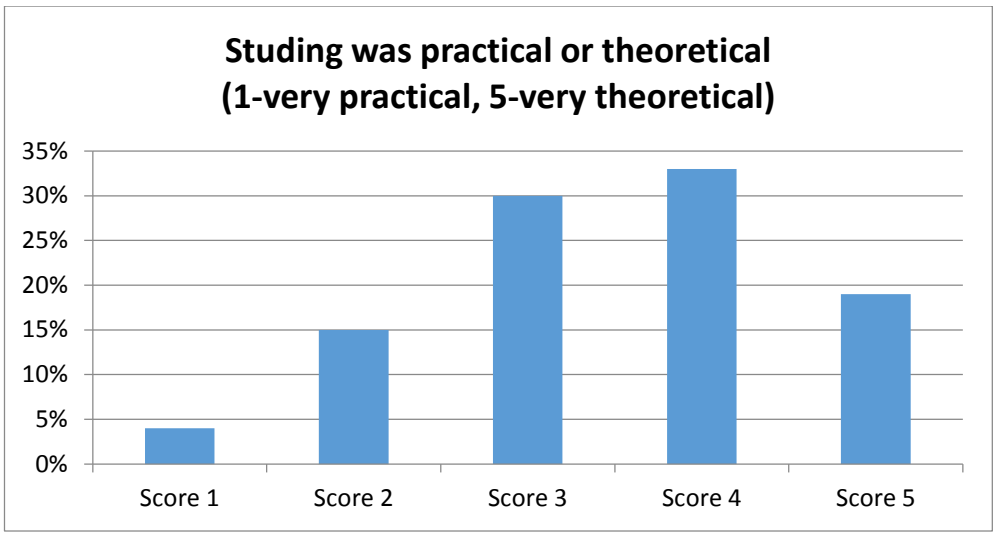

Figure 5. Studying was practical or theoretical (1-very practical, 5-very theoretical)

The last question was about the company/field where they would like to work. The answers varied. Below are the most preferred companies/fields:

- Software Management & Web Developer
- Companies that offer network services
- Academy
- Telecommunications
- EVN, Telekom, MEPSO, Google

At the end the students were asked to give additional comments. The common comment of most of the students was "there should be more practice, less theory". Other comments were:

- Curricula should be updated every year with market driven courses
- More complex projects
- More professional courses
- Joined project lecturer/student
- Student involvement in research
- International cooperation

Conclusions

In this research, we tried to investigate the paths that would shrink the gap between business needs and academy regarding computer science curricula design. We used different ways to make this investigation: explored the CS curricula worldwide, analyzed ACM & IEEE recommendations, studied IT training offered in the market and made a survey with our alumni in order to understand how they fitted into the market after their graduation. All these approaches are made with the objective of increasing the quality of the CS graduates' capabilities.

Considering all discussions above, our major recommendations are:

- Include more practical hours/projects
- Student involvement in research projects
- More intensive studying of programming languages required by the market (Java, C#, PHP)
- More intensive studying of networks and security
- More intensive studying of fields required by the market (databases, web design/development, desktop applications)
- Certificate integration in the curricula
- Offering of specialized trainings for graduated students
- Preparing students for global trends (Cloud computing)

Instead of a final conclusion, we will use a student comment: "Hope that this survey will be considered in new curricula design".

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INCREASING THE EFFICIENCY OF TEACHING AND LEARNING IN THE CLASSROOM WITH LARGE NUMBER OF STUDENTS

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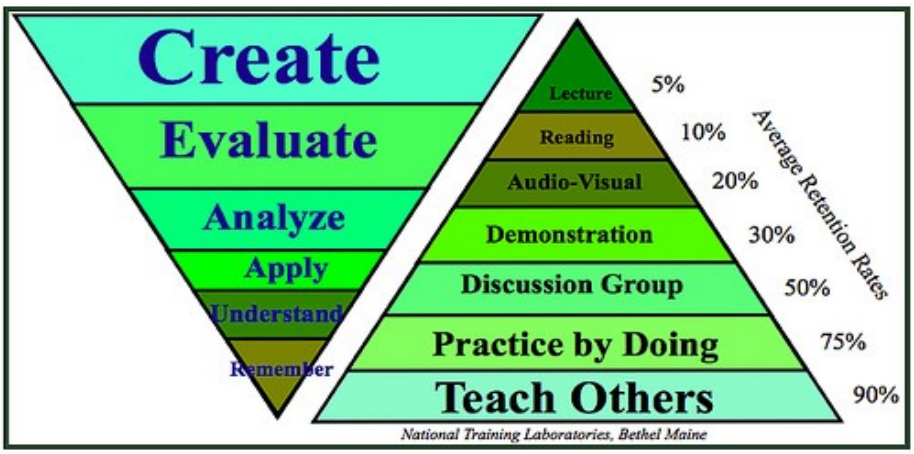
Introduction and Context

Similar to other social fields, teaching is a dynamic process and constantly changing. The teacher of the twenty-first century differs in many aspects for better from the teacher from previous centuries. This is not only a result of the availability and use of modern technology, but also of change and progress in many other areas, such as new methods that are used in teaching and learning, competition amongst schools, especially the opening and operation of private education institutions, greater awareness and greater demands from students. All these encourage the teacher to constantly progress with teaching by increasing professional and methodological knowledge. Every lesson should be evaluated as a new engagement and challenge in order to achieve the maximum performance in the primary purpose of teaching.

In the not so distant past, the realization of the teaching and learning process was mostly focused on the perspective of teaching, and the importance of learning was very small, although some elements of learning have been present in the teaching and learning process since ancient times. However, such an approach to the educational process has not given proper results. The concentration only on teaching and not on learning has impacted somewhat negatively on improving the level of excellence of teaching and learning at all levels of education. Later studies on this topic have affirmed that learning plays an important role in the learning process and nowadays even has the main role. It is not accidental that today the success or failure of the educational process relies mainly on learning, because it is useless if the teaching is perfect, and its product, learning, a failure. If students do not learn the lesson, it follows that the work and commitment of teachers has been of very little use. Nowadays, it is most important to embed a love of learning in students, not just to realize a transfer of knowledge. Given this, researchers have developed a number of methods and approaches to be used in the implementation of the learning process, each in their own way aiming to achieve maximum results.

The published research by numerous pedagogues and sociologists who have contributed in this direction are now very well known. One of those who advanced this area is undoubtedly R. Dreikurs, who in 1972 came to the conclusion that learning as classical memorizing of lectures, when one speaks and others listen, presents the weakest form, manner and method of learning. In the "learning pyramid", the best source and method of learning is the so called "learn by teaching others". This is an active learning method when people in general retain 90%. Then follows the method of "practice by doing" which informs us that the rate of memorizing learning is up to 70%, followed by “discussion group” with 50%, "demonstration" with 30%, the use of audio-visual tools with 20%, reading 10% and finally “lecturing” which has only a 5%. rate of remembering. This is well exemplified in the following graphic.

Fig . no. 1, Learning from listening to learning



Source: (R. Dreikurs, 1972)

Also, it should be emphasized that with the learning process which is realized in the form of lecturing, that is, traditional forms where we have only teaching, the expected results are not satisfactory even in the part of concentration and student attendance at lectures. No matter to what level the teacher is committed to his/her work and how much s/he tries to be interesting and attractive, the learning outcome is too small. This is because the concentration of listeners in the beginning is high, but after only 15 - 20 minutes falls significantly, while at the end of the lecture it reaches the lowest point of concentration (Stewart and Rutherford 1978). The success of attempts to improve this situation, such as by raising and lowering the tone and rhythm, or creating a relaxing atmosphere, is modest.

Active Methods—Benefits and Challenges

Implementation of Active Methods for Teaching in Classrooms with Large Student Numbers—the Benefits

Having in mind the above mentioned research and the main goals of teaching, the teacher should change the classical methods of delivering learning and instead use more active strategies. Some of the activities carried out with these methods are: analysis, definition of the problem, working in groups, brain storming, critical thinking, information collection, selection, decision-making, explaining decisions to others, findings, demonstration, simulation. These are forms of learning during the implementation of which students are engaged in the learning process, are part of the process, take their obligations and since they are more involved, they learn more.

A combination of some of these methods might be the most appropriate way of teaching. The question is why we should use active learning instead of passive. The answer is simple. Given the results from the study of the so-called "learning pyramid", it is clear that better learning results are mostly achieved with these strategies. In addition, students in these classes are active and creative. They participate in the implementation of the learning process, express their opinion freely, are more flexible in the classroom, have tolerance toward thinking differently, have good chances of acquiring better scientific knowledge, are encouraged to solve problems, are able to explain to others the issues addressed cooperatively with each other, support or reject each other's ideas and make decisions that implement the same in practice. The goal is not to memorize something for the moment that later can be forgotten, but to learn how to solve problems in everyday life. In comparison, in 'classical' learning, students are passive, they are not required to make something concrete, but rather memorization of knowledge is of paramount importance. Even when assessing their knowledge, it is primarily based on how much has been memorized.

Use of Interactive Methods for Teaching in Classrooms with Large Student Numbers—the Challeneges

Even though nowadays lectures in classrooms with large numbers of students are the main pillar of teaching and learning, yet many activities described above could be implemented in such classes. The effective use of these activities in classes with large numbers of students may be more difficult, but success is possible. A modern (interactive) teaching approach is often ignored and neglected as not being efficient for or accessible to large groups of students, and has even been disregarded by a number of teachers, or its implementation viewed with scepticism. The 'classical' form of teaching, *ex cathedra,* when the professor teaches and students have a duty only to listen, according to some, can never be replaced by any other form of teaching. However, according to the hypothesis that active learning methods provide better opportunities for student learning, such opinions appear somewhat incorrect, outdated and unconvincing. Experience shows that, despite the difficulties that may be encountered, their use gives enviable results.

Justifications for marginalizing active methodologies are of different types, but without doubt, among those that are more important are the difficulties that come in the implementation of active learning. It is almost impossible in a classroom with large numbers of students to engage all or most of them in debate. A major impediment in implementing active learning remains the management of the lecture. The noise and confusion that could be caused, poor management and control of the learning environment by teachers, poor communication between students and the professor, for example, could seriously hurt the learning process.

In order to succeed in the implementation of active learning and overcome barriers that hinder effectiveness, it is suggested that some additional effort must be made during activities and actions in the learning process. Different approaches should be used in order to foster curiosity and interest in learning. Within these activities the most important are: encouraging regular attendance of students in class, students'

active participation in discussion and debate, the use of case studies, presentation of events through video and the Internet, findings, explanation of key words, problem solving and simulation of a case.

Methodology

Therefore, to evaluate how far these methods were effective, a questionnaire was given to students in a sixth semester International Finance Business elective course. Twenty one students out of twenty three completed this. The experience of the author in observing other professors as part of a quality process at the university was also considered.

Results

Regular Student Attendance in Classes

According to the results, good attendance is very important for stimulating the professor and encouraging students to exchange ideas. Taking an attendance register helps to motivate students to attend which is very important for learning. When the number of students is large, it takes a lot of time to identify student by reading their names and therefore, circulating a previously prepared rooster for signature is more efficient. At the end of the class, the teacher could randomly read a few names in order to verify whether those students are present and then mark the empty boxes with red pen to avoid these being filled later.

The teacher should also consider that the attendance of students in the class depends a lot on him. Students felt that their participation is higher if the teacher is friendly and polite and knows how to create an open atmosphere and a relaxed ethos in class. The opposite will happen if the teacher does not create favourable conditions for participation, is harsh or has no tolerance for different opinions.

Regular attendance of students may also be stimulated by rewarding students as part of the final mark or as a penalty for non-regular students.

Development of a Case Study or Relevant Example

The survey results indicated that students find it helpful to have a method such as a case study or relevant example for analysis as part of the lecture. Experience shows that this should be short, with clear instructions. They should be related to the learning unit. Distribution should be done in a way that ensures students share the material. During dissemination of the material, the teacher may ask students after they have read the material to try answering questions set at the end of the text or on a slide. Before the debate begins, students may discuss the issue with the colleague next to him/her, while the teacher communicates with the students by guiding them. The debate is facilitated by the teacher. The teacher should start the debate by encouraging students to participate. Creating a secure, pleasant and relaxing environment, sometimes with easy humour by teachers, helps students to participate. This relaxing and warm environment can be enhanced when the teacher calls students by name to participate in the debate. This makes them feel proud, appreciated and respected - they are not just numbers in the classroom. It's worth learning names from the start by asking for them and by trying to memorize them from the register.

During the discussion of the case study/example, problems could be numbered or described as most and least important. In small groups, problems could be analyzed, causes and effects identified, alternatives solutions to problems could be given and finally overall conclusions. At the end of the case study, each student could answer at least two questions such as: What I have learned from this case study/example? What is my experience from everyday life related to this case study/example? Such activity should be planned to allow time for the students to participate.

Participation of Students in Debate

Student participation in debate also depends on other factors that the teacher should identify and use. Initially, it should be noted that one of the important conditions is that students should be prepared in advance for the class. They have to read the materials that are provided as reference for the realization of the course and this should be referred to during the class.

Questions that the teacher sets at the beginning should be simple, but then become more complex. They should be open and enable students to give general answer and later to go deeper into the planned topic. In this case, it is important to note that the responses should not be expected to be given immediately. Students should be given a reasonable time to think and then respond. The teacher should encourage participation in the debate by asking different students. He/she should be careful that every student (or as many as possible)

answers and that he directs and guides the debate skilfully in the right direction. The debate should continue until all ideas are exhausted on the issue discussed. Everybody involved in the debate should be supported but importance should be given to answers that are correct and complete. In such cases, examples of open questions which can be asked are: what do you think? Who has a different opinion? Who has any comment or has anything to add to this topic?

The next step for effective learning is to provide a solution to a task. For this to be successful, the material must be well prepared in advance and easy to understand. During delivery, the teacher should give clear instructions, quick and concise so as not to cause confusion among students. One good method is that in the beginning, students work individually, then compare the results with each other and finally a student publically gives the outcome of the task given with explanation and analysis. Other students confirm, comment, add or eventually give alternative results with explanation. At this stage, the teacher can confirm the answer and could illustrate key points of the problem by referring to an Internet site, linking the theoretical and practical part. Of course, this site should have been previously found and stored on the desktop. Sometimes, direct questions can be addressed to students: "Well, what do you think?" This is done on purpose so that no students are passive and lacking motivation in teaching and learning.

While individual students are answering, the teacher should concentrate and be very aware and careful. Any answer given by the student must be evaluated and not ignored. The teacher should not move to the next question without elaborating the first one fully. The timing for intervention in the debate and proper direction in discussion are the duties of teachers.

Conclusions and Explaining Key Words and Concepts

It was seen as effective that conclusions which are made in the classroom should be made by the teacher in cooperation with the students. Students need to be more active, because the wording of conclusions could be an indicator of whether learning has been successful. Also, at the end of the class, the teacher may engage students in explaining the key words or concepts for the unit. These words could be translated into English or the relevant language to ensure that students get the exact meaning.

Toward the end of the class, the teacher may distribute material that could be in the form of a quiz or key questions for monitoring learning. The questions should deal with the main issues that were discussed during the class. Some of the questions require the completion of the empty places in the sentence, or short answers; others require critical thinking. This type of method provides a brief repetition of what was discussed and confirms how successful the learning was and also how to solve real-life problems. Another activity is called “one minute question and answer”. Students write on a piece of paper a sentence about what was the most important concept that they learned during a certain class and secondly, a sentence about what has remained unclear from that day’s class.

At the end of the class, in the last slide, the teacher should provide literature as well as the title of the topic of the lesson which will be realized the following week. Literature and additional material which should be prepared for future classes should be included.

Use of Technology in the Classroom

Successful realization of active teaching and learning in classrooms with large number of students requires special conditions and by necessity, we should mention the use of modern technology. The importance and role of using resources becomes more important when we have in mind a large student number and rational use of time. So, in order to be heard by all the students in a typically large space, it is necessary to use a wireless microphone which creates enough sound and enables free movement throughout the classroom environment. Another important source is the use of the projector and the Internet. PowerPoint slides must be well prepared, not too loaded with text, sometimes just one photo can replace the meaning and significance of a whole page of text. Change of slides should be through remote control so that the teacher is not static next to the PC; the same remote control should be used for highlighting key words, etc. Slides should be used in different ways, such as analysis by students. Also, it is preferable during discussion and explanation to use the white board actively and with different colour markers (each has its meaning), but which looks good and clear even from afar. In the case of lessons in classes with large number of students there is a new device called "clicker", in the form of mobile phones, where each student uses one of them to give the answer. They are especially practical for the realization of quizzes in class.

Class management

When we are talking about management in the classroom, then we must consider the combination of different interactive methods that a teacher uses. This effective combination depends largely on the ability and skills of teachers. It is very important how well the teacher uses and implements each of these methods to maximize learning. For example, the time and order of using one or other method is of particular importance. The learning must proceed logically and the lesson should be planned with a clear structure for activities and outcomes. The results from the student questionnaire showed that the students appreciated knowing what to do, when and what the next step was. Also, time management should be carried out in a completely friendly way.

The teacher should move in a relaxed way around the classroom, and be in a good communicative distance both at the front and back of the lecture hall during the class. Approaching closer to students without crowding them activates them by making them think that the teacher will ask him/her a question.

In conclusion, the teacher should explore what it is that makes the learning process successful and what not. S/he should also develop the effective methods and reduce or eliminate the weaknesses. He should involve the students in this process at all times.

Conclusion

The learning cannot be considered successful if the teacher does not commit seriously to two main activities: teaching and learning. Recently, the role and importance of the learning process has been given great importance and a deserved place. Most contemporary studies plus the student questionnaire and teaching/observation experience suggest that active learning has advantages and produces better results than a more traditional approach.

In active learning, the teacher should combine more activities ranging from short lecture to bringing conclusions. Students must be engaged in the learning, so that they are creative, think critically, gather information, analyze, make decisions, explain to others, take responsibility and defend decisions made. The learning process is best realized with cooperation between the teacher and students. A unit should not be memorized by students, which might be forgotten the next day. Students value being taught how to solve problems, learn how the theoretical part applies in everyday life and, what is important, increase their confidence.

The factors that mostly affect students' learning positively in any class are that they learn better when they are engaged, different students learn through different learning styles and they benefit from the possibility of having the opportunity to evaluate.

Possible recommendations for the successful realization of learning in classes with a large number of students: the teacher should always be creative in teaching. Creativity does not allow learning to become monotonous. Classes must be varied, well planned and with structure. In the time in which we live and work, it is a sin not to use modern technology in the teaching and learning process with student involvement. Chalk and blackboard are resources that belong to the past.

Students in every discipline must be given the possibility of learning actively how to solve problems rather than memorize. Active learning methods provide this opportunity.

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REFLECTIONS ON THE LAW ENFORCING PRACTICAL TEACHING IN THE REPUBLIC OF MACEDONIA, AND ITS IMPLEMENTATION BY FIRST-YEAR STUDENTS AT SOUTH EAST EUROPEAN UNIVERSITY

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Introduction

The Republic of Macedonia requires students to undertake 'practical' teaching, which in effect is a form of internship. The aim of this paper is the analysis of student participation in this process. What is the role of students in the realization of practical teaching, particularly in relation to their faculty? How much experience do they gain from the fulfilment of this practical work? What is the involvement of mentors in this process? Do the students keep notes regarding their placement and who provides constructive oversight of their internships?

The Law on Higher Education of the Republic of Macedonia

Based on Article 132, paragraph 9 of the Law on Higher Education (Official Gazette of R. of Macedonia, number 35/08, 103/08, 26/09, 83/09, 99/09, 115/10, 17/11, 51/11, 123/12 and 15/13), (Parliament, 2008), all students that study in the Republic of Macedonia are required to do practical teaching. In this Law, the Ministry of Education and Science sets the rules and requirements for the organization of practical teaching. In Article 5 of the Law on the implementation of practical teaching, there is a formal description of the procedure for appointing mentors for students undertaking practical teaching. The students are obliged to keep records—or a 'diary'— as expressed in Article 6. Article 7 of this Law determines the duration of practical teaching, which is set at 30 working days (Parliament, 2008).

What is practical teaching?

There are several definitions regarding the meaning of practical teaching. According to Penny Loretto, "Practical teaching/internships provide real world experience to those looking to explore or gain the relevant knowledge and skills required to enter into a particular career field" (Loretto, 1996).

The Career Center at Johns Hopkins University defines practical teaching and internships as "Opportunities to apply the knowledge one has gained from academic studies into practice and working environment" (Hopkins, 2000). The Center has also created a detailed mechanism for the evaluation of student experiences in internships.

According to the Career Center at the University of California, Berkeley, practical teaching is a very good and effective way to connect academic experience with a professional working environment (Berkeley, 2013). The Centre seeks to evaluate what students liked about the work they did, what they thought about the work environment, what they learned, how this would continue in future and what they learned about themselves, their strengths and weaknesses (Berkley, 2013).

At the University of Missouri, their Department of Education defines the rules and obligations of a student to perform practical teaching by dividing the process into several stages. According to the manual for practical teaching, the teacher, employer, and/or company must fulfil certain forms of evaluation—as must the student—in which the student's contribution, and specific reflections from the student, are expressed clearly. In the same evaluation, the teacher, employer and student address the professionalism of the student, his or her relationship with co-workers, his or her learning skills, and the student's administrative work and analytical skills, all of which are assessed by a scaled measurement (Missouri, 2012).

Research Methodology

The Law on practical teaching envisions a collaborative effort involving teachers, students and employers. Having in mind these three actors, the law and the experience at SEEU, the hypotheses used in this research are:

- SEEU students undertake practical teaching only formally, as required by law;
- The public and private sectors are non-compliant with this law, as reflected by the experience of

SEEU students.

- If a Career Centre, mentors and employers continuously cooperate with students, then the students will fulfil the practical teaching obligation with more value;

The two main assessment mechanisms used in this paper are:

- The Quantitative method: Questionnaires for students (Appendix 1).
- The Qualitative method: Interviews with SEEU professors and potential employers.

Quantitative method

The questionnaire was distributed to first year students of South East European University in Tetovo and Skopje campuses who had all completed the practical teaching requirement, among the five Faculties of the University: Business and Economics; Public Administration and Political Sciences; Languages, Cultures and Communications; Contemporary Sciences and Technologies; and Law. No distinction was made in relation to ethnic identity. The questionnaire was submitted to Albanians, Macedonians and students from other ethnic groups who study in these Faculties.

Qualitative method

Interviews were conducted with 29 teachers, professors, and mentors of South East European University. We interviewed members of all five faculties at the University as above.

In addition, because this law does not relate exclusively to higher-education authorities but includes another major participant, private industry and commerce, we interviewed a total of 32 companies, institutions, public, private and non-governmental organizations from Macedonia. Regarding the profile of institutions, and of the companies interviewed, most of them are governmental institutions, schools, banks, or companies that offer services; they are notable as being those that receive students for internships.

Analysis of Student Perspectives on the Implementation of Practical Teaching/ Internship

One of the methods of analysis used in this study was the questionnaire distributed to first-year students. The questionnaire consisted of 11 questions, distributed in three parts, as follows: the first part contained general questions relating to gender, ethnicity and Faculty; the second part asked students to answer questions regarding their experiences using a Likert scale; and the third part consisted of open-ended questions that offered students the opportunity to report their experiences freely.

The following tables provide a specific overview of Faculty, gender and the ethnicity of the students who completed the questionnaire.

Faculty	BE	LAW	CST	PAPS	LCC
Total	85	106	72	102	67
Percentage	19.67%	24.53%	16.16%	23.61%	15.50%

Figure 1: Completion of questionnaire according to Faculties

The largest number of students who answered the questionnaire are the students of the Law Faculty, with a total of 24.53%. They are followed by those of the Public Administration and Political Science with a total of 23.61%. Students of the Faculty of Languages, Cultures and Communications (as well as those of Contemporary Science and Technologies) are those with the lowest completion rate, with totals of 15.50% and 16.16% respectively (table 1). There appear to be no particular reasons given for these different rates of completion.

Gender	Female	Male
Total	205	227
Percentage	47.45%	52.54%

Figure 2: Completion of questionnaire according to gender

The total participation of males in this survey was 52.54 %, while female participation was 47.45 % (table 2). This is broadly in line with enrolment.

Ethnic	Albanians	Macedonians	Others
Total	421	9	2
Percentage	97.45%	2.08%	0.46%

Figure 3: Completion of questionnaire according to ethnicity

Based on the ethnic identification of the respondents, the overall participation of Albanians in the analysis is 97.45 %; Macedonians 2.08 %; and other ethnicities 0.46 % (table 3). This ratio does not reflect the ratio of ethnicities in the university (about 80% Albanian and 20% Macedonian/other) but occurred because the questionnaire was distributed as part of a student participation project and left to them to implement.

	Before beginning of semester	01-03 months after	04-06 months after	07-09 months after	10-12 months after	Other
Percentage	3.00%	10.41%	35.87%	37.26%	11.80%	1.62%

Figure 4: Completion of questionnaire showing time of fulfilling internship requirement

Regarding the time for the realization of the internship, we note that 37.26% of students did their internship within 7-8 months of the beginning of the semester, while 1.62 % of students said that they completed their internship at another time period from the options given above (Figure 4). It is clear that the majority organize and complete their internship during the middle of the academic year which appears logical for new students who need to be informed of the process and wish to finish in order to be allowed to enrol for the following year.

	Skopje	Tetovo	Gostivar	Kumanovo	Struga	Dibër	Kicevo	Ohrid	Other
Percentage	12.03%	34.95%	14.12%	2.31%	0.92%	1.38%	1.38%	0.23%	32.63%

Figure 5: Realization of practical teaching according to cities

The highest percentage of South East European University students who completed their practical teaching did so in Tetovo, with 34.95% of respondents completing their requirements in that city. Other cities recorded a total of 32.63%. The cities with the lowest recorded percentage of students who fulfilled their internship requirements were Ohrid and Struga, with approximately 1% collectively (Figure 5). However, this broadly reflects where the students come from which might also make it easier for them to find placements.

	Micro companies (1-10 employees)	Small companies (11-50 employees)	Medium companies (51-250 employees)	Large companies (over 251 employees)
Percentage	29.86%	40.50%	25.00%	4.62%

Figure 6: Realization of practical teaching according to size of the company

Based on the size of the company, the data prove that 40.50% of the students replying completed their practical teaching in small companies, while 4.62% were engaged in large companies (Figure 6). This distribution reflects the sizes of companies in the Republic of Macedonia and their location.

	Inter.	Newspaper	Family	CC	Friends	Professors	Other
Percentage	5.78%	5.55%	46.29%	23.14%	15.04%	3.47%	0.69%

Figure 7: Where did you hear about a practical teaching opportunity?

Based on the responses of students regarding where they learned about practical teaching opportunities, 46.29% have answered that they learned from their family members; about 23.14% from the SEEU Career Centre; and the rest have learned from teachers and newspapers, in proportions being approximately 3.47 % and 5.55 % (Figure 7).

Analysing the student data illustrated several variables in terms of sector across faculties which broadly reflect where students might find employment after graduation.

Business and Economics

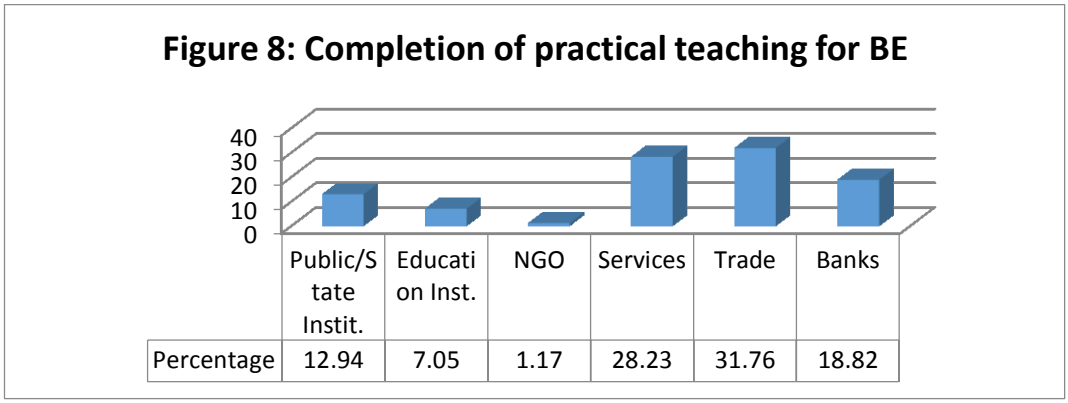
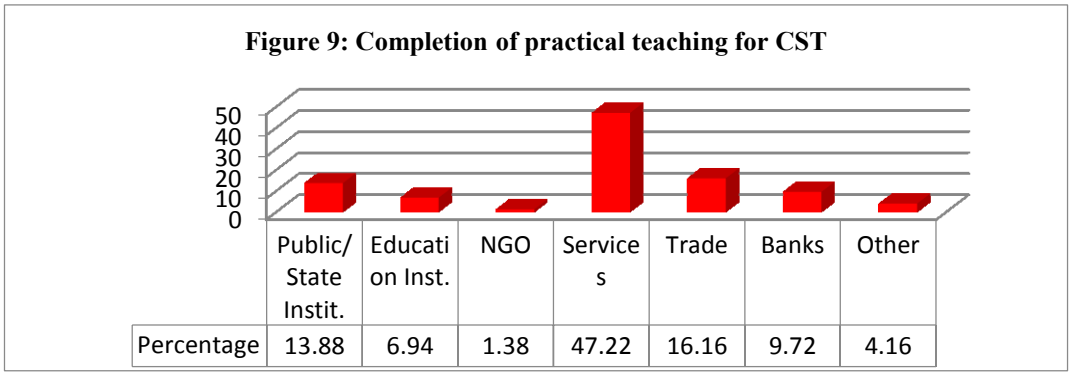


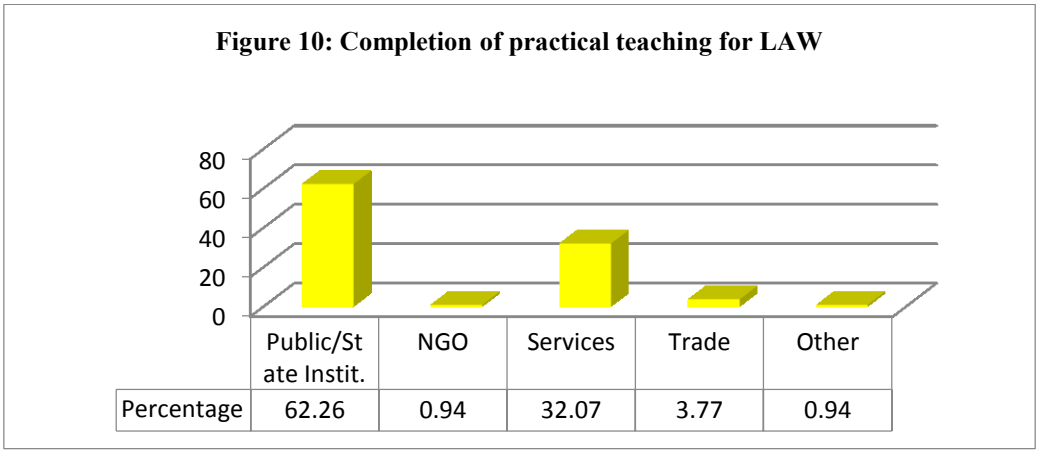
Figure 8 presents data on which sector the students completed their practical teaching by students in the Business and Economics Faculty. From the data we note that most students of the Business and Economics Faculty completed their practical training in trade companies (31.76%), and the smallest percentage of them did so in non-governmental organizations (approximately 1%).

Contemporary Sciences and Technologies



Students of the Faculty of Contemporary Sciences and Technologies primarily fulfilled their internship in companies that offer services (47.22 %), followed by trade companies (16.16 %). The smallest number of this Faculty's students fulfilled their practical teaching in NGOs and education institutions (1% and 6%: Figure 9).

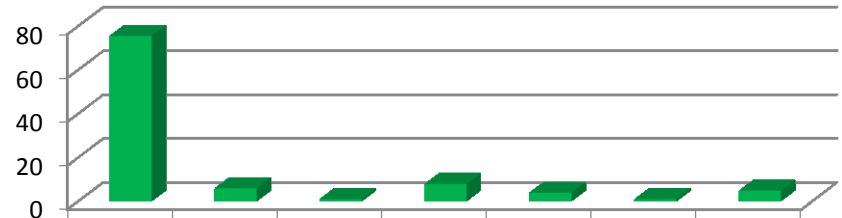
LAW



62.26% of Law Faculty students fulfilled their internship in public institutions, while others completed their internships in NGOs and trade (3% and 1%: Figure 10).

Public Administration and Political Sciences

Figure11: Completion of practical teaching for PAPS

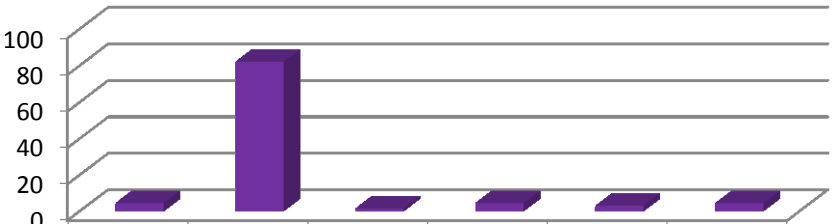


	Public/State Institit.	Education Inst.	NGO	Services	Trade	Banks	Other
Percentage	75.49	5.88	0.98	7.84	3.92	0.98	4.9

About 75.49 % of students of the Public Administration and Political Sciences Faculty fulfilled their internship in public institutions, while a smaller percentage did so in NGO sectors and banks (approximately 1% each: Figure 11).

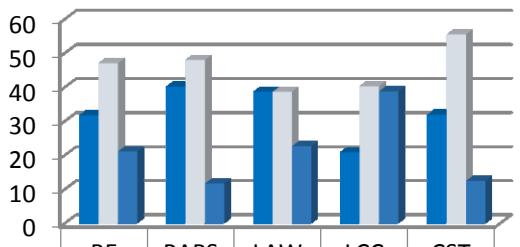
Languages, Cultures and Communications

Figure 12: Completion of practical teaching for LCC



	Public/State Institit.	Education Inst.	NGO	Services	Trade	Other
Percentage	4.47	82.08	1.49	4.47	2.98	4.47

As one might expect, over 80% of the students of the Faculty of Languages, Cultures and Communications completed their practical teaching requirement in educational institutions. The smallest group of them (about 1%) did so in non-governmental organizations.



	BE	PAPS	LAW	LCC	CST
Career Centre	31.76	40.19	38.67	20.89	31.94
Mentor/Professor	47.05	48.03	38.67	40.29	55.55
Institucion/Company	21.17	11.76	22.67	38.8	12.5

Figure 13: Who helped you in fulfiling practical teaching?

Measuring the quality and implementation of practical teaching was also done through the assistance offered to SEE University students. From the data, we note that students of the Business and Economics Faculty claim that their mentors and the Career Centre helped them in fulfilling this requirement, in proportions of 47.05% and 31.76%. PAPS students report almost the same division, with 40.19% and 48.03%, whilst the Faculty of Law students claim that the Career Centre and their mentors assisted them roughly equally, with each receiving approximately 38%. Similar percentages exist for the two remaining faculties, LCC and CST. We can therefore note that teachers are engaged in this legally mandated process to a greater degree than are businessmen and representatives of the private sector.

Analysis of Companies' Representatives' Perspectives on the Implementation of Practical Teaching with Students

A second questionnaire was distributed to company representatives in Macedonia who received students for an internship. 66% of the companies replying were private, 16% public, 12% were NGOs and 6% other.

The most significant number of companies were small sized companies (11-50 employees), amounting to 63% of the survey group; 17% were medium companies (51-250 employees) and 6% were large companies (over 250 employees).

This questionnaire consisted of 8 questions divided into three categories: general questions, scale questions and open questions.

In reply to the question, to what level do you think that practical teaching enhances quality in teaching, 34% of these respondents replied that practical teaching impacts 'a lot' on quality assurance. However, 47% of the company representatives responded 'not that much,' although only 3% responded 'not at all. From the total number of respondents, 16% of them said the practical teaching enhances quality only a little. From these data we can note that there is a mixed opinion about the value and impact of practical teaching from companies. The highest number of respondents thinks that the practical teaching does not enhance the quality approximately 66% of them and 47% think positively about internship.

In relation to the question about student involvement, the biggest part responded that student work commitment during their internship is very high (39%); 25% replied that student involvement was 'not that high'; 30% responded little, while 6% responded that students do not show any interest in fulfilling their practical teaching requirement. According to the results, we can see that that there are mixed answers related to their involvement. Most of the company representatives think students' involvement is not as expected, approximately 61% of them. However, 39% of companies claim that students are involved a lot while fulfilling their internship.

With regard to the length of internship, 28% of respondents claimed that the internship should last from 2 to 6 months, which shows that companies have a need for longer student involvement in the process. There are companies that provide a mandatory practical teaching program for six months during which the student signs a contract before starting. 19% of respondents say that internships should last more than six months. 25% of them assert that the internship should last 30 days. Only 28% claim internship should be shorter than 30 days. According to the results, we can see that companies are aware about students' requirement for practical teaching. Companies need student's involvement there, and most of them are interested to work with students more than a month because it takes time for them to prepare new students each month for an internship. Most of them think that internship should last 30 days and longer 72% and just 28% think that it should last less than 30 days.

Analysis of Teachers' Perspectives on the Implementation of Students' Practical Teaching

In addition to the analyses of the opinions of students and companies about the implementation of practical teaching and its quality, we also sought the opinion of teachers.

Interviews were conducted with South East European University teachers from all five Faculties. The interview consisted of seven questions distributed in three parts as follows: general questions, Likert scales and open questions.

55% of the teachers interviewed supervised more than 50 students per year; only 3% of them supervised fewer than 10 students. 7% of teachers supervised 50 students, and 35% of teachers supervised 10-20 students.

With regard to teachers, 66% claim that student interest is satisfactory; 21% say that student interest is small. 10% of teachers think that students' interest in fulfilling their internship is high. Only 3% of teachers responded that student interest is unsatisfactory. According to the results, we can see that most of the teachers think that students' involvement on fulfilling internship is high, approximately 76% of them and only 24% think that it is not so much. Compared to the company representatives, we can see that there is a completely different opinion on the issue. Companies think that students' involvement is not so high, and teachers think that their involvement is high. Just to mention that teachers check the students' diaries when they have finished their internship and there is a space on their papers for teachers' comments. On the other hand, companies deliver duties to the students and they are obliged to fulfil them. At the end, companies give feedback on students' involvement on their internship. It appears more teachers feel that students' response is more positive.

Regarding the length of practical training, 55% of teacher's surveyed claim that the fulfilment of this obligation should be thirty days long, but only 4% of them claim that internships should last more than six months. 31% of the teachers surveyed suggested that internships should last 2-6 months and 10% of them claim that it should last less than 30 days. As can be seen from the results, most of the teachers think that the practical teaching should last 30 days and longer, approximately 90% of them and only 10% think it should lest less than 30 days. Compared to company representatives, it seems that they remain the same. Both companies and teachers think that students' internship should last 30 days and longer.

Intriguingly, only 38% of the teachers surveyed claim that the practical teaching obligation is very important, 42% claims it depends on students' interest, 10% of them think it is not effective and 10% claim 'other' opinion. Compared with teachers' opinions, we can see that only 34% of company representatives claim that the practical opportunity impacts on quality and the others 66% think the contrary. According to these mixed answers by teachers and company representatives, we can see that the practical teaching experience does not have a big impact on quality of student learning; only 34% of companies and 38% of teachers think positively of practical teaching and its effect.

Conclusion

We had three main hypotheses concerning practical teaching. For the first one, that students only undertake practical teaching formally, as legally required, we can see that teachers and representatives of the companies express mixed opinions about South East European University students and their practical teaching. Most of the company representatives think students' involvement is not as expected, approximately 61% of them. However, 39% of companies claim that students are involved a lot while fulfilling their internship. Intriguingly, only 38% of the teachers' surveyed claim that the practical teaching obligation is very important, 42% claim it depends on students' interest, 10% of them think it is not effective and 10% claim an 'other' opinion. According to these mixed answers by teachers and company representatives, we can see that the practical teaching experience does not have as big an impact on the quality of student learning as required; only 34% of companies and 38% of teachers think positively of practical teaching and its effect. This could be improved.

The second hypothesis was that public and private sectors do not comply with this law as can be seen from the experience of our students. From the results obtained from the profile of the companies where our students do practical teaching, we see that Business students complete internships in trade companies, services and banks; CST students do so in services, state institutions and trade; Law students and Public Administration students in state institutions and services; while those from Languages serve primarily in educational institutions. From here it can be seen that the public and private sector are indeed willing to cooperate with South East European University students to comply with the requirement for practical teaching. Analysing the student data illustrated several variables in terms of sector across faculties which broadly reflect where students might find employment after graduation. If we compere the practical teaching results with the SEEU Annual Employability Report , we can see that the sectors remain the same. Given that only companies who accepted students completed the survey, we still need more support from the public and business sector.

Finally, we suggested that if the Career Centre, mentors and employers continuously cooperate with students, then the students will fulfil the practical teaching obligation with more value. From the results obtained in the field, it was noted that developing cooperation between these four partners gives more effective results.

The first point is the institution where students find about their practical teaching. According to the results, we can see that most students (46.29%) have heard about a placement from their family members; about 23.14% from the SEEU Career Centre; and the rest have learned from teachers and newspapers, in proportions being approximately 3.47 % and 5.55 %. Teachers and the Career Centre are represented by 26, 61% and according to our opinion this percent should be increased. The two partners should be the most important places where students find information about new internship positions although family and small businesses will remain important.

Secondly, according to the student survey results, we can see that students of the Business and Economics Faculty claim that their mentors and the Career Centre helped them in fulfilling this requirement, in proportions of 47.05% and 31.76%. PAPS students report almost the same division, with 40.19% and 48.03%, whilst the Faculty of Law students claim that the Career Centre and their mentors assisted them roughly equally, with each receiving approximately 38%. Similar percentages exist for the two remaining faculties, LCC and CST. We can therefore note that teachers and the Career Centre are engaged actively in this legally mandated process to a greater degree than are businessmen and representatives of the private sector.

Lastly, the other point that shows the cooperation and mutual understanding between the Career Centre, teachers and companies is the length of practical teaching. From the results, we can see that most of the teachers think that the practical teaching should last 30 days and longer, approximately 90% of them and only 10% think it should lest less than 30 days. Compared to company representatives, it seems that they have the same opinion. Both companies and teachers think that students' internship should last 30 days and longer. This is useful for developing effective internships for students and partnerships between stakeholders.

Recommendation

We propose that close cooperation amongst the four actors involved in practical teaching (students, university teachers and academic administrators, and representatives of companies) should be increased so that the result will be an increased quality of education and more value for practical teaching. The fulfilment of the practical teaching/internship required by law, when accompanied by proper management by mentors, as well as the willingness of employers to accept and train students as part of their new staff, promotes effective cooperation between the educational and commercial sectors of society and should be developed.

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Appendix 1

Прашалник за практична настава (за студенти)

Почитувани студенти од втора година на ЈИЕУ, со задоволство ви испратиме анкета која ќе ви зема неколку минути од вашето време, каде што ќе бидеме во можност да се добие попрецизни информации за извршување на практичната настава за нашите студенти, меѓу кои сте и вие. Оваа анкета е спроведена од страна на Центарот за Кариера во ЈИЕУ.
Ви благодариме за Вашата соработка!

* Required

Факултет: *

- БЕ (Факултет за бизнис и економија)
- ЈАПН (Факултет за јавна администрација и политички науки)
- ПН (Правни науки)
- ЈКК (Јазици, култури и комуникација)
- СНТ (Современи науки и технологии)

ПОЛ *

- М
- Ж

Етничка припадност *

- АЛБ
- МАК
- ТУР
- Other:

Дали имате завршено со практичната настава? *

- ДА
- НЕ

Кога сте почнале со вашата практична настава?

- после 1-3 месеци
- после 4-6 месеци

University E-Studying in the Republic of Macedonia

Darinka Marolova
Kostadin Golakov
Goce Delcev University - Stip

Introduction

Teachers of the 21st century live in the era of modern technology and globalization that brings rapid changes in all spheres of human life. As a result of the tendency to constantly create new information, objects and establish new relationships between objects and actions, as well as the on-going general development of technology, teachers are continually seeking new knowledge and skills. As links in modern society and being constantly surrounded by these kind of innovations, teachers must get used to this new and rapidly developing technological environment, combine technology and methodology, that is, adapt to the need for fast, timely and effective education that offers knowledge and information which are open and widely available.

The Republic of Macedonia has introduced (or is still in the development phase) modern information and communication technologies in all spheres of life, including education as a very important part of society. In education, this is taking place at a rapid pace, and we will focus only on the actual implementation of e-Learning by teachers and other associates and administrative staff of the University "Goce Delchev" Stip. Although this university is quite new – it has existed since 2007 - still with its commitment and focus, it is very close to achieving, perhaps, the most important goal of any educational institution, which is to provide better and more qualitative education for its students, by applying e-Learning as the most modern form of learning. e-Learning, i.e. learning by use of technical tools with all its software enhancements is the peak of modern education. This paper is based on the research methods and results of the application of e-Learning as part of everyday practice at the University "Goce Delchev " in Stip. It aims to give a presentation of the experience of the electronic interaction between teacher and student, electronic exercises for independent work, learning materials, forums, surveys and evaluation of results achieved. In particular, it identifies the benefits and possible drawbacks of this modern way of learning, and makes an effort to promote the positive aspects that could offer suggestions for improvement and development of this way of learning. This scientific paper includes the features, activities and steps to be taken from the creation of the course by the teacher, use by teachers and students to evaluating the achieved knowledge.

E-Learning as a Modern Form of Learning

There are many definitions of e-Learning, but the most common is the one that says "e-Learning is teaching and / or learning using the Internet."

e-Learning, as a type of modern learning, is enabled at Goce Delchev University through the electronic tool Moodle used to create interactive Web courses, which offer more opportunities for students and teachers. This e-Learning platform offers effective online courses and content that includes media in the form of text, image and video. In addition, it offers all kinds of forms of electronically supported learning and teaching, as well as opportunities for the highest quality digital communication.

In terms of access and security, a teacher logs on to the Internet with his/her username and password through the official website of the University, creates a course in his/her own way, for the appropriate syllabus. In order for students to have access to the course, they register as participants with their own user names and passwords. All courses are available to them, created by all teachers and all schools, and for ease of getting to the appropriate course, they are arranged in categories. The main categories are: undergraduate and graduate studies, which are further divided according to the faculties, then groups/directions and finally according to year of study and program. Some courses are password protected.

Moodle is an interactive way of learning through the Internet, which offers the following options:

- Highlighting image or text in the form of a statement, tutorial, lesson, etc.;
- The assignment of a task or activity such as a quiz, survey, workshop, project (individual or group), the theme for the seminar or topic for an essay;
- A reference to the sources of knowledge: web-page, the title of the book, dictionary, encyclopedia, other resources;
- Enabling social interaction through forums and social networks, where they write, arrange,

inform, discuss and post comments, with messages arriving on their e-mail. Social interaction is practiced by students and teachers.

Independent work of students is encouraged. The teacher regularly monitors the activities of students based on their comments, questions, discussions, quizzes, polls, results of written work and essays, and gets an insight on the students, specifically their interests, motivation, desires, skills and knowledge. Depending on the interests and abilities of each student, a teacher may propose a movie, a work of literature or music, or refer to a website, encyclopedia, book, dictionary or lexicon where he can find more information about the area. In this way, the teacher can make his/her own dictionary or lexicon, or give access to students to participate in the creation of the dictionary or lexicon and then use it as a source of information. The teacher may recommend a discussion topic in the forums and follow-up student opinions and views. Topics may be suggested by students. Moreover, the teacher may provide additional exercises and assignments to students to expand their knowledge. These do not necessarily have to be considered in formal evaluation, because such extra-curricular activities are aimed at expanding knowledge in accordance with the interests of the student.

The most important aspect of this is the open contact between teachers and students. However, although the teacher monitors each activity and the student's interest all the time, it must be recognized that the teacher does not always get the real picture. Sometimes a student can open courses without any special interest, but simply out of curiosity, or to leave a false impression of an active student.

e-Learning in the World

e-Learning is encouraged not only at the University "Goce Delchev" - Stip, but widely in higher education. Many believe that e-Learning can enrich knowledge, experience and learning, assist in cutting costs and, of course, increase opportunities for education. All forecasts concerning this area of education say that we will increase the number of students who learn on-line, unlike the classical approach which requires physical presence in the classroom. Accordingly, it is considered that the number of teachers who teach online will increase at the expense of teachers who will be using classical methods of teaching. There is constant evaluation and improvement in e-Learning systems.

According to some research, it is believed that the Internet currently has over 15 million online courses with the trend towards constant growth. In the U.S., the number of companies dealing with e-Learning is more than 1000. Some companies or institutions offer courses only for employed students, who may want to advance in their career or need to upgrade skills such as management, finance or IT. There is also an increase in the number of online training courses for teachers.

Thus, the Massachusetts Institute of Technology (MIT) has announced that all courses are available not only to students, but also for people who are not students of the University. The virtual University of Monterrey has provided a one-year course for 25,000 teachers by satellite TV or on the Internet since 1989. In June 2000, the European Commission formally integrated e-Learning into its global e-Europe plan, and provided 13 billion Euro for the development and strengthening of e-Learning in the European Union. There are universities in which the main curriculum is based on distance learning. This is also the case with countries that are not members of the European Union, such as Russia, Ukraine and countries of the Western Balkans. In China, over half a million students study at 38 online universities. The Republic of Korea has adopted a national doctrine which aims for an "Edutopia" - a state in which everyone will have the opportunity to learn through the Internet anywhere and at anytime. In the Philippines, Malaysia, Indonesia, Thailand, Singapore, India, the number of universities that implement e-Learning is increasing day by day as it is in countries in Africa, where there has been an even greater use of the Internet and learning courses (see Joanne Capper: e-Learning: Current Status and International Experience, World Bank).

Moreover, associations, private institutions and centers offer training in using e-Learning platforms, monitor application platforms, upgrade systems, remove any software problems, and using positive and negative experiences of the past, promote this modern way of learning. There is a noticeable increase in the number of partnerships between higher education institutions and private corporations that use platforms for e-Learning, which is a positive signal about the future of this mode of education.

Implementation of e-learning at the University "Goce Delchev" - Stip

University "Goce Delchev" - Stip was established in March 2007, and an aim was to organize the highest level of use of computer technology in all areas of teaching, but also in management and administration. For this purpose, computers were provided for each employee, many classrooms and computer labs were opened

with interactive boards, with a modern computer network which is connected to all campuses with optical connection set between them. Apart from that, there has been a successful implementation of the systems: Document Management System and Learning Management System (Moodle).

At university level, an e-Learning center was established whose aim was to provide continuous support for all teachers and assistants, monitoring, development and implementation of new technologies for electronic supported learning and implementation of the e-Learning platform Moodle.

In order to ensure the successful implementation and integration of e-Learning at the University, several training sessions for teachers, assistants and administrators were conducted. For this purpose, the development of specific software was necessary that fitted the needs of teachers and teaching, and certainly the development of appropriate curriculum which would allow the integration of e-Learning in daily teaching activities. Therefore, in the creation of new curricula, all experience, both positive and negative, on the application of e-Learning, was taken into account.

Currently, this platform is successfully used by academic staff and collaborators on the one hand and students on the other. According to the survey entitled Implementation of e-Learning - Experiences from the University "Goce Delchev" - Stip by Dr. Zoran Zdravev, the current situation is such that the number of created courses in December 2012 was 930, the number of users about 13 548, the number of activities 41 397, the number of posts 34,047, the number of resources posted 8139, the average number of users per course 44.26 and the number of modules per course 12.70.

In order to achieve this high degree of success in the implementation of e-Learning at the University, we had to overcome some obstacles and challenges such as: lack of equipment and skills to use this advanced equipment, skepticism of some teachers and staff (especially the older members of staff) and lack of motivation which in turn was a cause of ignorance about this new method. Fortunately all these obstacles are now behind us and we can be proud of the success which was achieved. We have done this by ensuring that we had modern computer equipment and regular training to upgrade the skills of using IT equipment and resources. We also established a center for e-Learning which aimed at monitoring the state of computer technology (hardware and software), providing continuous training for users and monitoring and promotion of e-Learning.

e-Learning and Student Assessment

However, with regard to the assessment of students, although it is partially possible for the evaluation of students to be done electronically, the student's physical attendance in lectures / tutorials and mid-term and final exams is still regarded as the best and most reliable method. Experience shows that direct contact between teacher and student is still considered the most appropriate assessment method. In that way, we avoid any possibility of manipulation and cheating by students, because otherwise, the teacher is never 100% sure who is sitting on the other end of the electronic connection, and which tools the student is using at the time of evaluation (dictionaries, encyclopedias, textbooks, websites, etc.). Seminar work and student essays can be uploaded from home, but the teacher still has to read and evaluate them. Automatic assessment of written material is still not feasible because the machine can only take into account possible grammatical errors, and not content and stylistic value of the text. There is a possibility of participation in quizzes with automatic grading, but the practice at our university has shown that these results are not taken into account when conducting the final evaluation; they are done only for students to compete among themselves or to allow individuals to assess his/her own level of knowledge.

Benefits and Drawbacks of E-Learning

The current application of e-Learning in teaching in higher education has shown both positive and negative sides. The benefits are that the interaction between teacher and student is at the highest possible level, 24 hours a day, so the teacher can monitor student activity at any time. This way of learning offers a range of knowledge resources that are easy to use, and opportunities to activate and motivate students to actively participate in teaching at home, where they are quite comfortable, and everyone finds it simpler to sit in front of a computer, which today is a mandatory utility in every home, rather than travelling to the institution, to attend classes physically, or to go to a library where they work in a room with many other people and search materials to upgrade their knowledge.

This kind of learning is particularly well suited to part-time students who may be prevented from attending classes for justified reasons. It allows them to be updated with events and to complement teaching.

Despite many benefits, this kind of learning has its weaknesses. One negative side is that the teacher spends a lot of time in the preparation of the course (in particular if he/she has to make many courses), and he/she must have knowledge about the appropriate use of tools. Apart from that, the teacher must be able to adapt the contents of the e-Learning to the planned teaching material. Some teachers, especially the older ones, are not willing to change their classical methods of teaching which they have used for several years – which may not applicable nowadays and are considered as obsolete – or to replace them with new methods which include technical support.

Another downside is that there is no live interaction between teacher and student and that students remain a long time in front of the computer, not moving, and interaction through the Internet is not simultaneous and parallel, because the contact is in the form of sending emails. Moreover, many of the students did not use e-Learning seriously, as a way of learning, but more as a way of fun, interaction and so on.

Conclusion

Despite these challenges, our experience showed that interaction through e-Learning allows improvements in the quality of teaching and learning. It was a new experience in the way of studying but with excellent results. Even though this new mode of learning is still developing, with the advancement of technology and methodology, it is expected to become routine and distinct it its way of teaching, learning and assessment. In order to improve the quality of teaching, we propose the integration of e-Learning with classical teaching methods, which would include delivering some of the tasks assisted with Moodle during the lectures on the faculty premises. So, the teacher would be sure that students perform tasks independently and could include the results of the e-Learning in the students' final grade. We have to admit that the e-Learning system which we have today is not mature enough to be applied in assessment. For this purpose, it should be upgraded in terms of setting the camera for transmission of image and sound, so as to be able to monitor that the student is expressing his knowledge independently, and that s/he does not read and that nobody else is telling him/her what to write. Also, to prevent possible manipulation through students opening other tools on the screen (eg. Encyclopedia or textbook) during examinations, the system should offer the option to ban the opening of other tools. But even if we make a "perfect system" for assessment, information technology can never be safe from hacking which keeps pace with the development of technology itself. Another conclusion is that it is necessary to consider the development of platforms for electronic education by adding entertaining content that would hold the attention of students longer and thus facilitate the online learning method. Since research shows that students use the Internet primarily for reading, posting or downloading content from Facebook, YouTube or Wikipedia, and not primarily for their own intellectual upgrade, we think that there should not be an obstacle for further synthesis of e-Learning platforms and content with non–educative character.

By uniting e-Learning and fun, we would achieve perfect results.

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THE IMPACT OF AN OBSERVATION PROCEDURE ON INDIVIDUAL IMPROVEMENT IN LEARNING AND TEACHING

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Introductory Context

The change of focus from teaching to learning in universities is a current and key trend at international, national and institutional levels. This paper examines the layers of quality assurance which support this development, and specifically, the impact of the interaction between academic colleagues giving and receiving feedback on teaching.

The long-term vision expressed by European Higher Education Ministers at Leuven-la-Neuve in 2009 reasserted the importance of the teaching mission of higher education, the need to focus on student-centred learning, empowerment of individual learners and new approaches to learning and teaching. These commitments were re-stated in 2012 in Bucharest with a requirement for higher education institutions to establish conditions that foster student-centred learning and innovative teaching methods (Communiqués of European Higher Education Ministers, 2009, 2012). The European University Association identifies quality assurance and the development of transparency tools to support, amongst other things, the quality of learning and teaching as an important current work and policy area. The Bologna Guidelines and Standards (2007) maintain that since 'teachers are the single most important learning resource available to most students', institutions should ensure that academic staff are 'qualified and competent'. Importantly, students themselves are at the forefront of expecting change and improvement in the quality of their own learning experience. They want to become 'active citizens, analytical thinkers and agents for change' and see student-centred learning as a 'welcome and fresh alternative' and as 'one layer in a cake of various harmonization instruments and procedures: the layer with direct impact on the learning process' (European Students' Union, 2012). It should be noted that at the European level, 95% of higher education institutions use student feedback questionnaires for quality enhancement and 61% regularly carry out evaluations for individual teaching staff. In the 'Trends' document, data indicate that institutions who have a wider, European focus are 'more likely to evaluate both teaching and research activities regularly' (Surcock and Smidt, 2010).

The government of the Republic of Macedonia has responded to this focus on improving learning and teaching by using legal means. These include the requirement to publish learning outcomes, the inclusion of clinical and practical teaching and the re-balancing of the curriculum elements. In 2011, the government introduced a national ranking process with criteria and weightings for the quality of learning and teaching, staff qualification, student entry qualifications, number of foreign and scholarship students, student-teacher ratio, student focused resource spending, a 1% weighting on graduation on time and 2% on employability. There were no more qualitative criteria.

These broader trends and strategies may seem like good news and positive progress, but many teachers in higher education in Macedonia still do not receive training in, or advice about, pedagogy or student-centred approaches before they start teaching. In common with academics everywhere, their focus may not primarily be on reflective teaching practice or the wider scholarship of learning but more on subject expertise and research, an emphasis heavily re-enforced by the allocation of funds and career progression.

Moreover, for the individual teacher as for institutional and external agencies, important questions remain: what constitutes high quality teaching, what criteria might be developed and applied which would have general recognition and acceptance across subject areas, institutions and countries, what level of quality might be acceptable (standards) and what specific processes or approaches might best evaluate and support best practice and improvement? For example, The UK Professional Standards Framework for teaching and supporting higher education (2011) defines at national level five areas of teaching activity, linked to areas or core knowledge and professional values, with descriptors explicitly linked to teaching experience and career progression/status. No specific assessment mechanisms are given here on the assumption that universities will develop their own internal procedures. In 'A Swedish perspective on Pedagogical Competence' (Ed: Ryegard, Apelgren, Olsson 2010) in the chapter on Pedagogical Competence (Apelgen, Giertz 2010), the authors describe the scholarly development of teaching portfolios to underpin quality enhancement and individual teacher development. They define teaching competence as: 'the ability and will to regularly apply

the attitude, the knowledge and the skills that promote the learning of the teacher's students in the best way' and identify 11 assessment criteria including attitude, teacher belief, knowledge related to education and learning and linked to research, teaching skills, teamwork and organization ability and leadership. This was introduced at all levels of the organization and is linked to positive professional development opportunities. In another chapter, Olsson, Martensson and Roxa also highlight the underpinning theory and beneficial practice of teachers 'observing' and reflecting on their own practice and writing this up in a systematic and scholarly manner for the purpose of quality enhancement and individual promotion. They have also provided a useful definition of teacher competence which 'presupposes good, broad and deep knowledge of the subject of teaching. A pedagogically proficient teacher shall in different contexts demonstrate a good ability to use their subject knowledge in research-related, practical, pedagogical actions with student learning in focus.' (Olsson, Martensson and Roxa, 2010). However, neatly defining teaching quality or choosing between diverse educational theories is complex and another approach is to listen to and learn from the testimony of teachers acknowledged to be excellent, whose stories exemplify cross-cultural, generic competences and provide practical, inspiring examples. 'Readers who follow the advice and practice of these excellent teachers should be able to improve the quality of their own teaching' (Kember, 2007). This is a grassroots, self-help model without significant reference to institutional or external monitoring.

There are a number of challenges. Definitions of competence and strategies to strengthen them are complex and diverse; assessment methodologies and their impact are also not easy to design, implement and evaluate. Indeed, there is the view that 'the learning process cannot be assessed as it combines various determinants..' and that attempts to assess it 'give rise to subjective judgments' (Henard 2010). It is acknowledged that progress is steady and long-term. The students themselves understand that 'a change towards more student-centred higher education requires changes in the mindset of the actors and the structures of higher education, both at the grass roots level at institutions and at policymaking level' (European Students Union, 2012).

However, it is clear that the most positive examples of effective processes to support the quality of learning and teaching are underpinned by a holistic, consultative, reflective and scholarly approach and that internal quality assurance has the potential for positive influence.

When the focus switches to the evaluation of individual teaching and mechanisms for supporting quality improvement, there appear to be widespread uses of student evaluation, peer review and reliance on qualification and experience profile, but less evidence of use of direct observation with feedback. However, there is a view that, 'amongst all instructional development efforts, the most promising way of fundamentally changing post-secondary teaching is to provide individualized, formative feedback.' (Brinko, 1993). She highlights many aspects of what constitutes effective feedback but points out that 'rarely do observers observe the way in which information is conveyed to the instructor and fewer still analyze this process'. The quality initiative described below and the specific focus of this paper aim to contribute to such an analysis.

Institutional Context

South East European University (SEEU) is eleven years old and is currently placed second in the National Ranking system from 19 higher education institutions in the Republic of Macedonia. It has public-private status and offers socio-economic subjects in five Faculties in three languages (Albanian, Macedonian and English) to around 5,000 students. Its primary mission statement is a commitment to excellence in teaching and research. Whilst it develops its research capacity, and in the context of its reliance on student fees and therefore on its reputation with local stakeholders, the quality of teaching remains crucial to its sustainability and most importantly, to serving its students and the community.

Since its establishment, it has developed an integrated approach to strategy and practice and made positive use of wider European trends and developments. It has broadly followed the Bologna guidelines for degree structure, ECTS, Diploma Supplement and the focus on mobility and quality assurance. It has received great benefit from the EUA Institutional Review Programme. Importantly, staff have a positive view of such international guidance. In a 2009 internal survey, 52% felt that Bologna initiatives were very relevant to the institution. In the current project on Differentiation, Equity, Productivity (Centre for Education Policy, in progress), SEEU staff were the most positive from 16 eastern European universities in 8 countries about the impact of Bologna on the quality of their institution. Management have made good use of international tools and concepts as a valuable ally in supporting debate, formulating strategy and driving change.

Internally, quality assurance processes have been developed consultatively and with attention to transparency and consistency, are integrated, reviewed and developed regularly. For example, with regard to the quality of learning and teaching, the students provide direct input through the Student Evaluation Survey, at individual and unit level. The university's Observation Scheme provides individual, Faculty and institutional feedback. Both processes are actively linked to the annual Staff Evaluation procedure, professional development and the process of academic promotion. As before, the Centre for Education Policy preliminary project results show that SEEU staff are the most positive about the impact of its internal leadership.

Internal Quality Assurance of Learning and Teaching at SEEU

The Observation Procedure is in its fifth year of implementation. It requires the annual observation of every teacher, from junior to senior faculty and including senior management. There are two observers, usually one from the Faculty with some subject expertise and one with methodological training/experience. Observers are selected because of their position eg Dean of Faculty or because of their pedagogical expertise/experience and demonstrated good practice. All are trained before they observe. The training combines discussion of teacher competencies, research analysis and practical application of the university procedure including evaluating the trainer's performance. Of particular use is the trainee analysis of the research carried out by Hatzipanos and Lygo-Baner which indicated that teachers value pre-observation meetings, observation and most of all post-observation feedback and that experienced educational developers identified the most important value of an observation process as encouraging critical reflection on teaching (Hatzipangos, Lygo-Baner 2006).

The process itself consists of three phases. The first is a pre-observation meeting between the main observer and the teacher during which the lesson plan (content, learning context, teaching and assessment methods) and related materials are discussed. The intention is to ensure that the observers understand the context of the class and the teacher has an opportunity for active reflection on the planned learning, with the possibility of adjustments to the plan. The second phase is the observation itself, which must last a minimum of one hour and finish at the end of the session or at a suitable break. The observers sit unobtrusively in the class and observe what happens. This includes the teacher's presentation of the material, methods of engaging students, class management, quality and use of resources and assessing student progress during the class; plus the response, demonstrated understanding and output of the students. Observers then confer concerning what they observed, identify strengths, areas for consideration and advice. They agree general 'judgments' according to a five point scale from outstanding to unsatisfactory, for learning, teaching, classroom management, resources and monitoring student progress. They prepare a draft report on a standard template. The final, perhaps most valuable part, is a follow-up meeting between the main observer and the teacher. Before this meeting, the teacher may complete a Self-Evaluation Form analyzing the quality of the class for use during the feedback discussion. The meeting itself provides an opportunity for feedback and active discussion, in a supportive, confidential setting, at which the draft report is analysed, good practice acknowledged and areas for improvement considered, with evidence and helpful advice as required. The teacher may add a comment on the form if desired, the form is signed by all parties and copies go to the individual, the Faculty and the Quality Office for general quality assurance purposes. Finally, on a half year and full year basis, the Quality Office provides a Faculty profile which includes detailed information about strengths and weaknesses identified during observations for discussion with each Faculty; as well as a summary report at University level, with evaluation and recommendations which goes to all staff and students.

Whilst there is good integration of the process with other institutional policies concerning quality enhancement and staff performance, the process is more focused on encouraging critical reflection on teaching and deepening understanding of ideas and techniques Hatzipangos, Lygo-Baner (2006); it is less about developing scholarship.

There is good indication that the Observation scheme has had a positive incremental impact over the years of implementation. Data from the Full Year Observation Report 2011-12 provides evidence of a steady improvement in general and individual quality of teaching. Observation Feedback Reports are used actively and 'the substantial majority of the reports were completed fully and with useful information and detail' (SEEU Quality Office, 2012). This initiative has encouraged a wider ownership and depth of quality culture and increased awareness of pedagogical issues and commitment to improving classroom practice. For example, an internal survey carried out in 2009 indicated that 77% of staff felt the scheme had helped them

reflect on their teaching, 68% said it had made them more aware of teaching methodologies and strategies and 66% believed that the post-observation feedback enabled positive discussion. Members of staff commented that this was a 'needed' and 'positive' process that had 'mobilized the staff'. There is always lively debate and helpful feedback provided during the discussions with Faculties and Observers report that they learn as much if not more than the teachers they observe. Almost all training sessions conducted with Faculties at their request have been well evaluated.

The use of general judgments concerning learning, teaching, classroom management, resources and monitoring student progress remains controversial. They are considered by some staff to be subjective and a barrier to more meaningful discussion. There is sometimes a disconnect between the judgments for teaching (usually higher) and learning (usually lower). Observers suggest that it is easier to give advice which is not perceived as being more directly about personal performance. Some staff also believe that because the Observations are organized and discussed in advance, it is too easy for individuals to prepare a splendid performance on a once-a-year basis or to cover less satisfactory regular practice. To investigate this, the Rector and members of the senior management team carried out 'unannounced' observations last year. From 15 unannounced observations, it was pleasing to note that most judgments were similar to those reported from the regular observation reports of the same teachers, and actually erred on the positive side.

It appears we also need to continue to develop our ability to critically analyze our strengths and weaknesses. A teacher competence checklist was developed from the best practice identified in the University and during a training programme in January 2012, Faculty staff were asked to self-evaluation their teaching skills. A massive 96% estimated that they were either excellent or very good in all areas. However, when presented with the results, they expressed amusement and some cynicism at the results.

Finally, there remain issues with the quality of some feedback reports. Some lack detail, useful advice and/or consistency and have become routine; a few are 'too good to be true'. Informal feedback suggests that such over-inflated evaluation may come from a number of causes: the desire not to upset a colleague, the wish to use the judgments to motivate or in a very few cases, pressure from the teacher to change the report to be more favourable. These reports were clearly of less use to teachers and weaken the validity and value of the general process. Continual development of Observer reporting skills is required as is a regular review of who is part of the observation team.

Research Hypothesis

Teaching staff at SEEU are engaged in developing their own teaching practice and self-reflection skills and expect the observation reports to be of the highest quality. They acknowledge the value of giving and receiving effective feedback. Therefore, we analyzed the extent to which the process of observing teaching and providing feedback has had a positive impact. In particular, in order to investigate at individual staff level the use of observation reports and the impact of the post-observation feedback meetings, a more focused, in-depth analysis was conducted about the experience and value of the individual post-observation meetings and whether they impacted on the teacher's willingness to reflect on, accept and consider improvements to their individual teaching practice.

Method

The feedback reports used in the specific post-observation meetings were analyzed for quality and usage. The use and value of the Self-Evaluation Forms was checked. The Quality Officer monitored 18 post-observation feedback discussions (10% of total observations) conducted during academic year 2011-12, in agreement with observers and teachers, including junior and senior faculty, from all five Faculties and two Centres. Notes were taken of what happened regarding communication and outcomes. Finally, more informal feedback from observers was considered.

Analysis of Feedback Monitoring

The teachers involved in the monitoring were satisfied with the observation scheme in general and many commented on this explicitly. They felt that it helped to improve their teaching. Where the observers giving feedback explained why the process was important, why and how the report would be used, the teachers took the process very seriously. Indeed, some shared their positive experience about the scheme and gave suggestions for improving it. The monitor noted that in two cases, the professors were very aware of the positive impact of the process but only commented on this indirectly, because they had been critical of the

scheme in the past. Notable also was the correlation between a useful pre-observation meeting and a positive post-observation meeting. In at least two cases, the teachers expressed surprise and satisfaction that strategies discussed before the class, and added to the teacher's plan at the suggestion of the observer, had worked well, generated more student interactivity and could be applied in future. The 5 teachers who had been or were observers were particularly responsive and also expressed clear understanding of the value of the process and feedback mechanism.

In one case, the feedback took place in a campus cafeteria and the meeting was interrupted by other colleagues. This interfered with the flow of the discussion and reduced value and satisfaction. Finally, a couple of times, the observer made comments specifically about the content of the lecture which is not a focus of the procedure. This caused a negative reaction from the teacher and diverted the discussion. These cases re-enforced the need to comply with the procedure which states that the meeting should be held in a comfortable, formal but friendly setting and focus on effective learning methodologies. The matter of discussing expert knowledge, content, material or level, remains a difficult issue to address.

With regard to the quality of the written feedback for the monitored meetings, it was noted that all 18 reports were very well written, with appropriate detail. Each section of the template contained evidenced based description, commended good practice and identified points for improvement, with suggestions for the teacher to consider. The judgments (eg good, outstanding, satisfactory) closely equated to the commentary and with the guidelines on 'Use of Language in Providing Feedback' (SEEU Observation Procedure, revised 2012). This meant that there was a very good basis on which to conduct the discussions and in most cases, the reports were used well.

However, it was noted that in a few cases, the observer made only positive comments and failed to mention any points for improvement, even when they were in the written report and the teacher was receptive. Also, in one meeting, the teacher focused on trying to improve the judgments and not very much on the details, which created a negative diversion which was difficult to manage. This 'grade' bargaining has also been reported to the Quality Office on a few other occasions and requires further consideration as part of any discussion on use of judgments and maintaining the integrity of a process.

With reference to the Self-Evaluation Form, it was completed by 11% of all teachers in 2011-12. In every one, the teachers had responded to the prompt questions by analyzing the strengths and weaknesses from their observed class. It was pleasing to note that although the observation report sometimes contained more details, in 100% of cases, the teacher had identified the same points and judgments as the observer. For the 2 whose feedback was observed, they demonstrated that they agreed with the observers' remarks and this made the discussion very positive. Teacher self-reflection worked particularly well when the observer giving feedback invited the teacher to analyze the lesson at the start of the meeting as well as during the discussion. In general, it appears that using this self-evaluation form helped the teacher to reflect on their practice and be more open to the observer's recommendations. It also helped the observer to approach issues for improvement and create a more open atmosphere.

It was clear from the monitoring and other informal feedback that teacher belief and opinion affected the impact of the feedback discussion. Where staff understood that teaching was a core responsibility and believed in the students and their ability to learn, they were more ready to consider the feedback, willing to consider different approaches and put in extra effort to maximize learning. However, some professors were very firm in their views: students were weak and getting weaker, inter-activity was not very feasible in lectures or larger classes, learning should occur in practical classes, it was a waste of time asking the students questions, it was only fruitful asking the ones who were known to be good, there should be separate classes for the best students, Power Point presentations never improved student learning and most crucially, some teachers indicated that none of these issues were his/her responsibility and there was nothing to be done. In 3 cases, summer school was the answer. Staff made a valid point about some students' competence in basic Maths or language required for a programme, which the students did not achieve at school and were not required to meet on-entry. Generally, however, the very firm expression of such opinions during post-observation meetings limited or almost prohibited active self-reflection. There were also a few times where the observer agreed with the teacher's views and re-enforced the conclusion that the teacher could not improve anything. There is a need for continued debate and regular promotion of positive theories and models of teaching.

The quality of the interaction and communication between teacher and observer also impacted significantly on the success of the feedback. In most cases, the meeting was conducted in a supportive way

with an open ethos and productive outcome. In a least 13 meetings, the observers giving feedback explained the process and purpose very clearly, focused the meeting immediately and facilitated self-reflection by the teacher first. They kept the discussion on track, highlighted all relevant points, stressed what could be changed and motivated the teacher to consider improvements diplomatically but clearly. Wherever they led the meetings with quiet confidence in their authority and advice, the teacher was reflective and expressed readiness to develop their teaching practice. It was also effective when they persevered with the main points and used different persuasive methods to convince the teacher.

The impact and outcome of the meetings appeared less effective in 5 cases for a combination of reasons as follows. The teacher took immediate control by explaining her/his general achievements, opinions and/or experience or by immediately justifying why the lesson was difficult; or the teacher was not really open to reflection and dealt with the process in a purely formal way. On occasion, the observer giving feedback allowed the teacher to just agree mechanically without expecting a serious response. In these cases, the observer had less chance of providing useful input. On the other hand, in a few cases, the observer expected a negative response from the teacher and pre-judged the meeting. The observer sounded too authoritarian and talked too much, even when the teacher appeared open to suggestion; or, the observer flattered the teacher, perhaps to motivate him/her but did not try to provide analytical points. Again, this limited positive impact. There was also informal evidence that a few observers were somewhat wary of the teachers because of their position or possible future position or were over-keen to avoid any fall out from the process. In general, however, most meetings had a positive outcome as monitored and it is necessary to maintain such positive practice, continue to improve the skills of giving and receiving feedback in an academic setting and support the development of observer status and skills.

Conclusions and Looking Forward

The Observation of Learning and Teaching Scheme has had a positive impact and the post-observation meeting monitoring carried out so far indicates that the individual teachers make good use of the process and in particular the feedback meetings. Feedback was particularly effective when the parameters were clear, the environment supportive, self reflection encouraged, solid, objective evidence and advice was provided, the observer managed the event pro-actively and positively, the teacher was open to debate and improvement and the actors communicated and negotiated the outcomes with mutual understanding and cooperation. The process was well supported by institutional and external policies and guidelines and well integrated with other procedures. There was evidence of a steady development by individuals and the institution towards the implementation of student centred learning and use of varied, active, appropriate teaching methodologies. There was room for improvement and innovation in the process, implementation, observer report writing and feedback skills and in continuously enhancing the quality of learning and teaching. There was a clear need to consider how to develop the scholarship of learning and teaching further.

In the following academic year, the monitoring will continue in order to get a deeper understanding of the post-observation process, and training will be provided to observers focused on this aspect. Very importantly, in 2012-3, the Quality Office intends to carry out follow-up monitoring of a class for each teacher to try to gauge if the teacher has implemented successfully any changes in teaching practice. In this way, it is hoped that the process and specifically the feedback mechanism will develop as a model of good practice and continue to support a positive learning experience for students.

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CONTINUOUS ASSESSMENT DEVELOPS THINKING SKILLS

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Introduction

Assessment can be defined as a process of collecting data that will be used to bring a decision, in this case, about students' achievement. Students' assessment is as important as the teaching process itself.

Pedagogy is a word that describes the art of teaching. Most teachers aim at improving this art. For this art to be perfected, pedagogy requires studying teaching methods that aim to achieve teaching objectives. One teaching objective is the development of the thinking skills of students. The development and possession of higher level thinking skills allows students to achieve intellectual freedom and development.

Content

Thinking is the cognitive process that allows us to make sense of the world, to question one's self about the challenges of daily living and find their solution in order to have a better life. The aim of this study is to observe the impact of continuous assessment on the development of students' thinking skills that would result in higher success in a Mathematics course.

It is important to emphasize that during Maths teaching, the development of thinking skills is incorporated everywhere. The basic thinking skills that are crucial as far as learning objectives are concerned are described in Bloom's Taxonomy. These objectives are divided into three areas: cognitive, affective and psychomotor. Bloom has emphasized the high impact of learning and experience in life on the intellectual development of a person. He has also stressed that "all children can learn".

Bloom's Taxonomy is used often and it represents the foundation of programs for thinking development. The taxonomy, as mentioned above, consists of three main parts that make up the cognitive, affective and psychomotor domains.

According to this taxonomy, the cognitive domain is divided into: remembering, understanding, applying, analyzing, synthesizing and assessing.

Remembering is the lowest level classification of Bloom's cognitive taxonomy. This puts the emphasis on memorising or remembering, and means recalling facts that are collected in the memory. This level describes the reproduction level of information that is remembered as it is stored. Even though the remembering level details the lowest level of thinking skills, it represents the basis of other thinking levels. This means that it is a necessary level to pass in order to gain the other higher thinking levels. During continuous assessment, we gave tasks of this level by asking students to identify certain formula, rules, definitions or concepts that are taught.

Understanding is the category that transforms information and facts in the most understandable form. Through this level, the material is understood and not simply memorized. This category integrates the information as such but does not extend it further. In other words, during identification of this level, the teacher can understand how much the student has comprehended and organized the given material. In this case, we gave exercises that have to do with understanding the material, specifically, the current given unit.

Applying is the Bloom's Taxonomy category where the absorbed information is used in practice to achieve a solution to an actual problem. In this kind of exercise, students were asked to apply their knowledge to various problems, specifically, they were given simpler assignments where they used formulas, rules, etc.

Analysis is the highest level of application. The notion of analysis means decomposition, breaking a whole into its components. This decomposition is done for the purpose of showing that components act together to achieve a common goal or effect.

Synthesis is a higher level than analysis and it reveals its opposite, because it depends on the process of combining parts for forming a whole that has not existed before. Synthesis is used to arrive at the solution of a specific problem where there should be a synthesizing of various parts – components and basic concepts that result in a new and more complicated concept.

Evaluation is the highest level in Bloom's Taxonomy. Evaluation means thinking operations that are used to take decisions about various issues. In our case, we would say that the student forms his/her own

thinking with certain previous criteria. While giving exercises from daily life, where a solution from daily life (e.g. problems related to economics) is expected, we arrived at the evaluation stage when students thought through the problem given.

Usually, Bloom's Taxonomy is shown as a pyramid, where its base represents knowledge, and levels progress upwards to the highest level of thinking skills that represents evaluation.

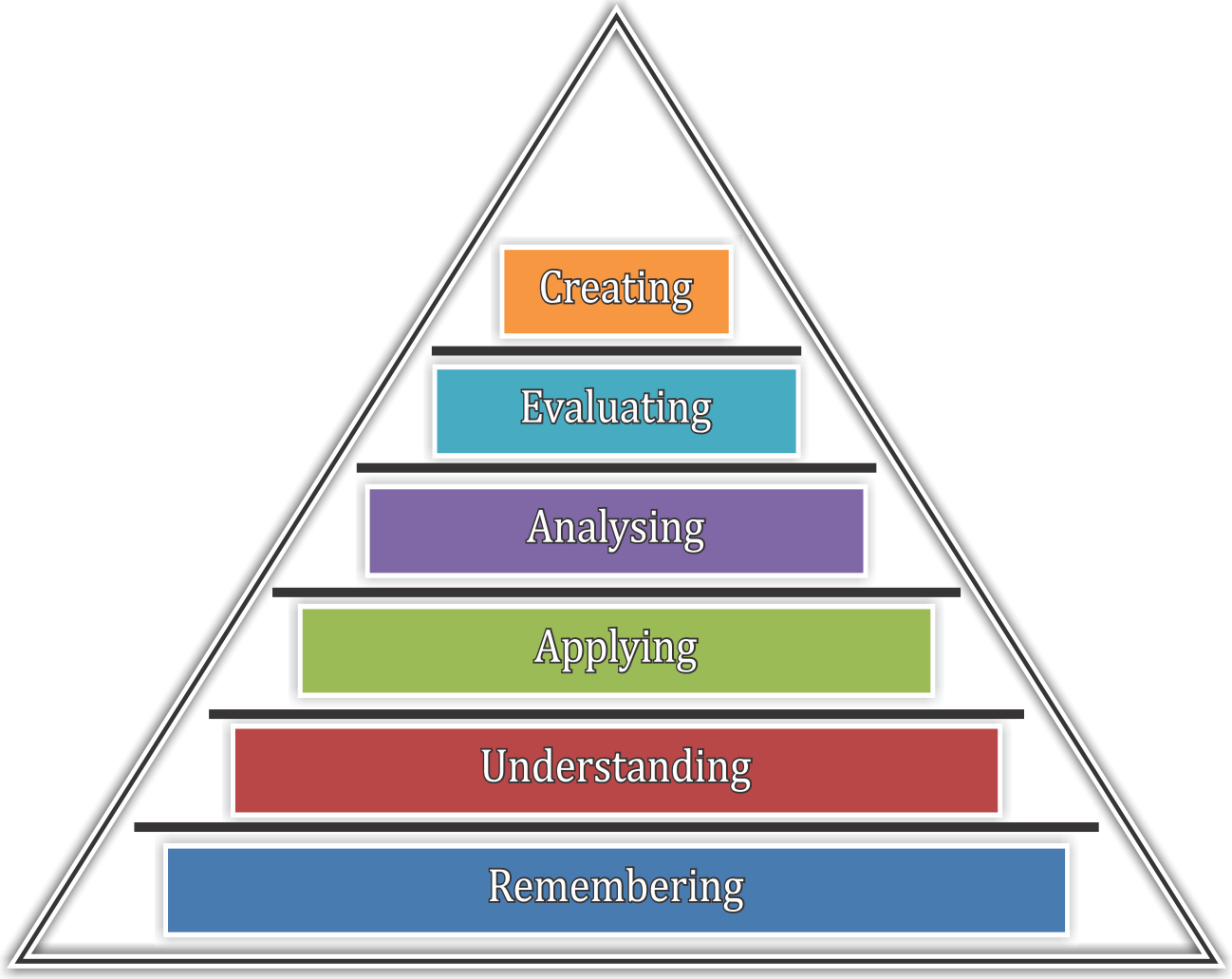

Fig.1 Bloom's Taxonomy new version** (shown as **a pyramid, Anderson & Krathwohl, 2001

According to Bloom's Taxonomy, in the process of teaching while aiming to achieve thinking skills development within the teaching objectives, it is necessary to use suitable questions or checks that reveal the degree of thinking skills, resulting in information about s student's learning level.

Such questions which show the degree of thinking skills development are given in the following table.

Competence	Skills Demonstrated and Question Cues
Knowledge	observation and recall of information knowledge of dates, events, places knowledge of major ideas mastery of subject matter *Question Cues*:list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where
Comprehension	understanding information grasping meaning translating knowledge into new contexts interpreting facts, compare, contrast ordering, grouping, inferring causes predicting consequences *Question Cues*:summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend.
Application	using information using methods, concepts, theories in new situations solving problems using required skills or knowledge *Questions Cues:* apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover
Analysis	seeing patterns organization of parts recognition of hidden meanings identification of components *Question Cues:*analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer
Synthesis	using old ideas to create new ones generalizing from given facts relating knowledge from several areas predicting, drawing conclusions *Question Cues:*combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite
Evaluation	comparing and discriminating between ideas assessing value of theories, presentations making choices based on reasoned argument verifying value of evidence recognizing subjectivity *Question Cues:*assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize

***Fig.2 Questions of the degree of thinking skills development (From Benjamin S. Bloom* Taxonomy of educational objectives.**
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In this paper, we are dealing with students' **evaluation,** and "to assess means to gather information that allows a judgement that will lighten the coming decision (Ch. Hadji), cited from T. Zajazi pg.738. We have

collected information about students during their continuous assessment and we have checked their progress in thinking skills development as well as information about their results during the formal assessment required from the syllabus of Mathematics in our Faculty of Business and Economics.

Assessment is continuous because we have done the same six times as well as the formal assessment.

Research Methodology

This research paper was completed as part of a project on student assessment led by the Quality Assurance Office at SEEU; we focused on the hypothesis that: "Continuous assessment develops thinking skills in students" and reflects in higher exam achievement. According to the syllabus, students are assessed through 2 quizzes, attendance in class, mid-term and final exam. Student evaluation is done based on points gathered from all these activities. Since we have focused on continuous assessment, we have carried out assessments in addition to the formal ones. This was done during the second semester, with first year students (Appendices 1 – 6). In setting these informal assessments, we were very careful in designing the exercises to be solved by students, because the goal was to develop students' thinking skills. This development was also evaluated through the student questionnaire given in Appendix 7.

The continuous assessment group consisted of 34 students, with 16 studying in Macedonian and 18 in Albanian. Students who were assessed with formal assessment methods only were all studying Albanian. Continuous assessment applied to a group consisting of 20 female and 14 male students. The formally assessed group had 17 female and 17 male students. Initially, all of the students took the same quiz that carried 5% of the final grade and the average grade received was about the same in both groups, with only a minor difference of 0.011. The continuous assessment of students was conducted using Mathematics exercises and tests which paid attention to exercise types in line with our aim of developing thinking skills through continuous assessment. Students were informed beforehand about the tests and they were performed after the teaching material was completed in class (lecture and practice). After each testing, there was a discussion about the way of solving the test exercises. Students were given time to understand their mistakes and they were also given explanations related to the difficulties they had encountered. So, students had the opportunity to receive explanations about study materials taught and therefore grasp them more clearly. So, a better follow up about students' progress was possible.

With indicator **I** we have used exercises for remembering, with **II** understanding; with **III** applying; with **IV** analyzing; with **V** synthesizing; and with **VI** evaluating. Below are the results of the students' achievement in the continuous assessments.

In the first assessment (testing) of thinking skills related to the first lecture, the results are as follows:

I	II	III	IV	V	VI
44%	80%	88%	84%	72%	36%

Fig.3 Results of the first assessment

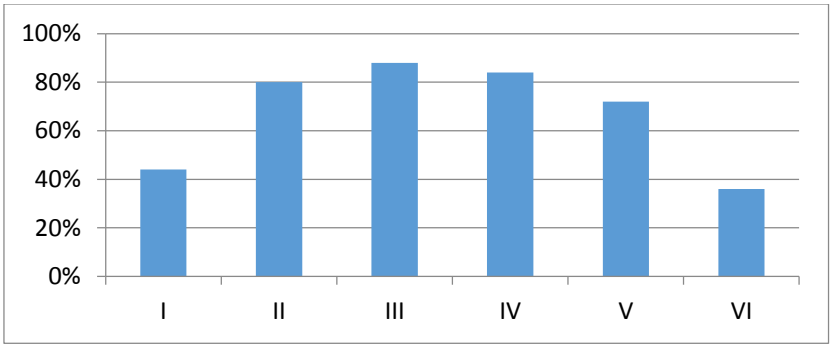

Chart1. Results of the first assessment

The results of the second assessment, related to the second lecture, are as follows:

I	II	III	IV	V	VI
68%	32%	86%	68%	82%	18%

Fig.4 Results of second assessment

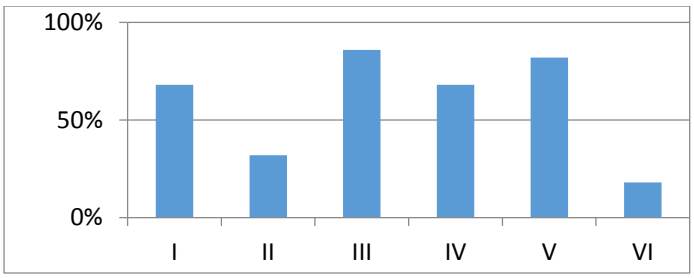

Chart2. Results of the second assessment

Results of the third assessment (third lecture) are as follows:

I	II	III	IV	V	VI
82%	45%	59%	55%	50%	32%

Fig.5 Results of third assessment

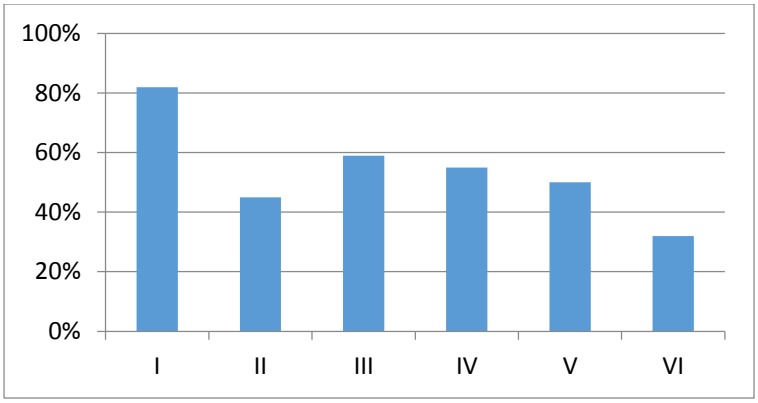

Chart3. Results of the third assessment

Results of the fourth assessment (third lecture) are as follows:

I	II	III	IV	V	VI
77%	50%	55%	50%	55%	27%

Fig.5 Results of fourth assessment

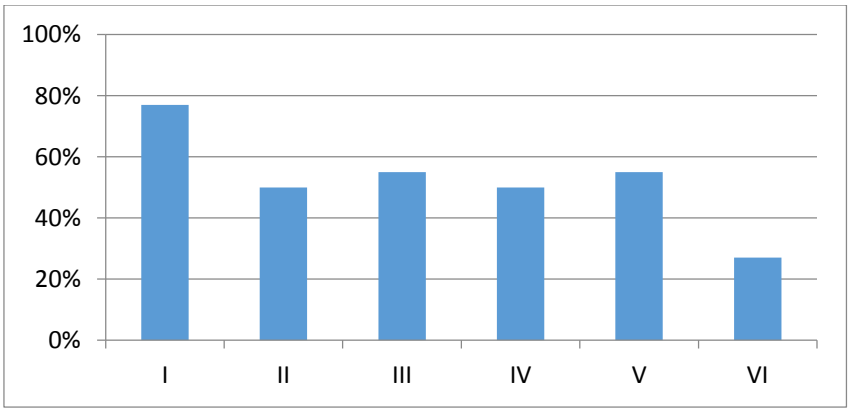

Chart4. Results of the fourth assessment

Results of fifth assessment (testing) are as follows:

I	II	III	IV	V	VI
73%	50%	45%	55%	50%	45%

Fig.6 Results of fifth assessment

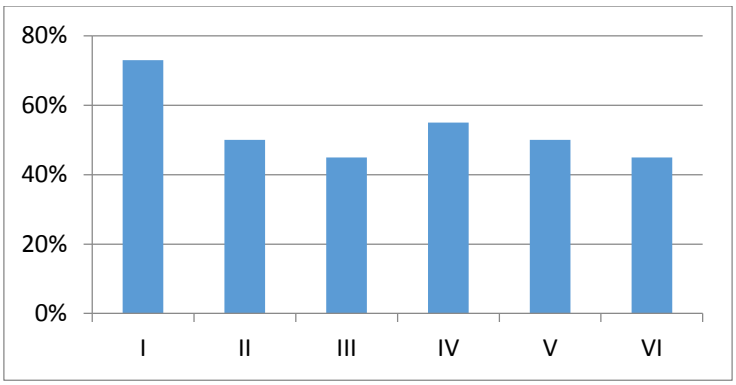

Chart5. Results of the fifth assessment

In the last test, the following are the results:

I	II	III	IV	V	VI
64%	59%	59%	55%	41%	37%

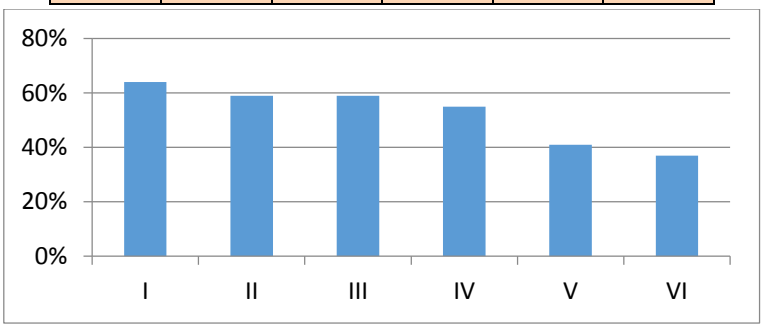

Fig.7 Results of the sixth assessment Chart 6. Results of the sixth assessment

If we compare all of the results, then we have the following picture:

	I	II	III	IV	V	VI
1	44%	80%	88%	84%	72%	36%
2	44%	80%	88%	84%	72%	36%
3	82%	45%	59%	55%	50%	32%
4	77%	50%	55%	50%	55%	27%
5	73%	50%	45%	55%	50%	45%
6	64%	59%	59%	55%	41%	37%

Fig.8 Comparison of results

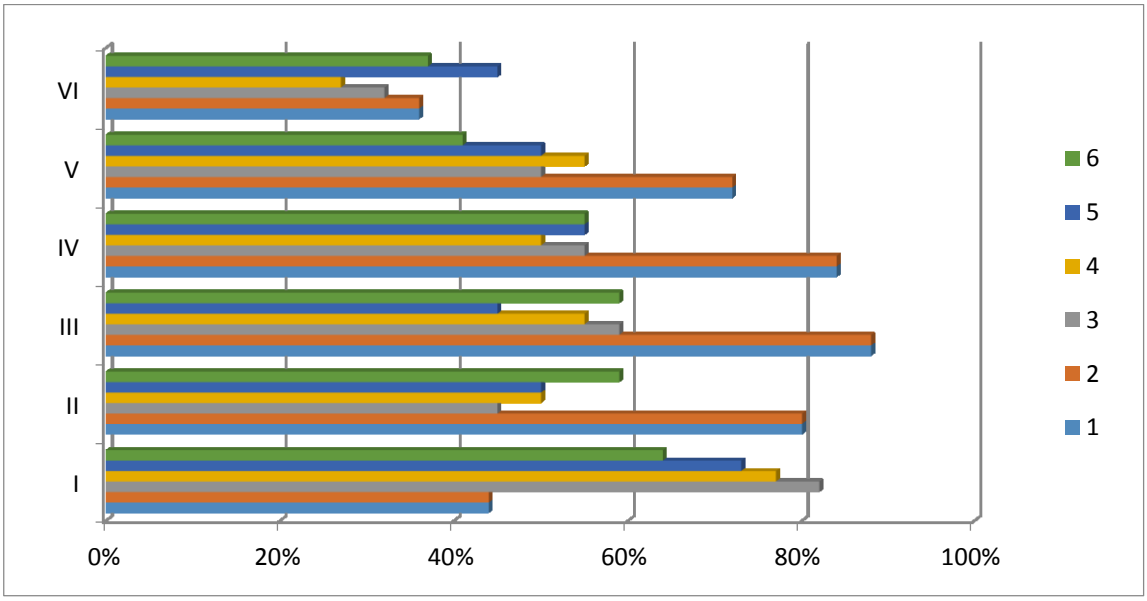

Chart 7. Comparison of results of the assessment

From these results, we can conclude that with continuous assessment, we have achieved our teaching aim and developed the thinking skills of our students as well as remembering, understanding, analysing, applying and evaluating.

To achieve all of the teaching goals, then the learning level that is identified should grow, which is showed through students' achievements through their earned points during their formal assessment (testing) in the semester. This kind of assessment is shown below for both student groups: the group assessed continuously and the group not assessed continuously.

	Quiz 1 (5 pts)	Assignment1 (5 pts)	Mid-term (30 pts)	Quiz 2 (5 pts)	Assignment2 (5 pts)	Attendance (10 pts)	Final Exam (40 pts)	Total Average of stud.
Non-continuously	3.13	4.57	13.6	3.34	4.7	6.8	13.7	40.26
Continuously	3.07	3.75	16.16	3.03	3.87	7.98	23.42	52.78

Fig.9 Formal assessment of both student groups

Graphically, this is shown as follows:

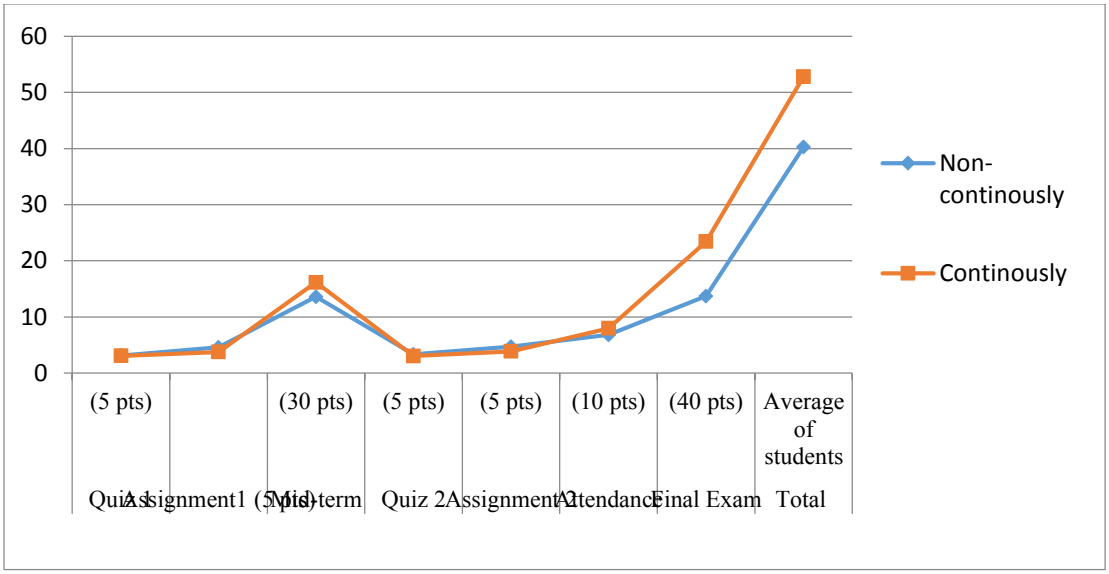

Fig. 10 Graph of formal assessment of both students groups

The following hypotheses were analyzed in our research:

Ho: The average of total points is the same in both groups of students

Ha: The average of total points in the group with continuous assessment is higher than the average of total points in the group without continuous assessment.

Using Megastat for data analysis, we came to the conclusion and verified that the average of the total points in the group with continuous assessment was higher than the average of total points in the group without continuous assessment. Therefore, we have accepted the second hypothesis: the average of points (final grade) earned by the group with whom we worked with continuous assessment to develop thinking skills is higher than the average of points earned by students that did not have continuous assessment for the purpose of developing their thinking skills.

Results achieved were as follows:

	Group1 Continuous and formal assessment	**Group2 Formal assessment only**
mean	52.6324	40.264
Std.dev	34.0450	25.365
n	34	36

Df=68;
12.36846 difference (group1-group2)
893.63085 pooled variance
29.89366 pooled std dev.
7.14887 standard error of difference

At the end we had the value of t=1.73, which is higher than the critical value t=1.6676 and p=0.0441<0.05, which means that Ho falls, and Ha is accepted and that students are demonstrated to have benefitted from their engagement in continuous assessment.

During this study, we also used an electronic questionnaire as a research tool which was given to students who were continuously assessed to get their opinions about continuous assessment. Through this questionnaire, we also concluded that hypothesis zero (H_o: Continuous assessment is not a preferred assessment tool among students) is incorrect in comparison with the alternative hypothesis (H_a: Continuous assessment is a preferred assessment tool among students who are continuously assessed).

The students' opinions about this use of continuous assessment are as follows:

- All of the students think that such assessment helps them to study continuously;
- All of the students think that such assessment helps them to have less trouble in the subject where such assessment is applied;
- All of the students think that such assessment encourages them to discuss and explain things that are not clear enough;
- Students ask for such assessments to be applied not only in the subject of Mathematics, but also in other subjects.

The demand for applying this assessment method in other courses indicates that this method of evaluation is very useful and popular with students and that these students have seen the difference and benefits of continual assessment versus formal assessment (periodic and mandatory).

Conclusion

This study has resulted in the following conclusions.

Through continuous assessment in the process of teaching, students develop their thinking skills. Continuous assessment allows for a better follow up of students' progress. Through continuous assessment, there is a higher interactivity among students. Through continuous assessment, the face-to-face contact between teacher and student is higher and continuous learning is developed. Through continuous assessment, the student also develops self-assessment through discussion of the exercises and it encourages higher attendance in class. Continuous assessment contributes to student's higher success meaning higher learning. Continuous assessment stimulates different learning methods such as discussion and gives more testing opportunities. Students think that continuous assessment supports them in their studying. According to student opinion, continuous assessment helps in overcoming various eventual problems related to the study materials. They also say that such assessment should not only be applied in the subject of Mathematics, but also in other subjects, because this would boost student's achievement.

Recommendation

According to this research my recommendation is that a key teaching target among other staff should also be the development of students' thinking skills and that continuous assessment should be applied in all subjects, where it is possible. Students' progress should be followed regularly and better and there should be staff workshops organized about the development of thinking skills in students and strategies for doing this.

Appendices

Assessment 1

Assessment 2

Assessment 3

Assessment 4

Assessment 5

Assessment 6

Questionnaire

Assessment 1

1. Which symbol shows a matrix of 3x2 dimensions

a) $\begin{bmatrix} 1 & 2 \\ -1 & 0 \end{bmatrix}$ b) $\begin{bmatrix} 1 & 2 \\ -1 & 0 \\ 3 & 0 \end{bmatrix}$ c) $\begin{bmatrix} 2 & 1 & -1 \\ 0 & 3 & -4 \end{bmatrix}$

2. A singular matrix is:

a) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ b) $\begin{bmatrix} 0 & 0 & 1 \\ 0 & 1 & 0 \\ 1 & 0 & 0 \end{bmatrix}$ c) $\begin{bmatrix} 1 & 1 & 0 \\ 0 & 1 & 0 \end{bmatrix}$

3. The sum of matrixes $A = \begin{bmatrix} 1 & 2 & 0 \\ -1 & 0 & 2 \\ 1 & 0 & -1 \end{bmatrix}, B = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ is:

a) $C = \begin{bmatrix} 2 & 2 & 0 \\ -1 & 1 & 2 \\ 1 & 0 & 0 \end{bmatrix}$ b) $C = \begin{bmatrix} 1 & 2 & 1 \\ -1 & 1 & 2 \\ 1 & 1 & 0 \end{bmatrix}$ c) $C = \begin{bmatrix} 1 & 0 & 1 \\ -1 & 1 & 2 \\ 1 & 0 & 0 \end{bmatrix}$

4. The determinant $\begin{vmatrix} 1 & 1 \\ 0 & 0 \end{vmatrix}$ has the value of: a) 0 b) 1, c) -1

5. The inverse matrix of Matrix A is calculated with the following formula:

a) $A^{-1} = \frac{1}{\det A} \cdot adjA$ b) $A^{-1} = \frac{1}{A} \cdot adjA$ c) $A^{-1} = \frac{1}{adjA} \cdot |A|$.

6. The inverse matrix A^{-1} has the following attribute:

a) $A^{-1} \cdot A = A \cdot A^{-1} = I$ b) $A^{-1} \cdot B = B \cdot A^{-1}$ c) $A^{-1} \cdot I = I \cdot A^{-1} = A$.

7. An equations system is indefinite if:

a) $\Delta = \Delta_x = \Delta_y = 0$, b) $\Delta = \Delta_x = \Delta_y \neq 0$ c) $\Delta \neq \Delta_x \neq \Delta_y \neq 0$.

8. Determine the outcome of the following matrixes:

$$A = \begin{bmatrix} 1 & 0 & -1 \\ 0 & 1 & -1 \end{bmatrix}, B = \begin{bmatrix} 1 & 1 \\ -1 & -1 \\ 1 & 0 \end{bmatrix}$$

Assessment 2

Name Surname_____ID_____

1. Which of the following represents an arithmetic sequence?

   a) $1,3,5,7,...$ b) $1,0,-1,-2,-3...$ c) $\frac{1}{2},\frac{1}{4},\frac{1}{8},\frac{1}{16},...$ ç) $1,4,-5,-7,-11...$

2. Determine the general expression of the following sequences:

   a) $1,\frac{1}{3},\frac{1}{5},\frac{1}{7},,...$ b) $\frac{2}{3},\frac{4}{5},\frac{8}{7},\frac{16}{9},...$

3. An arithmetic sequence is increasing if:

   a) $d=-2$ b) $d=2$

4. Determine the arithmetic sequence if: $a_1=-3, a_7=9$

5. The sum of the first n elements (terms) of the arithmetic progression is determined through the formula:

   a) $S_n=\frac{n}{2}\left[2a_1+(n-1)d\right]$ b) $S_n=\frac{n}{2}\left[a_1+(n-1)d\right]$

6. One company has produced 2000 units in April and 2900 units in July. If it is produced with an arithmetic progression calculate:

a) the monthly growth of production

b) the total productionin of that year

c) planned prduction for December

Assessment 3

Name

Surname_____ID_____

Writing Test for geometric sequence:

1. q=-2 responds to the following sequence:
   a) 2,4,8,16,…, b) 3,-6,12,-24,… c) 8,4,2,1,…
2. Write some elements if the geometric sequence if: $a_1 = 5, a_5 = 135$
3. Determine the geometric sequence if: $\begin{cases} a_7 + a_5 = 160 \\ a_6 + a_4 = -80 \end{cases}$
4. Determine q and n if: $a_1 = 2, a_n = 2048, S_n = 2730$
5. To what geometric sequence the difference between the sixth and fourth element is 72 and the difference between the third and first element is 9?
6. A company has produced 4882.81 m of canvas in its fifth year, while in its sixth year it has produced 6104.52 m of canvas. For how many years 685889 m of canvas are produced, if the production is increased according to a geometric progression?

Assessment-4

Name
Surname_____ID_____

1. Which of the following ratios are equal?
   a) 10:2 so 15:3
   b) 21:3 so 14:2
   c) 10: 2 so 10:5

2. Determine the value of x:
   $(9+x):(9-x)=8:1$

3. The sum of 35000€ should be divided as in: 57 :24 :19

4. How much should be paid in the form of interest for the sum of 20000€ with a yearly interest rate of 9% for the next 5 years?

5. Which capital for **n** years with an interest rate of 6% brings the same interest amount as the capital of 12000€ with a simple interest rate of 3% for the same period of time?

6. A person half of his capital deposits with the interest rate of 3.5%, 10000€ with 5%, while the rest with 4%. For one year he receives 3100€ in form of interest. How much was his capital?

Assessment-5

Name
Surname_____ID_____

1. The value of capital after the last capitalization with a semestral capitalization is calcuklated with the following formula:

   a) $K_n = K(1+\frac{p}{100})^n$ b) $K_{2n} = K(1+\frac{p}{100 \cdot 2})^{2n}$ c)

   $K = \frac{100 \cdot i}{p}$

2. Calculate the factor of decursive interest, if the interest rate is 9%.

3. What is the interest rate if the factor of decursive interest is 1,11?

4. What amount the sum of 3800€ will reach after 3 years with 6% (p.a.d) and quarterly capitalization?

5. What interest the sum of 2000€ will generate with 6% (p.a.d) for 5 years and monthly capitalization?

6. What amount is deposited before 4 years with 8% (p.a.d) and semestral capitalization if it has grown into 10000?

Assessment-6

Name
Surname_____ID_____

1. The sum received during a period of equal time intervals in the name of the amount deposited before is called _____.
2. Formula for calculating the M is:

   a) $M = R\dfrac{r-1}{r^n}$ b) $M = R\dfrac{r^{n\cdot m}-1}{r^{n\cdot m}(r-1)}$ c) $M = R\dfrac{r-1}{r^n(r-1)}$

3. How much monsy should be deposited in the bank so that in 10 coming years one can receive a monthly rent of 400€, if the bank's interest rate is 8%(p.a.d).

4. In the bank there is a deposit of 30000€ with 4% (p.a.d) and a semestral capitalization. Calculate how many times one can receive monthly rents of 2000€.

5. The loan of 7500€ is depreciated for 8 years with equal annuities and interest of 4%(p.a.d) and yearly capitalization. Calculate the sixth installment.

6. Determine the monthly payment of the new car with the price of 15675€ if its downpayment is 4000€ in 5 years time with the percentage of 6%(p.a.d) and monthly capitalization.

Students Questionnaire for the course of Mathematics

Circle your answer (more than one is possible)

1. Do you think that Mathematics course is hard to understand:
   a) No b) Little c) Very hard c) Not understandable
2. According to your opinion, Mathematics depends on:
   a) Previous Knowledge b) Teaching method c) dedication to study the subject
3. If understanding Mathematics depends on teaching methods, then this means:
   a) To be a passive listener of what is explained
   b) To participate actively in class
   c) To follow (study) continuously the materials given
4. In the course of Mathematics, do you think that testing (continuous assessment) used helped you
   a) Not at all b) Little c) Enough ç) Very much
5. The continuous assessment helped you to:
   a) Express your knowledge
   b) Study continuously
   c) Think more about the developed material
   d) Get an explanation of unclear things
   e) Discuss with peers about the material
   f) Discuss with the lecturer about issues in different parts of the material
6. With continuous assessment you:
   a) Had more emotions
   b) Had to be faced with various exercises that usually you have not had
   c) Opportunity to have less trouble with the material
   d) Opportunity to explain and work on various types of exercises
7. Did you like this kind of evaluation?
   a) No
   b) Do not know
   c) Yes
8. Would you like to see this assessment more often?
   a) Yes
   b) No
   c) Do not know
9. Would you like this method to be applied in other courses?
   a) Yes
   b) No

Анкета со студенти за вреднувањето по часовите по математика

Да се заокружи вашиот одговор (може и повеќе од еден

1. Дали предметот Математика е тежок да се разбере:
   а) не б) малку с) многу тежок с) е херазбирлив
2. Според вас колку е јасен предметот математика зависи од
   а) Предзнаењата b) видот на предавањата с) опседнатоста да се научи тој предмет
3. Ако разбирањето на математиката зависи од видот на предавањето со тоа се подразбира:
   a) Та бидеш пасивен слушател
   b) Да земеш активно учество на часовите
   c) Да го пратиш предметот континуално
4. ТЕстовите што се примениа на часовите дали ви помогнааі:
   a) не b) малку с) доволно ç) многу
5. Континуалното вреднување ви помогна за да:
   a) Го изразите тоа што го знаете
   b) Да учите континуално
   c) Да мислите повеќе за материалот
   d) Да се објаснат неразбраните нешта
   e) Да дискутирате со колегите за материалот
   f) Да дискутирате со наставникот за одредени проблеми со материалот
6. При континуалното вреднување:
   a) Имавте повеке емоции
   b) Спавување со задачи кои ги немате општо
   c) Можност за да во иднина да имате помалку проблеми со материалот
   d) Можност за објаснување на разни задачи
7. Дали го подржзвате овој начин на вреднување
   a) не
   b) не знам
   c) да
8. Дали би сакале овој начин да се применува почесто:
   a) Да
   b) Не
   c) Не знам
9. Дали би сакале овој начин да се применува и во другите предмети
   a) Да
   b) Не

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EFFECTIVE TEACHING METHODS AT UNIVERSITY LEVEL

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Introduction

Second language teaching and second language learning are particular challenges for professors and university students. The English language is very important for future professionals as it gives them different opportunities to progress in life. The methodology of teaching is a very important process that is carried out at university level. This study aims to identify the teaching methods used by professors and assistants of English language teaching at the State University of Tetova. The effectiveness of particular methods is examined using a questionnaire and interviews. The quality of teaching and the quality of the learning process are important tasks which need to be considered at university level. Teachers and university students give answers to several questions that are directly linked to the teaching process, especially to teaching methods. Traditional methods and some learning approaches are taken into account to come to particular conclusions and suggestions.

Literature Review

Second language acquisition may sometimes be uninteresting to certain students, thus, there are different alternative approaches to learn a second language in a more interesting way. Professors need to be careful in choosing the teaching methods and need to be prepared for different situations that may appear. If students lose interest in the classroom, then professors need to be prepared to use different methods to motivate them. They need to use different methods that will ease their job when necessary for students to be motivated to the required level.

Before analyzing alternative approaches in language learning, we need to list some major teaching methods. It is important to list the main traditional methods used worldwide, such as the Grammar-Translation Method, Natural Method, Direct Method and Audio-Lingual Method. According to Tafani, the Grammar-Translation Method is used to teach students mainly vocabulary and grammar which, according to this approach, are considered to be the main elements in the academic process. This method is concentrated on long explanations and very few exercises and the mother tongue is used as the medium of instruction. The Natural Method, as the word itself indicates, covers the real-life principles of language learning. This method is beneficial because children are taught by constant conversation by their parents and not by grammatical rules. This method is positive for communicative competence, but not for grammatical perfection. The Direct Method was developed as a reaction to the Grammar-Translation method in an attempt to integrate more use of the target language in instruction. By this method, the target language is learnt with direct association of words and phrases with objects and without the use of the native language. The Audio-Lingual Method is concentrated in aural and oral activities. This method helps students develop their speaking, reading and writing skills and teachers make a great effort to prevent errors. It is crucial in building students' confidence in speaking the language. Further, Tafani commented on Communicative Language Teaching (CLT). This is seen more as an approach, rather than a method and was a reaction to the Grammar-Translation Method and Audio-Lingual Method. CLT fills the gaps, and in particular the gap of communication. Applied linguistics emphasizes the functional and communicative proficiency rather than mere mastery of structures. Thus, CLT deals a lot with communicative competence (Tafani 2003:55).

When dealing with approaches, we need to underline theories used in language learning. Tafani also commented on them, starting from the Total Physical Response, known as TPR. This approach is based on the belief that listening comprehension should be developed fully, as it is with children learning their native language, before an active oral participation from students is expected. The Silent Way is another approach in language learning. It is defined as a method of learning through self-reliance. It is based on the ideas that the teacher should be silent as much as possible in the classroom and the student should be encouraged to produce as much language as possible (Ibid, pg. 157).

Patel and Praveen commented on the types of approaches in language learning as well. They pointed out two types: the Structural and the Communicative Approaches. The Structural Approach to teaching English refers to the way the language material is organized for presentation. The Communicative Approach, on the other hand, is the approach where teachers try to develop students' communicative ability. It is a learner-

centered approach which gives the learner not only grammatical competence but also a social skill as to what to say. This approach tries to develop both accuracy and fluency from the beginning of language learning. The role of the teacher is that of a co-participant, not that of an authoritarian master (Patel, Praveen 2008:89).

Different classrooms function in different ways, that is, how teachers organize them. If teachers decide to use one method, then students are obliged to follow that method. But, there are cases when a method is not successful, thus, the teacher will be 'forced' to use an alternative approach in order to get satisfactory results. A student who learns English language only in a particular class, in this case a university student, is obliged to find different ways altogether with the professor in order that the influence of English is as high as possible for fast language learning, or at least with the aim of satisfactory communication use. Different techniques are important in language learning, for example listening to music and watching movies in the target language without translation. These techniques help students in the language learning process; "(s)upplementary activities to the second language classroom, conversation (the real thing, with native speakers of the target language) and pleasure reading, then move to some ideas and programs that have met with real success," and may be taken as different techniques (Krashen 1982:162).

The Study

This study aims to investigate the methods used by university professors and assistants for effective English language learning at the State University of Tetova. The study includes six university professors and assistants and forty-six university students (students of the Faculty of Philosophy, Department of History, and students of the Faculty of Economics). The students' age is between 19- 24 and the participants filled in the Albanian version of the questionnaire. The participants were expected to write down their answers on the teaching and learning process. In addition, interviews were conducted with the six university professors of English language (who teach outside the department of English Language and Literature) in order to compare the teaching methodology. The interviews were in the form of questionnaires and the English language professors did not have to write anything as their answers were registered by the interviewer. They were asked to answer the questions orally. The interview questions were (in)directly linked to the teaching methodology pointed out at the beginning of this study.

Data Analysis

The data were analyzed according to the responses obtained from the participants. The interview with professors and assistants of the State University of Tetova provided the path to further understand the academic process. The direct contact with professors gave a better view as to how professors hold their lessons and gave the opportunity to identify similarities or differences.

The Interviews with professors

The interview started with asking professors *whether the learning materials are appropriate or not*. They answered that it depended on the book that was being used and justified this opinion by saying that some students were able to comprehend the provided content when using appropriate materials and some not. This was because in different departments, different learning materials were used and they could not come to a general conclusion. In the meantime, the learning materials were appropriate for the students' age; in some cases, they were easy and comprehensible. In the next question, where they were asked *if the syllabus is appropriate*, professors gave similar answers to the first one. Again, not all syllabuses were the same for all departments. But in general, they reported that syllabuses were professionally prepared and students' levels were taken into account so that no students would be left behind. In general, professors said that the syllabus and the learning materials were not obstacles for students in successfully learning English.

The third question was the key question regarding this study. Professors were asked for the teaching methods they used for their lessons. Their answers were that they used more than one method during lessons, but, according to them, the most commonly used methods were the Grammar-Translation Method, Communicative Language Teaching and in some cases the Audio-Lingual Method. The Silent Way and the Total Physical Response were mentioned as well, but they were not used as much as the aforementioned methods. What needs to be mentioned is that most classrooms are not equipped with standard technology equipment, and professors are obliged to provide a laptop, CD-player or a projector when they are needed. The fourth question of the interview asked if professors used more than one teaching method. The answers were as expected, and the most important answer was that the methods used depended on students'

preferences and level. Hence, particular methods were efficient in making students fluent regarding the four skills.

The fifth question focused on professors' methodology on enriching students' vocabulary. Students' vocabulary is very important while they are speaking or writing and their success may undoubtedly depend on it. The English professors mentioned different strategies for enriching students' vocabulary, such as watching TV (especially American movies), listening to English music, and repeating newly learnt words as much as possible. However, one interesting and unexpected answer was given by one professor who mentioned that using stylistic figures, synonyms, antonyms and homonyms helped students learn new English words and have more chance to remember them than using other techniques. This is not a common technique when teaching students who do not study at the department of English Language and Literature.

Students making oral or written mistakes were common and the sixth question was intended to understand the ways in which teachers corrected students' mistakes. This question asked professors to list some techniques for error correction. Professors said that they mostly corrected oral mistakes by immediately telling students the correct pronunciation or the correct option, depending on the given task, but there were 'rare' cases when they were corrected later on during the lesson. This was not the case with written mistakes. Professors, while consulting their students, decided on the ways of correcting mistakes. They could correct them immediately or afterwards, after the identified mistakes were marked.

Different professors have different techniques, and one of the best according to the interviewed professors was asking for students' opinions of the mistake. By this, students become more concentrated and involved in the lesson. Students could learn from their mistakes. This method was usually used during the lessons. These answers were given in the seventh question.

The last question of the interview asked if professors used technological equipment during their lessons. This question indirectly identified the teaching methods employed by university professors. Even if classrooms are not equipped with laptops and projectors, different departments have their own and the English language professors can use them. In general, professors said that they used laptops and projectors, but not constantly. This was because they needed to focus their lessons more on the book's requirements, by fulfilling each task as required, and in a new way in order to communicate with students even more in English. Translation took a lot of time during the lessons and it was a necessary task for non-native English speakers. Thus, it was concluded that laptops and projectors were used only when necessary and depending on the focus of the lesson.

The Questionnaire

The questionnaire consists of questions that were (in)directly related to the teaching methodology. The first question asked if students were satisfied with the level of English language use during English language classes.

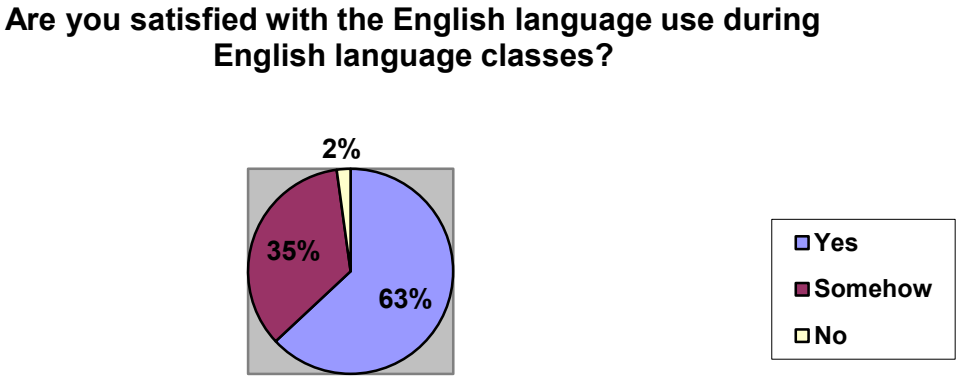

Figure 1

The majority of students answered positively to this question, but the "Somehow" answer was somewhat disturbing. According to the provided answers, we could conclude that communication was not at the

necessary level. This meant that some students were not satisfied with the use of English during their English language classes. On the other hand, the number of students who were not at all satisfied is small and insignificant.

The second and the third questions were very important to this study. The second question showed how students want to learn English language. Four options were given in the questionnaire: listening, reading, oral communication and writing. Students' opinions regarding this question were very important, thus, students were asked to think of the most appropriate way they wished to learn English.

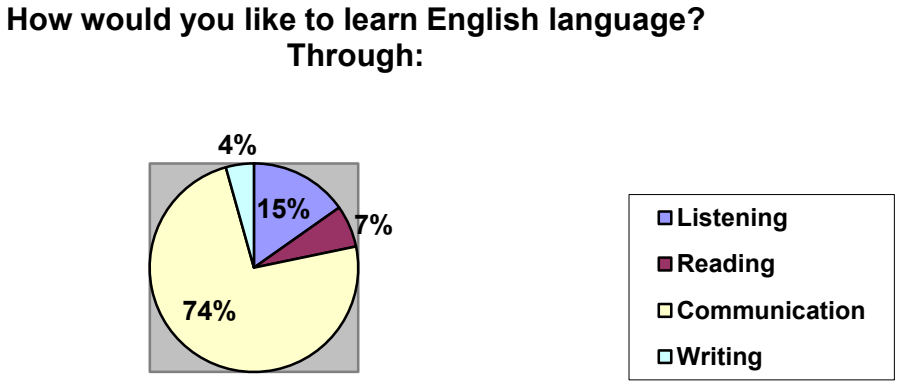

Figure 2

The results, obtained from the second question in Figure 2, were very interesting and important. It was obvious that most students liked to learn English language through communication even though they had other interesting and attractive options. The second thing to point out is the low percentage given to other options. They much preferred communication to developing listening, writing and reading skills. When analyzing the provided figure, we understand that students were more interested in the spoken language than in the written one. At the same time, these answers were reasonable, logical and expected.

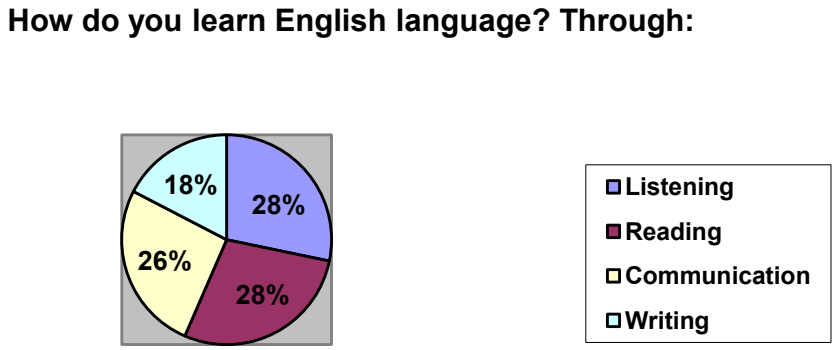

Figure 3

The answers provided from figure 3 reflected the teaching process carried out at the State University of Tetova. It was obvious that professors of the English language taught their students through different methods, but we could not see a dominance of any of the aforementioned. Teaching students through writing had the smallest percentage and this might be due to students' preferences not to learn English through writing.

The fourth question of the questionnaire is again related to the learning process. Students were asked to answer if they liked to learn English in a group or individually.

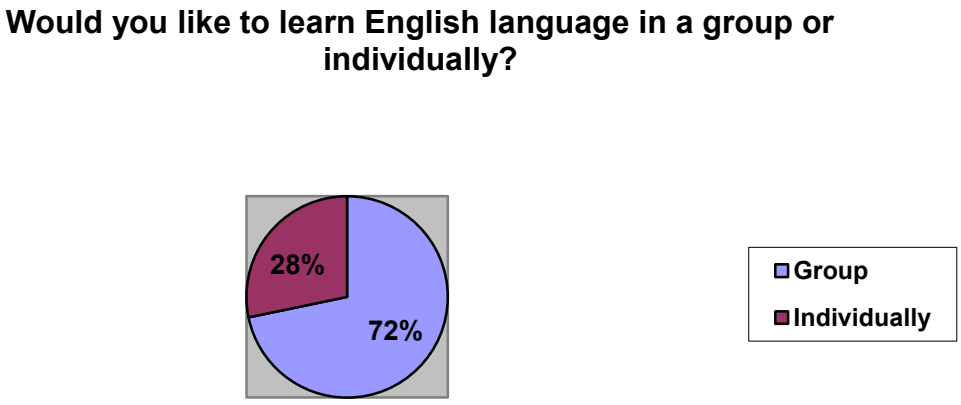

Figure 4

The chart above shows students' opinions regarding the fourth question. The high percentage was really important regarding the academic process. It is known that students prefer to learn in groups and this high percentage was only a confirmation. English language professors do not usually teach students in small groups. They sometimes form groups in order to do different activities. Although the usual teaching structure is not based on smaller group work, such face-to-face interaction is valuable. Thus, this result is important and shows students' wish to learn in groups.

Students were asked to identify the teaching methods used by their professors in the fifth question. Most of the students left this question unanswered. This might be a result of uncertainty or because of not being able to identify the methods at all. Only some students provided answers, where the Grammar-Translation method was most mentioned, and Communication Language Teaching and Total Physical Response were less mentioned.

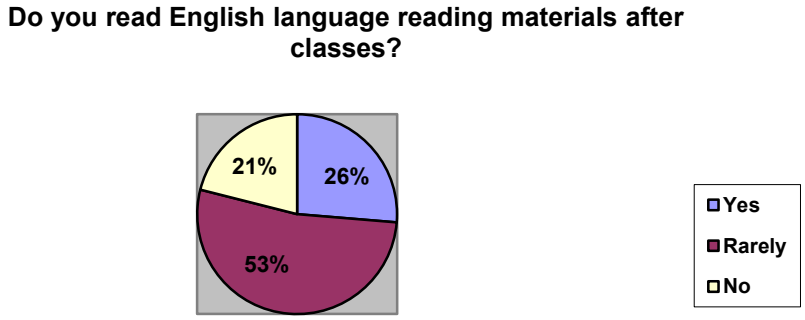

Figure 5

Figure 5 verifies that some university students read in English after classes. On the other hand, we can see that the majority of students did not regularly read reading materials in English. Nowadays, it is a fact that students do not like to read a lot. Hence, we can understand that the material they read is not related to their studies, but maybe entertainment magazines. It needs to be mentioned that if students are interested in reading articles related to their studies, they can find materials on the Internet or at the American Corner (a centre which provides student learning activities). However, after consulting with the Officer at the American Corner who reported the same result as above, it is safe to say that students are not interested in looking for articles in English. The number of students using books provided by the American Corner is so small, compared to the enormous number of students studying in Tetovo.

The sixth question was asked in order to show how students' vocabulary was constantly enriched. Students were asked if they learned English words when listening to an English song, watching an American movie or using the Internet. According to figure 6, the results were overwhelmingly positive about this.

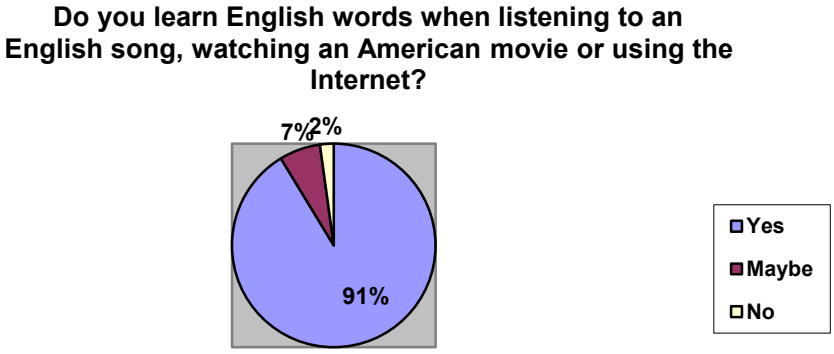

Figure 6

The seventh question was again related to students' vocabulary, and was "Are you satisfied with the English words you have learnt during the English classes?" This question was used to highlight students' opinions about whether they had learnt enough English words.

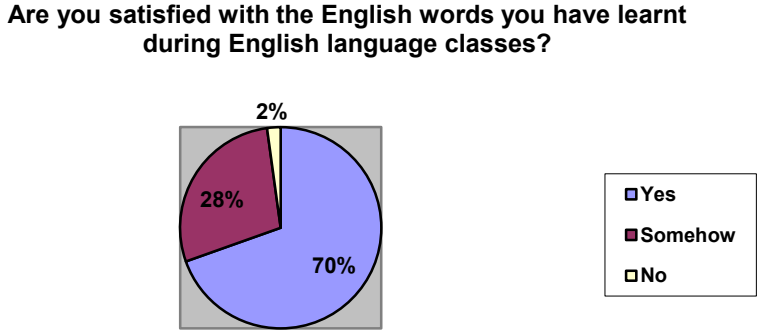

Figure 7

The above results are impressive because a lower "yes" percentage was expected. These percentages were important indicators that showed students' commitment to English classes. These indicators showed that the majority of students were concentrated during classes and were satisfied with the number of English words they had learnt. The surprising result was the percentage that showed students who were not satisfied which was so small, almost insignificant. The "somehow" answer was again an important indicator to show that there was a certain variety in students' satisfaction. These percentages might not be taken as fully reliable data because the provided answers for this question might be relative, i.e., vary according to students' individual attitudes, opinions and especially on the number of the interviewed students.

After analyzing some of the above questions related to students' vocabulary, it was time to turn to students' mistakes. Making mistakes is an unavoidable process through which every student must pass. Professors are accustomed to meeting different mistakes from students, thus, the eighth question highlights students' answers of whether they make mistakes during the writing and the reading process.

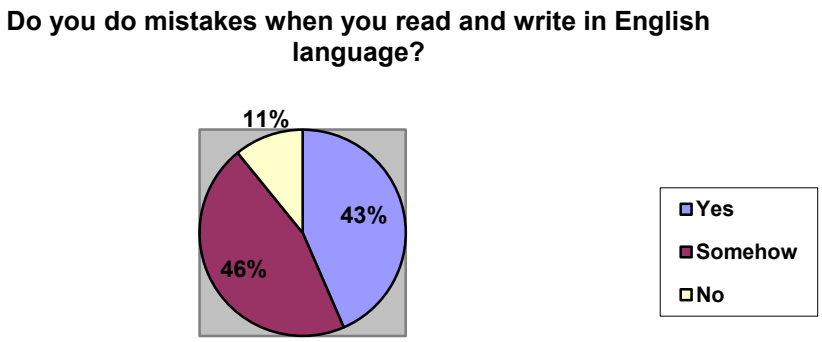

Figure 8

It was obvious that students were sincere. This was enough to understand that the majority of students accepted that they do make mistakes. This question in the questionnaire was very important because students had the chance to show their opinions, and professors would have the chance to understand what steps they needed to take.

The ninth question was asked in order for students to give their opinions about whether they corrected their mistakes by consulting their professor. From Figure 8, we already understood that students know they make mistakes when using English. Again, the students' answers were very positive about the help provided by the teachers, although with a significant percentage who were not sure if consultations were beneficial. This should be a valuable indicator for staff.

Figure 9

The improvement process should not be related only to teachers' help. If students do not work individually, then they will probably fail to achieve the desired success. We may have met many students, with different attitudes and different ways of learning. The following question helps us understand if students work at home to improve mistakes and what is the percentage between students that try to improve their mistakes individually or do not.

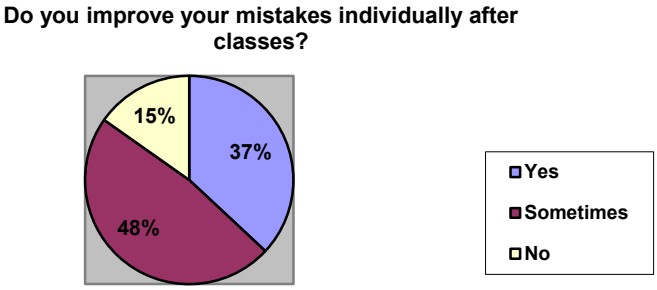

Figure 10

According to the above figure many students believe that they correct their mistakes. However, even if most students answered "yes" or "sometimes", from personal experience while teaching university students, it appears that they do not always analyze this correctly.

The following two questions are again related to the teaching methodology. While students could choose different options above, the two following questions included grammar, communication, translation and reading.

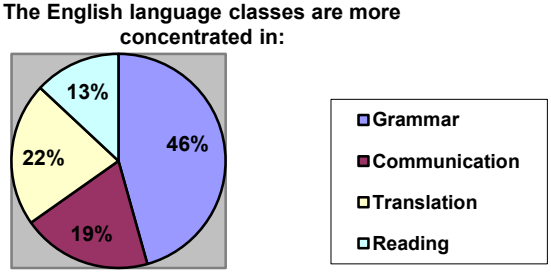

Figure 11

Figure 11 shows that the English language professors were mostly concentrated in grammar, whereas the other percentages were lower and somehow similar. According to the interview, the English professors mentioned several methods, and figure 11 could be a reflection of their work. This was very different from students' wishes about learning English. Students answered that they wanted to learn English language through communication, but English language learning was mostly concentrated on the Grammar-Translation method.

The next question showed students' opinions about what English classes needed to be more concentrated on. This question was very important in this study because it focused on the teaching and learning methods; thus, the results from this question are very important in giving reliable suggestions. Even if the answers are relative, we can still understand part of the academic process carried out at the State University of Tetova and consider changes.

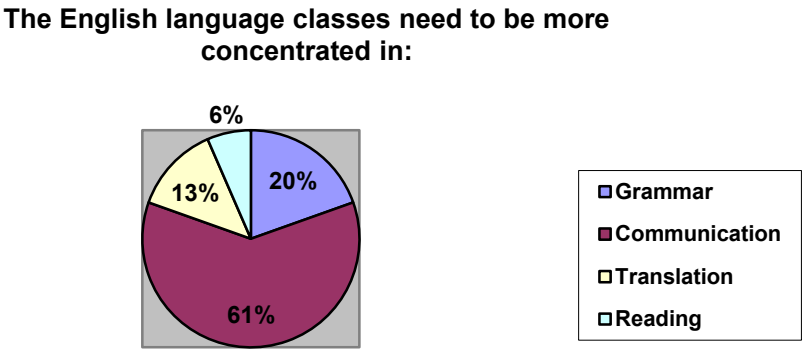

Figure 12

The majority of students thought that their English language classes needed to be more concentrated in communication, i.e. oral communication. This is a two-way process and students also needed the opportunity to develop speaking and listening skills. Students already know that speaking in the target language is very important for the language learning process. These percentages showed a serious approach to learning methods. The other percentages were varying and to some extent similar.

The last question of the questionnaire asked students what they would change in their English class if they were the teacher (especially on the teaching methodology). They had a blank space where they could write their suggestions. Students were encouraged to think seriously about this question. Most students left this question unanswered, but some of them gave interesting suggestions, for instance:

- "I would teach my students mostly in English rather than in Albanian."
- "I would use small groups for certain activities."
- "I would communicate more with my students during the English class."

All of the above questions and answers provided from Figure 1 to Figure 12 are a good indicator that the university students are thinking about their education, learning methodology and teaching methodology. All questions from the interview and the questionnaire were related more or less to the teaching/learning methodology. These questions provoked students and professors to answer maybe previously unasked questions, which would make them think more deeply about their role in the academic process.

Conclusions and Suggestions

After analyzing and interpreting answers from the questionnaire and interviews, it is time to concentrate on the general summary. This study was done in order to approach the teaching and learning methods, i.e., if the teaching and learning methods are appropriately used and accepted by both professors and students. The answers provided are enough to come to clear conclusions. Teachers and students need to work harder all together, with joint efforts. This is the main general conclusion from this study. They need to consult each other and English language professors need to choose the most efficient methods of teaching.

It is obvious that the English language professors mostly use the Grammar-Translation method and other methods. They use different methods according to students' needs. On the other hand, according to students,

the Communicative Teaching (CLT) method needs to be used as much as possible, but that is not the case with the students interviewed at the State University of Tetova. Even if English language professors think that they use the CLT to a satisfactory level, it is still not enough according to students' answers. Group learning is another method that needs to be taken into account by professors and gives them the chance to teach in the way students want. Professors can use this way of teaching to motivate students to improve their mistakes as well. The general opinion at the State University of Tetova, according to professors, is that students who do not study at the department of English language and literature are not good at the English language. This may be because of a lack of motivation, their insufficient interest in the English language or because of the inappropriate and ineffective teaching methods used by their professors. Hence, the quality of teaching is very important to this University and every educational institution. Improving the process of foreign language teaching is not an easy thing to do. A lot of research and studies need to be done in order to get to different conclusions. Each and every study helps in improving this process, and this study should be one of them. Some suggestions of improving the quality of teaching are illustrated hereafter.

Supplementary activities are very important during second language learning. When studying a certain grammatical element, the student's book may not be appropriate, thus, professors are advised to use supplementary materials that will be useful for their students. Students will then have more exercises that will help them to better understand the intended material and to better understand the rules by doing various exercises that are different from the book. Besides the need of extra materials regarding different elements that are to be covered by the syllabus, teachers also often need to use supplementary materials to cover the class if extra time is left.

Conversation with native speakers of the target language is a very important technique in language learning. This is because they have the opportunity to acquire different words in real life situations, words that they never had the chance to learn during the academic process. For instance, English language professors can cooperate with the Peace Corps, organize a meeting with volunteers and provide a chance to their students to be in direct contact with native English speakers.

Independent reading is another important technique during the academic year, because students can create reading habits that will help them. Students may read different books that are not too hard for them to understand, and in the meantime they may remember new words mostly by context rather than by translation. This way of learning new words is very frequent with students who read, and they have the opportunity to learn a language more quickly than their peers. Of course, this is relative because not all individuals learn a language at the same speed.

According to the above analysis, it is safe to say that alternative approaches may be used together with traditional methods. This needs to be done in order to improve the quality of teaching and the quality of learning as well.

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Statistical Education of Students in Macedonia

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Introduction

The development of mankind and science are always in mutual interaction. The progress of scientific thought promotes human life, but conversely, progressive society needs to dictate the developmental directions in science. Historically, some scientific discoveries have caused a big step in technical and technological development, others have had negligible influence, and some scientific achievements remain for decades until their value is confirmed in practice.

We live in the information age, life is driven by numbers and we are constantly surrounded by data. Electronic and print media offer different results from surveys every day such as data about the growth of population, rise of inflation or unemployment. Moreover, it is not enough just to know how to read that data, presented in different ways, but it is necessary to establish a critical attitude towards them in terms of their validity and relevance in order to compare and draw useful conclusions. We cannot imagine research in any sphere of human life, which in itself does not include collecting, collating, processing and analysis of data and drawing conclusions.

From the above stated, there is a dominant presence of statistics, not only in the professional activity of each individual, but as part of his everyday life. Hence, there implicitly arises one of the main goals of modern society, which is to prepare its citizens to make the right decisions for private and professional plans, so that they understand and use appropriately all the information at their disposal. In this regard, education has the most prominent role. The introduction of content from statistics in the mathematics curriculum influences children from the earliest age to develop the ability to work with data and statistical thinking. They also create a more natural way for students to apply mathematics in the study of other subjects and in everyday life. Modern outcomes for continuing education or lifelong learning inevitably require statistical education to be given a real and not merely formal place, especially within higher education. Namely, although the course methodology (of scientific research) is required in the second or third cycle of studies, practice shows that there may not always be appropriate representation of statistics in the syllabi. Our experience even indicates that, in some cases, most of the time used for training students is allocated for writing essays and making conceptual sketches for a particular project, with almost negligible attention paid to research methods for data processing, determining the level of their dependence and verification of hypotheses. The subjects of the courses are general procedures and methods of scientific research, without making distinctions based on the specifics of each scientific field. Despite this, there are also cases where teaching is done by teachers without knowledge of the relevant scientific field whose research methodology is being studied. Therefore, there is a real need for a review of statistical education in Macedonia, particularly within higher education.

Statistical purposes in teaching

Statistics is not just a system of knowledge and skills, but also a tool to solve problems. Competences acquired whilst learning statistics allow each individual to recognize the problems that they will encounter, to understand properly their essence, to create models for their solution, set hypotheses supported by evidence and make relevant conclusions. In addition, as part of a system of mathematical sciences, statistics is subject to the basic principle of the acquisition of knowledge which is the principle of concentric circles. Therefore, it is necessary for it to be represented at all levels of education and to be taught in a graduated manner. In addition to this, statistics takes place primarily in terms of the area of its application, which goes far beyond the borders of pure mathematics.

Defining the purpose of statistical education usually starts from the following outcomes:

- Acquiring statistical knowledge;
- Integrating statistics with other scientific disciplines;
- Strengthening mathematical knowledge, including performance calculations and estimations;
- Developing the ability to use appropriate tools to solve tasks;
- Applying knowledge to solve practical problems of life;

- Developing aesthetic feelings by entering harmony, clarity, accuracy and brevity of expression in solving statistical tasks.

For successful implementation of the objectives of statistical education, a curriculum which requires much more than the adoption of basic knowledge and skills is needed. However, for quality statistical education, in addition to the correct choice of curricula, the teaching methods applied are very important. In this regard, research was conducted (Verkoeijen and others, 2002), which underpins this fact. The conclusions indicate that traditional instructional methods give poor results in the study of statistics. On the other hand, a choice of interesting problems from life and practice, where students have the role of active solvers, without the teacher's dominant leadership, the application of cooperative learning techniques and training on the use of modern software packages, contribute significantly to the motivation and enjoyment of statistical learning. Students perceive its value and need, and acquire durable and applicable knowledge (Hogg, 1992). In addition, it was determined that in the framework of statistical learning, small group work gives particularly good results, especially when it is project led (Giraud, 1997).

Understanding statistics is expected from all students. However, it is necessary to clarify terminology. With this concept, statistics essentially means three things: successful use of acquired knowledge, precision and flexibility. Successful use of knowledge enables students to develop a variety of strategies for solving a range of problematic situations. They need to know precisely the properties and rules that apply to statistics, in order to be able to use them during their research. Flexibility, however, is reflected in their ability to apply knowledge in modified conditions, using an analytical approach to problem solving, and an ability to vary techniques effectively.

Statistical Education. Statistical Literacy. Statistical Thinking. Statistical Reasoning.

Statistical education in the last two decades worldwide is accepted as a special and important part of general education. It integrates the most important issues of statistics in terms of their place in human life, their role in education, the way in which students acquire knowledge in the field of statistics, strategies teachers should apply to gain such knowledge and methods of evaluation of the results. Statistical education includes activities which seek to achieve the following goals:

- To develop understanding of statistical methods (their creation, development and use), and their involvement in all levels of education, depending on the abilities and needs of students;
- To make changes in the curriculum in order to respond to the needs of students;
- To make modifications to the curriculum, not only in terms of content, but also in the application of teaching methods and ways of validating knowledge and assessment.

Global goals of statistical education are the acquisition of statistical literacy, the development of statistical thinking and the development of statistical reasoning.

Statistical Literacy

In circumstances where information has a primary role in society, statistical literacy has become a subject of interest of many educators worldwide. It is the reason for major changes in curricula. It is also an imperative for students, to meet the needs of private and professional life after the completion of education (Watson, 2004).

In the literature, we find several definitions of statistical literacy. We will point out a few of them:

- Ability to interpret and critical assessment of information offered by the media and the ability for discussion about them (I. Gal, 2000);
- Understanding statistical terminology, expressions and symbols, ability to interpret data given in the tables and graphs, ability to read and interpret the data that surrounds us every day (media, elections, polls, etc.) (J. Garfield, 1999);
- "... Ability to understand statistics at the lowest level ... "(L.Snell, 1999);
- Ability to understand the statistical results present in everyday life, setting up a critical attitude towards them, and an understanding of the importance of statistical thinking in decision-making in private and professional life (KK Wallman, 1993).

J. M. Watson (1997) distinguishes three levels of statistical literacy:

- Understanding basic statistical terminology;
- Understanding statistical language and concepts present in wider social communication;
- Taking a critical attitude in the use of statistical information.

Gal (2002) considers that statistical literacy refers to two inter-related components, as follows:

- The ability of humans to interpret and critically address statistical information, and
- The ability of people to understand the importance of statistical information and to know how to use it.

Statistical Thinking

Statistical thinking involves understanding statistical surveys. Describing, organizing and reducing, representing, analyzing and collecting data are five inseparable components of statistical thinking.

Describing Data

Data describing means reading the data presented in different ways (tables, graphs, charts), i.e getting information based on display of data, discovering the properties of the chart and the generality of the conclusions from a sample population.

Organizing and Reducing Data

The second part of statistical thinking is the process of organizing and reducing data. This process includes procedures for sorting, grouping and displaying data. Reducing data actually means using measures of central tendency and scattering data. Successful organization of the data allows easy detection of their characteristics and dependencies. This procedure is very useful when comparing two or more sets of data.

3.2.3. Data Presentation

Data presentation is the third step of statistical thinking and expression. It presents using charts and graphs. The choice of an adequate method of data representation is very important, because with the visual display many conclusions about the nature of the information can be easily drawn.

Analysis of Data

The previous three steps of statistical thinking are the basis for data analysis. This involves perceiving the characteristics of data and making assumptions or conclusions from charts, graphs and the like. The same procedure can be applied when several sets of data are mutually compared. It is believed that this step is the most complex stage of statistical thinking.

Data Collection

While many believe that the collection of data is not of a mathematical nature, it is included in the framework of statistical thinking in order to get a complete picture of what statistical thinking is. This operation consists of planning, monitoring, conducting experiments and more. Collecting data is the most basic step when statistics is applied to the given problem. People constantly present the results of different polls and surveys. In order to successfully interpret these results, one needs knowledge and information about what methods are used in the planning and implementation of these surveys and research.

Statistical Reasoning

According to Joan Garfield and Iddo Gal (1999), statistical reasoning is a way by which people use statistical ideas and develop a sense of statistics. It involves making conclusions from the data presented in different ways, and using statistical summaries and reports. According to Gal and Garfield (1997), the development of statistical thinking among students is very important, regardless of their future profession. There are several models of statistical reasoning:

1. **Typical reasoning** - recognition of some statistical symbols and concepts and using them without fully understanding, often wrongly;
2. **Verbal reasoning** - demonstrating verbal understanding of some knowledge, but without the ability to apply it in a particular case;

3. **Transient reasoning** - correctly identifying one or more dimensions of a statistical process, without the ability to integrate them in order to adopt the right conclusion;
4. **Procedural reasoning** - correctly identifying one or more dimensions of a statistical process in the absence of the ability to fully integrate them in order to adopt the right conclusion;
5. **Integrated gradual reasoning** - demonstrating a full understanding of a statistical process, the correct identification of all sides as well as defining the relationship between them.

When statistical content is taught, the similarities and differences between statistical literacy, statistical thinking and statistical reasoning are important in defining objectives in teaching and are of concern to many educators. At the annual meeting of the AERA (American Educational Research Association) in 2000 in New Orleans, Joan Garfield, Beth Chance and Deb Rumsey offered two views on the relationship between statistical literacy, statistical thinking and statistical reasoning. According to the first view, expressed by the Venn diagram presented in Figure 1, each area has a segment that is independent of the other two, but overlapping. This means that you can only address aspects of one area, independently of the others, but also aspects that include two or all three areas.

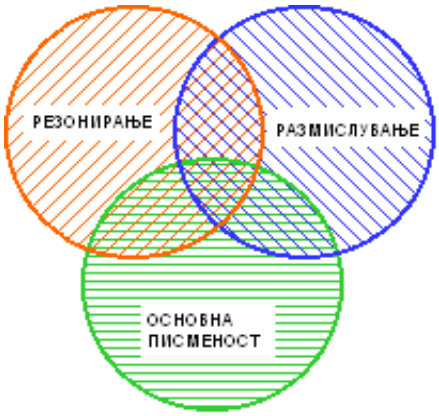

Figure 1

The second view is represented by the Venn diagram in Figure 2, where statistical literacy is a primary goal in teaching, while statistical thinking and statistical reasoning are its sub goals.

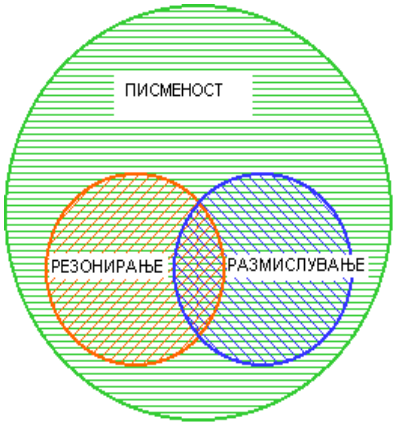

Figure 2

The Need for Statistics in Higher Education and its Importance for Professional Development

Among the first who realized the need for continuous learning of statistics in primary and secondary education were members of the National Council of Teachers of Mathematics (1989) in the United States, according to which, every student who finished high school must have a basic knowledge of statistics, in order to meet the challenges of personal and professional life. We should mention that, besides the aforementioned, New Zealand is currently one of the leading countries that works to promote and improve statistical education.

Many researchers in this field stress the need to include statistical content (and probability, which is its prerequisite) in primary education, even in the early grades. The reasons for this lie in the following focal points:

- **Application** - Acquired knowledge of probability and statistics allow students to train for processing, presentation and evaluation of the data, in order to right decisions;
- **Further education** - Knowledge of probability and statistics is not only required for further study of mathematics, but is also important for other subject areas;
- **Aesthetics -** The study of probability and statistics reveal beautiful pages of mathematics and contributes to overall aesthetic education.

Statistical content is treated differently in the mathematics curricula in different countries. In some countries, it is marginalized, but in some developed countries, primarily English-speaking countries (United States, New Zealand and England), statistical education is given great attention in every phase of education.

When it comes to the Republic of Macedonia, we should mention that with the recent reforms in the education system, primary education is realized in the cycle 3 +3 +3 (instead of 4 +4) and secondary education is compulsory. Moreover, following the experiences of other states, statistical content is taught continuously in primary and secondary education. Regarding our system of higher education in recent years, with the acceptance of the provisions of the Bologna process and the application of the credit-transfer system, and revision of curriculum, changes were made in this field. Namely, unlike before when the subject research methodology was present only at some universities, it is now mandatory after the first cycle. Unfortunately, for reasons that were mentioned in the introduction, the method of its realization, as well as the goals being realized, are far below world standards and the needs of students. Basic statistics is only slightly represented within first cycle study programs (mathematics, economics, computer science), and many colleges are not offering it even as an elective course.

Statistical literacy, statistical thinking and statistical reasoning are especially prominent in research, so therefore it is inevitable that statistics is present within higher education. It also gives a contribution to the professional development of each individual. It is therefore very important for statistical content to be included in the first cycle of higher education with its specific applications in the field. There are many software tools that allow easy and simple data processing. Familiarization in using them should be carried out even during studies, not after employment when the individual faces the need for their use alone, without the necessary theoretical knowledge and practical experience in using at least similar applications. Knowledge acquired in primary and secondary education should be only a solid foundation on which to build new knowledge at a higher level, which eventually ends with the acquisition of the ability to perform basic scientific research. Namely, one of the major problems faced by students during their study is the correct choice of data from that which is available, their connectivity, processing and interpretation, as well as drawing appropriate conclusions and taking a critical attitude. Therefore, it is not only of particular importance that students gain a solid knowledge of statistical research, its procedures and methods, but also to stress the importance of statistics, that only through it can the gap between the sea of information and the end result of their research – the conclusion – be closed.

The proper use of statistics in all spheres of human life is essential. The more advanced a society is, the greater the need for more extensive and more complex statistical surveys. In a developed society, statistics is looking for comprehensive information, thoughtful analysis, and short and actual answers to the questions: who, what, how, how much. Accordingly, regardless of the determination, statistics is the key to the professional development of each individual. The following lists some arguments in favor of this thesis.

The activities of governmental bodies in each country could not do without extensive research, which involves the use of statistical methods. Development of the economy, fighting crime, judicial efficiency, the development of agriculture, health, education, depend on the use of reliable, timely and properly interpreted data. Statistical research is regularly required to monitor natural population growth, migration, changes to the structure of the population, the labor force.

Application of statistics in the business field is growing. The profitability of firms largely depends on the quality control of their products, market trends, consumer interest and the like. For example, restaurants monitor food quality, preparation time and speed of service; companies which perform delivery of goods and transport monitor the timely arrival of packages and vehicles; farms are interested in the growth rate of

production and purchase quotas. These are some of many examples that are regularly subject to statistical research. Statistical decision theory is of great help in the business world, because it allows you to make the right decisions under conditions of uncertainty. Many processes that are seemingly undetermined are subject to certain rules.

The rapid development of medicine and pharmacy is based on the application of statistics. Every day, thousands of chemical compounds are tested and various tests are done in order to discover drugs for severe and incurable diseases, or to gather information on the effects of treatment with a particular therapy.

All these are just a few examples that show the importance of knowledge of statistics in decision-making on a professional level.

Suggestions for Improvement of Statistical Education

With the increased interest in raising the level of statistical literacy, which is in line with contemporary global trends, attention should be focused on statistical content in the curriculum and teachers' abilities to successfully implement this content. It is therefore necessary to modify the curriculum at all levels of education so that students are able to respond to the current challenges privately and professionally. Having noted these developments in higher education, we suggest the production of guidelines to overcome the problems and developmental changes in statistical education.

- Most of the students, such as students of social sciences, have a negative attitude towards statistics, because of its connection to mathematics. Certain findings reveal extreme reactions where students choose a specific study program in which there is an absence of mathematics.
- In the calculations in statistics, often procedures of arithmetic, algebra, differential and integral calculus are used, which can cause problems to students (although most of these features have been studied in the course of secondary education).
- Methods used by teachers to bring the content to the students are of crucial importance, because they fundamentally affect the development of the correct attitude towards statistics, which would lead to better adoption of the planned content.

In this context, we believe that for the successful implementation of teaching and the achievement of the objectives of each course in statistics, the following recommendations will have a positive influence:

- One of the ways to motivate students to learn statistics is to emphasize its importance not only for scientific research and professional development, but also for everyday life. For this, it is necessary to use real-life situations and problems that they are surrounded with on a daily basis, with special emphasis on the area that is the subject of their interest.
- To create a preparatory (optional) course in mathematics for students with weaker prior knowledge in maths, specifically structured for the purpose of statistical education, which will enable them to strengthen their knowledge and make it easier to follow the teaching of statistics.
- Each student who attends a course in statistics should be expected to understand the course of a statistical survey, starting from the selection of the sample, means of collecting data, their processing and analysis, up to the interpretation of results and their application. For this, it is necessary to pay more attention to the choice of statistical methods, selectively and critically considering how to use them, to realize their advantages and disadvantages, and to minimize the mathematical evidence for the claims.
- The teacher of statistics should be familiar with recent scientific findings about how students acquire knowledge and learn best within this specific subject. Studies show that it is an immediate application of active methods and cooperative learning techniques, problem solving and continuous practical verification of theoretical knowledge which works best.
- In the information society, of great benefit in the application of statistics in other sciences is the use of computers or ready statistical programs that significantly simplify the calculations and preparation of outputs in a variety of graphic forms. Therefore, students should be enabled to use some of the contemporary statistical programs such as SPSS, Statistics, Excel or Minitab.
- The selection of literature is also of great importance, especially in the sense that it should include all aspects of creating a better basis for the future progress of students (e.g. a course in statistics in the first cycle of the Faculties of Economics is the basis for courses in actuarial mathematics

and quantitative methods in economics).

- Methods for evaluation of students are an important factor, not only for providing feedback on the acquired knowledge, but also for the selection procedures that could assist students in the acquisition of quality education. One of the ways to determine how much and what knowledge is understood is the development of a specific project, where the students can demonstrate acquired knowledge in an integrated application form and where its presentation (defense) would contribute to the building and the development of adequate specialized vocabulary.
- Finally, account should be taken of the experiences of other countries in terms of their efforts to promote statistical literacy, statistical thinking and reasoning. In conditions of rapid change, the emergence of innovative techniques and the availability of any expert information from open sources, the danger is not using the resources offered by the Internet, such as on-line statistical applets and simulations, on-line books and activities or web pages from which students can download data (e.g. The web- page of the Statistical Office).

Conclusion

This paper is an attempt to highlight the need to strengthen statistical education aimed at introducing students to scientific research and supporting their professional development. Treated in that context should be concepts of statistical literacy, statistical thinking and statistical reasoning, which are key elements of every statistical survey. Several measures that can be taken into consideration are proposed in order to successfully accomplish the goals of statistical education. Upgrading knowledge does not end with the completion of higher education. Depending on individual needs, each person should strive to develop independently and professionally. However, the competences acquired during studies are essential and it will be difficult to compensate eventual omissions.

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ASSESSING LEARNING OUTCOMES BY USING STUDENT JOURNALS

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Emrije Agai, South East European University

Introduction

In recent years, an enormous amount of time and effort has been put into learning outcomes all around the globe. Macedonia, trying to follow this trend, has made learning outcomes mandatory for all Higher Education institutions in all programs, and individual courses. South East European University formally introduced learning outcomes to staff and students for the first time in the academic year 2011/12. However, teachers are always uncertain if their learning outcomes have been achieved or not. In an effort to try and assess the learning outcomes of an English Language Skills IV (B2 according to CEFR) course, we have focused only on nouns and noun phrases. This focus was due to the fact that assessing all learning outcomes was almost impossible in the time available within one single study. The words and phrases have been chosen from the topics covered throughout the semester.

Assessing learning outcomes is a very important step towards supporting the success of learners. The USA, for example, has a National Institute for Learning Outcome Assessment (NILOA), and other institutions like North Carolina State University and Montgomery College, as well as various Canadian universities, have a range of projects for assessing learning outcomes of high schools and universities. In Europe, the European Center for the Development of Vocational Education & Training (CEDEFOP), the Lifelong Learning Programs (LLP), European Qualifications Framework (EQF) are running various projects on assessing learning outcomes in all EU countries.

This process is important for learners since they can see how much progress they have made, and what they need to focus on more in the next course. The teachers have evidence of how successful their teaching strategies and activities have been in achieving their goals, and what they need to focus on more in the following semesters, as well as what changes need to be made in order to be more successful in subsequent years. Finally, the institution would have general written evidence about what needs to be changed, and therefore, plan the strategies it will use to improve the respective curricula in order to make progress.

Literature Review

Let us define the main variables in the study. *Noun phrases* are defined by the Longman Dictionary of Language Teaching and Applied Linguistics as "a group of words with a noun or pronoun as the main part" (p.366), whereas a *noun* is defined as 'a word which can occur as the subject of or object of a verb or the object of a preposition…' Learning outcomes have been described in the same dictionary as "the approach to curriculum development that describes the learning outcomes students should achieve by completing the course, create a curriculum to achieve those,and use the same to measure the success of the course"(ibid,pg.378).

Learning outcomes have been the focus of study of many researchers. In the USA, for example, learning outcomes were introduced many years ago and are part of many study programs, like that of Montgomery College, which completed a collective learning outcome assessment in 2009. They defined learning outcome assessment as: "Outcomes Assessment (OA) is the process of collecting information that will tell an organization whether the services, activities, or experiences it offers are having the desired impact on those who partake in them" (Cartwright et al, p.1).

They started the initiative by stating that their teachers needed to know and take evidence, or document, how much students know and how successful their teaching had been. In this way, their institution and teachers would know what they had achieved and what needed to be changed in order to improve their curricula or syllabi. The challenge was how to do this and what tools could be used which would help in assessing learning outcomes. They claimed that teachers should use "assessments that make use of the actual work that students produce in their courses." (ibid, pg. 1). Following their suggestion, we used student sample data, journals in this case, to assess learning outcomes, namely, knowledge & understanding and communication skills (see Section 4). Journals, as stated by Kamberi (2010), are a very useful tool for assessing student progress since they provide deep insight, not only into students' personalities, but also on progress.

Liu et al. (2012) studied learning outcomes related to motivation and learning and found that journals were a motivating factor in language learning. Rirdan & Loacker (2008) claim that assessing learning outcomes not only contributes to improvement of student learning and success but also ' creates a culture of learning' in order to achieve that goal (p. 188).

Nevertheless, there are also others who are against assessing learning outcomes by stating that it is only done to prove that assessment has been done, or 'for the sake of assessment'. Pen (2011), for example, argues that "results from assessment of general education learning outcomes are never used for anything" (p.9). Carrol (1998), in Pen (p.8) claims that student success depends on the time each student needs to finish a task. In this case, they refer to the individual student aptitude, especially to those individuals who need more time in completing a task.

In our study, our students kept a journal for the semester, with separate journal entries for each week, 10 in total. The students were encouraged to produce an entry on A4 paper, handed in weekly on time, with their reflections on the lesson or recently covered topic. The aim was to encourage students to practice the vocabulary freely and research the topic outside the classroom, as a way of progressing towards achieving their learning outcomes. These journal entries were corrected and revisions were encouraged. Students who handed in this work could receive up to 10% of a formal grade for completion.

The Foundation of this Paper

This paper seeks to confirm the significance of journal writing as a valuable tool for tertiary students learning foreign languages, in assessing learning outcomes because students were able to apply the newly acquired knowledge in written production. More specifically, this paper seeks to identify how effective students and teachers were in achieving two of the five learning outcomes, their communication skills and knowledge and understanding. These are related to expressing agreement/disagreement, advantages/ disadvantages, making decisions, and contrasting ideas, by using words and phrases focusing on three main covered topics covered during one semester, Education Technology, Space and Earth, Food and Drink.

Furthermore, the study offers empirical evidence for the importance of journal writing in foreign-language learning classes as an important tool in assessing learning outcomes.

Methodology

Student journals were analyzed by identifying the frequency of noun phrases used:

1. Knowledge & Understanding (using noun phrases related to Educational Technology, Space and Earth, Food and Drink)
2. Communication skills (expressing agreement/disagreement, advantages/disadvantages, making decisions, and contrasting ideas by using noun phrases, on three main topics covered in one semester)

Student journals were collected through a one semester period. Students who did not hand in the weekly journal entry were asked informally why they had not turned in their work. Data were analyzed by applying content analysis, namely comparing newly introduced noun phrases and identifying the frequency of using nouns and phrases related to the topics in the journals.

Research Questions

Based on our professional teaching experience and informed by the findings in the literature review above, the research questions addressed in this paper include:

1. How far can student journals support the assessment of learning outcomes?
2. Are students able to express their ideas and opinions by using various noun phrases related to particular topics covered throughout the semester?
3. Which noun phrases are most frequently used among the given ones?
4. Are journals a useful tool for encouraging students to use recently learned vocabulary freely in their own writing.

The Study

The study was conducted during one semester at South East European University in 2012. Employing convenience sampling, the 30 subjects (n=30) who participated in this study were students attending the

English Language Skills IV (B2 according to CEFR) course, in the English Department of the Languages Cultures and Communications Faculty. Their ages ranged from 19 - 21 years old. Females constituted 83% of the sample group.

Limitations

One of the limitations of this study is its relatively small sample size. A second limitation derives from the convenience sampling approach with, in this case, its gender imbalance and its necessary focus on English Language students. In addition, individual student progress was difficult to assess as only completion was graded but not accuracy.

The Study Instruments

Journals were collected at regular intervals and subjected to a modified content analysis (Newnham, Pantebre & Spark, 1999) to identify the main topics from the lessons. Frequency statistics were applied and inferences were made to analyze the results.

Data Collection and Analysis

Data were analysed using content, discourse, and corpus analysis. As suggested by Fraenkel & Wallen (2003), percentages were calculated, based on the frequency of the noun phrases used in each of the three topics in the journals relevant to the study, in comparison to the syllabus and course books.

Furthermore, in order to have a more reliable source, the content of the journal entry was not graded, as suggested by Paterson (1995) since students may feel threatened to write what they want and rather would write what they think their teacher expects them to. Another suggestion comes from Spack and Saddow (1983), "Ungraded journals can provide a non threatening way for students to express themselves in written English" (p.575). Therefore, the content of the journals was not graded, just the completion of the task as stated earlier.

Results

The frequency of noun phrases was measured based on three categories as listed below.

Knowledge and Understanding

Knowledge and Understanding most frequently used phrases (Educational Technology)

The first topic that students had to respond to was Educational Technology. There were 15 respondents involved and 26 noun phrases were used in total. The noun phrases were classified according to frequency. The results show that 33 % of the students have used the phrases: "online education", "online classes" and "traditional education". 20% used "online teaching" and "shared information".

Knowledge and Understanding less frequently used noun phrases.

Among the less frequent noun phrases, 13% of the students chose to use the following: "an easy way of understanding", "different skills", "famous network", "internet connection", and "different types of debates". A small percentage (7 %) chose to use various noun phrases such as: "a big strain", "a computer at home", "a medium of communication", "a really perfect teaching experience", "computer screen", "educative atmosphere", "eye contact with the teacher", "material for learning", "test results via internet", "visual problem", "the students in the classroom", "this type of classes", "a right to be educated" and "the teacher on the computer screen".

Knowledge and Understanding most frequently used noun phrases (Food and Drink)

The second topic that twenty one students responded to was titled Food and Drink. For this journal entry, nineteen phrases were used in total. The results show that 71% used the most frequent noun phrase" GM food", 42% used "naturally grown food" and 33% used the noun phrase "healthy food". Additionally, 28% used both the phrases "natural food" and "genetically modified food". Another frequently used phrase was "organic food" which was used by 28% of students and 13% chose the phrase "a lot of vitamins".

Knowledge and Understanding less frequently used noun phrases (Food and Drink)

In this section, results show that 38% chose to use all the following noun phrases: "enough vitamins", "healthy eating", "normal crops", "people who consume such food", "the vitamins that a fruit contains", "the food crisis", "the global warming", "the light of the sun", and "your health in the future".

Knowledge and Understanding most frequently used noun phrases (Space and Earth)

The third topic, for which only 12 students produced journal entries, was about Space and Earth. The research results show that thirteen noun phrases were used in total. The most frequent noun phrase used was "global warming". This phrase was used by 41% of the students, 25% used the phrase "the ozone hole", and 17 % used "the harmful gases" and "the only planet people can live on".

Knowledge and Understanding less frequently used noun phrases (Space and Earth)

Regarding the less frequent noun phrases used related to the topic Space and Earth, the study results have shown that a small number of students used the following phrases: "air pollution", "driving cars", "living in big cities", "life on other planets", "our life on earth", "skin diseases", "the earth environment", "the place we live in", and "different human activities".

Communication Skills

Communication Skills most frequently used noun phrases

As far as the second learning outcome is concerned, 70% out of the total sample wrote entries in their journal. The noun phrases expressing agreement/disagreement, advantages/disadvantages, making decisions, and contrasting ideas were set as the objectives for measuring their communication skills. Twenty noun phrases were used in total. The most frequent phrase used by participants was "the advantage of", namely 33% in total, while the second most frequent phrase was "one of the disadvantages" used by 19% of the respondents. Finally, the phrase "an interesting issue" was used by 19% of the total respondents.

Communication Skills less frequently used noun phrases

With regard to the less frequently used noun phrases, only 14 % of the total number of respondents used the following phrases: "a lot of benefits", "harmful effects on the human body", "many disadvantages", "disadvantages about GM food", "my first reason", "the major problem", "the most important one", "the other one", and "the other side". More rarely, only 9.5% used the following phrases: "as a conclusion", "high chance of developing cancer", "the endangered earth", and "the good ones". The least number of respondents, namely 5%, used the following phrases: "another thing I like about", "good conditions", "human health risks", "the big cons", "their awareness about their acts", and "unnatural components" (see Appendix 1).

Conclusions and Recommendations

First of all, although journal content was not graded, students were encouraged to reflect on the covered topics, and most of the students were able to use many noun phrases as reported in the results' section . The students participating in the study were also able to revise the previously covered material, express their ideas and opinions and include other concepts from their own experience or research outside the class.

Some students did not hand in all journal entries. For the topic "Food and Drink", 70% (n21) turned in their assignment on time, for "Educational Technology", 50 % (n=15) of the students handed in journal entries and for "Space and Earth" only a smaller number of students 40% (n=12) turned in their assignment on time (see Appendix 1). From their informal feedback, they stated that they did not complete work because the topic was difficult. However, as well as this, it might be because they were not sufficiently motivated by the grade for handing in the work, they were not interested in the topic; they lacked motivation or were academically inattentive. This is an indication that teachers have to regularly re-consider topics and also use a range of strategies to foster learning and motivate students.

Secondly, according to the number of noun phrases used in the journal entries for the three specified topics, it appears that students were very comfortable in using vocabulary for at least one topic but the other topics were less accessible. According to the study results, the most frequently used noun phrases were related to the topic 'Food and Drink' and include others not covered in class. However, the students used less noun phrases in the other two topics (see Appendix 1).

To conclude, it is recommended that teachers use free journal writing in their language classes since they are a useful way of assessing learning outcomes and encouraging free writing. As we can infer from the study results, topics and success of students in using target phrases need regular review and teachers should spend more time working with those topics which are more difficult for students. Perhaps putting students into small groups to research outside the class on the particular topic, using the computer lab or group presentations on those topics which are difficult for them would contribute to meeting those learning outcomes that were not met through journal writing.

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Appendix 1.

Table 1. Results of learning outcomes

	Communication skills	Knowledge & understanding
Noun phrases related to educational technology		A big strain; A computer at home; A medium of communication; A really perfect teaching experience; An easy way of understanding; Computer crash; Computer screen; Different skills; Educative atmosphere; Eye contact with teacher; Famous network; Internet connection; Material for learning; working in groups; Online classes; Online education; Online teaching; Personal computers; Proper institution; Shared information; Test result via internet; Traditional education; Visual disease; Visual problem; The students in the classroom; Different types of debates; Difficulty in reading on the computer; This type of classes; A right to be educated; The teacher on the computer
Noun phrases related to food and drink		GM food; Healthy food; The food that is grown in an artificial way; Natural food; Enough vitamins; Green food; A lot of vitamins; The things that surround us; Naturally grown food; Healthy eating; Vitamins that contain; A modern era; Genetically modified food; These kinds of food; Normal crops; People who consume such food; Organic food; The vitamins that a fruit contains; The food crisis; The global warming; The light of the sun; Your health in the future
Noun phrases related to space	Earth Space; The only planet where people can live in; Our houses; The place we live in; Air pollution; Driving cars; Our life on earth; The ozone hole; Skin diseases; The earth environment; Hot water; Life on other planets; Global warming; Living in big cities; Harmful gases; Life on earth	
Noun phrases Related to various expressions	Many disadvantages; My first reason; One of the disadvantages; The big cons; The big cons; The other one is; The major problem; Another thing I like about; As a conclusion; The best one; The good ones Harmful things; The advantages of them; Good conditions; Many disadvantages about GM food; Human health risks; The most important one; Harmful effects on the human body; natural components; High chance of developing cancer; The other side; A lot of benefits; Everyone to eat organic food; The endangered earth; The first step to keep the environment clean; An interesting issue; Their awareness about their acts; Their advices they give all over the world	

THE EFFECTIVENESS OF USING TECHNOLOGY TO ENHANCE AUTONOMOUS LEARNING IN TEACHING AND LEARNING VOCABULARY

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Introduction

We live in a technological era, and are surrounded by technology at all times. It plays an extremely important role in our everyday lives. We use it for many purposes, such as work, study and entertainment. It has also influenced teaching, as it is believed to make learning more interesting and more appealing to students.

This has caused a significant shift in teaching languages, and specifically in teaching English as a foreign language. We, as teachers, want to move to some more modern ways of teaching English to our students, and nowadays using technology in the process of teaching and learning is no longer perceived as an option, but rather a necessity for those who can afford it.

South East European University (SEEU) language centre concept, in teaching EFL, is promoting and encouraging teachers to move to more student-centred classes, in order to make students autonomous learners and to help them survive and manage their own learning both inside and outside the classroom. By making students aware of the importance of being autonomous learners, and by teaching them the techniques that promote autonomous learning, we help them gain self-confidence. This is important as we often see students who lack motivation which results in their frustration and hesitation in participating in different tasks, and even in failing classes.

This study investigated how technology can help teachers accommodate different learning needs and keep students motivated. Students at SEEU can learn to communicate in English independently with the help of technology because it offers a different, effective way to learn foreign languages. In these internet-based activities, the teacher takes the role of the facilitator and the students can direct their own pace of learning. Even the introvert students who resist taking part in group or whole class activities can be involved and actively participate in the given tasks.

The objectives of this study are:

- To identify technology efficiency in creating autonomous learners;
- To find out whether using technology is helpful to teachers and students, specifically in teaching vocabulary;
- To assess how technology enhances vocabulary acquisition in the English for Specific Purposes (ESP) class.

These objectives were assessed through the use of quantitative and qualitative methods to analyze the data collected. The main aim of this study was to contribute to the quality of the teaching and learning process.

Learner Autonomy

The terms ‘autonomous learning’ or ‘student-centred learning’ have been widely used for a very long period in teaching. Many scholars have provided definitions of what autonomous learning is.

Barr and Tagg (1995) offer a useful interpretation: they are of the opinion that there is autonomy when the power from the teacher is given to the student; there is a shift from teaching to learning.

It has been described in different ways, but Dickinson (1978:11) says that “Autonomy is a situation in which the learner is totally responsible for all the decisions concerned with his [or her] learning and the implementation of those decisions.” Benson and Voller (1997:29) agree with the above mentioned author and claim that “Autonomy is a recognition of the rights of learners within educational systems”. (Benson&Voller, 1997:29)

It has been defined by authors as students’ ability to control their own learning by becoming responsible, having skills, knowledge and motivation. Learner autonomy was popularly defined by Henry Holec in his

book *Autonomy and Foreign Language Learning* (Holec, 1981). He described learner autonomy as the "ability to take charge of one's own learning". This ability "is not inborn but must be acquired either by 'natural' means or (as most often happens) by formal learning, i.e. in a systematic, deliberate way". He points out that "To take charge of one's learning is to have […] the responsibility for all the decisions concerning all aspects of this learning […]" (Holec 1981:3).

It must be emphasized that autonomous language learning does not mean that students are working on their own. Instead, autonomy is achieved when students actively interact, participate and respond in order to acquire the vocabulary and apply it in a meaningful way; when they are not only an audience in their learning but, in fact, they take an active part in their learning.

Along these lines, Benson (2001) says that the learner in this case is not someone on whom we perform learning and accomplish tasks, rather he is the one who causes learning to take place by being an active participant in the process at all times. The autonomous learner is one that constructs knowledge from direct experience, rather than one who responds to someone's instruction.

Literature Review

Being a teacher of English as a foreign language and teaching students of different backgrounds, language skills and competencies is fulfilling, challenging, motivating and at times very difficult. Attempting to find ways to make the material more appealing to the students, to motivate them to participate and to make the learning experience a better one, is very rewarding for a teacher, when achieved. At times it is difficult to teach mixed ability students, at times it is difficult to teach low proficiency students, and in our case it was difficult to teach vocabulary to high proficiency students, because the vocabulary taught to them is very specific and related to their field of study. The authors of this paper are specialists in EFL teaching but do not necessarily have subject specific knowledge of the technical vocabulary our students require. The difficulties lie in the fact that we want to make our classes as beneficial as possible to our students and the learning a better experience for everyone.

With regard to our focus on teaching vocabulary, it is a fact that grammar has almost always been considered more important than vocabulary which, in a way, has been underestimated. Different scholars (e.g. Carter and McCarthy, 1988; Lewis, 1993; Long and Richards, 1997; Zimmerman, 1997) talk about vocabulary not being given the importance it merits; that it has never been considered as important as grammar, reading, writing or discourse analysis in language teaching, which in contrast have always been subjects of study by different researchers and scholars.

Recently, however, there are scholars who recognise the importance of vocabulary within language teaching. Words are the atoms of language, and according to Baker (2002:51) "Learning vocabulary is perhaps the largest and most laborious aspect of acquiring another language."

Decarrico (2001: 285) points out that "Vocabulary learning is central to language acquisition whether it is a second, or a foreign language. Even in a learner's mother tongue, there is an incessant learning of new words and new meanings for old words." A learner may be aware of the grammar rules or structures, but if he/she lacks knowledge of the words, he/ she will not be able to get the message across, and there will be no interaction among learners. "Richards (1997:7) claims that 'Vocabulary is central to language and of critical importance to the typical language learner." (as cited in Zimmerman, 1997:5)

For this paper, it is important to mention that we were dealing with students who already had an advanced knowledge of IT skills since they were Contemporary Science and Technology students. This meant that in using technology based activities, they were able to concentrate more fully on acquiring and retaining new vocabulary. We believe that the students are active participants in accomplishing the tasks; they can track their own progress and immediately become more motivated to get involved. While using internet-based activities, the timeframe is more flexible and under the control of the student. The fact that they receive the correct answers by the end of each activity gives them the opportunity to check and reflect upon their work.

We also think that using technology in the classroom not only makes our students autonomous, it also challenges and motivates them. They can guess and identify the meaning of the given vocabulary used in the different contexts which leads to increasing their self esteem and motivation. This is best expressed by Dogra (2010) who claims that "...the effect on students was an increase in motivation. Teachers and students are sometimes surprised at the level of technology-based accomplishment displayed by students who have shown much less initiative or facility with more conventional academic tasks". Dogra continues, "A related

technology effect stressed by many teachers was enhancement of *student self esteem*. Both the increased competence they feel after mastering technology-based tasks and their awareness of the value placed upon technology within our culture, led to increases in students' (and often teachers') sense of self worth."

Autonomy in Teaching and Learning Vocabulary

Generally, the SEEU Language Centre supports learner autonomy, especially in ESP vocabulary learning. Although students at SEEU come with different learning backgrounds and achievements, they have little or none of the autonomous disposition that is required at university level. The Language Centre strives to incorporate autonomous learning, especially with more advanced levels by creating different tasks in which students can measure their own progress. The aim is to enable students to increase their learning motivation, personal productivity and creativity because they can direct their pace and learning style. In addition, it is very beneficial as a life-long learning skill.

When they successfully accomplish the task, their self-esteem is raised, and that is an indicator that the student will actively participate in other tasks, usng the newly acquired words. That is when learning actually takes place and the short-term as well as later long-term objectives are achieved.

Corpus and Concordance

A corpus is a collection of texts compiled for linguistic study, whereas a concordance, according to the Collins Cobuild English Language Dictionary (1978) is: "An alphabetical list of the words in a book or a set of books which also say where each word can be found and often how it is used." Most concordances are now compiled by computer software.

In our study, we have used a concordance since we wanted to see how helpful it would be to students to learn the vocabulary items presented in class, get to know the grammatical category of a word, remember and use it. However, we need to bear in mind that Computer Sciences is a field which is changing constantly. The terminology used in this field is also changing rapidly; therefore, we cannot be sure that in the future the same terminology will be used.

The uses of concordances in teaching and learning range from 'low contact' to 'high contact'. 'Low contact' refers to concordances being used as a reference tool by a teacher, much as an individual may use a dictionary. At the other end of the spectrum is 'high contact' use in which concordances are used as one of the main language resources in a class. By using a concordance, our students were enabled to look at the words first of all, then look for the word in the concordance, to find the different meanings of that same word (as well as find which meaning applied to our context), to listen to the pronunciation of the word, to practice it and, finally, to do the activities.

Significance of the Study

The study examined how students perceive the incorporation of computer technology, particularly how they perceived the incorporation of the online concordance software in a vocabulary class. It investigated student attitudes towards these resources and derived conclusions about how it affected autonomous learning. The study results can be useful for teachers of languages and those who teach ESP.

Methodology

This study was carried out at South East European University in the academic year 2011/2012. Two types of data collection were used. The methods employed were administering questionnaires and quizzes for students and teachers.

The questionnaire asked the students about their attitudes to using computers in an ESP class - did it make them work independently, did they feel free during the activities, were they more motivated with the computer than with the textbook in the classroom? As far as the quizzes are concerned, they contained questions in which the new vocabulary items presented were tested.

We had two quizzes, one for the vocabulary items presented in class with the help of the textbook, and one for the vocabulary items presented in the computer lab with the help of the concordance. We wanted to see which experience would enable students to remember the words more easily, and to use them correctly in a given context.

There was a total sample of 25 students who participated in this study. The students were 20-25 years

old, all non-native speakers of English, both male and female. They were all students of the programme of Computer Sciences (CS) and they were attending the English for specific purposes course.

A list of 20 new vocabulary items was selected, taken from a new lesson which was presented to the class. Half of them (10 new words) were presented through the activities from the course pack, in the classroom, the other half were presented by using online concordance activities at a computer lab.

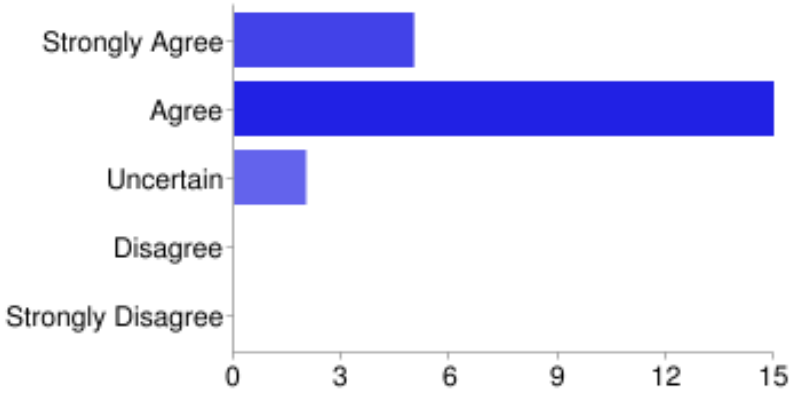
Results

Not all the questionnaire questions are discussed, only those which gave more relevant and reliable results.

1st Research Question: How efficient is technology in assisting autonomous learning?

Technology was shown to be a very helpful tool in assisting autonomous learning. By its means the students controlled their pace of learning and measured learning outcomes. In this particular case, by using the concordance activity, the students were able to guess the meaning of the unfamiliar words by referring to the given sentences used in authentic settings. The majority of other activities which were used on-line showed that the students could use the same words in different contexts. According to the survey results about whether students preferred computers to a textbook in ESP classes (75 % agreed, 15% strongly agreed 5% disagreed, and 5% strongly disagreed), Students got immediate feedback for the meaning of new words (30% agreed, 70% strongly agreed), it helped students become independent learners (55% agreed, 25 % strongly agreed,10% were neutral, 5% disagreed, and 5% strongly disagreed). It helped students improve the quality of their work (70% agreed, 20% strongly agreed, 10% were neutral), it helped students remember new words easier (805 agreed, and 20% strongly agreed).

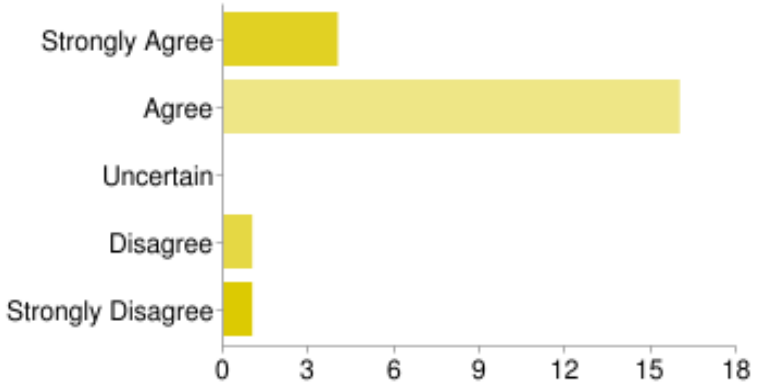
Finally, with the question about whether this method helped students to work at home independently, the following graph shows the results (75% agreed, 20% strongly agreed, and 5% were neutral).



Q.9. I can do more exercises related to the lesson at home independently

2nd research question: What are the students' attitudes towards the method?

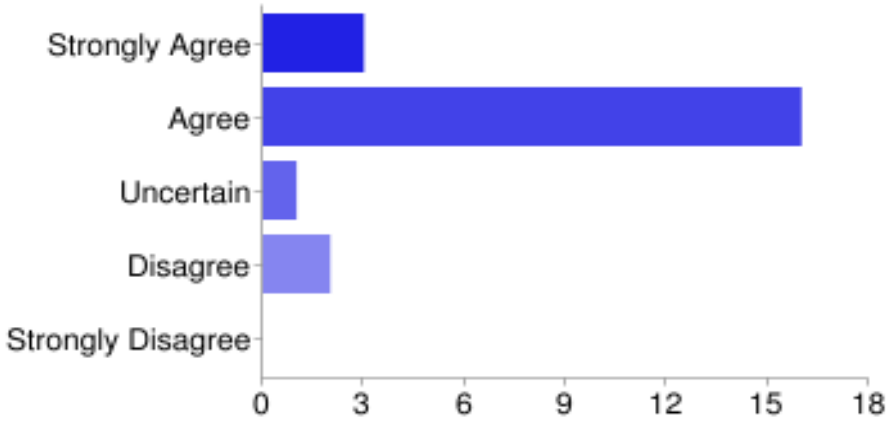
Questionnaire results showed that students preferred the second way of introducing new vocabulary, i.e. incorporating technology in teaching vocabulary, as 89% of them gave positive answers regarding its usefulness. They enjoyed the activity and found it useful for identifying word chunks, which in language acquisition refers to words used as fixed expressions and collocations.



Q.1. I prefer computers to a textbook in ESP classes

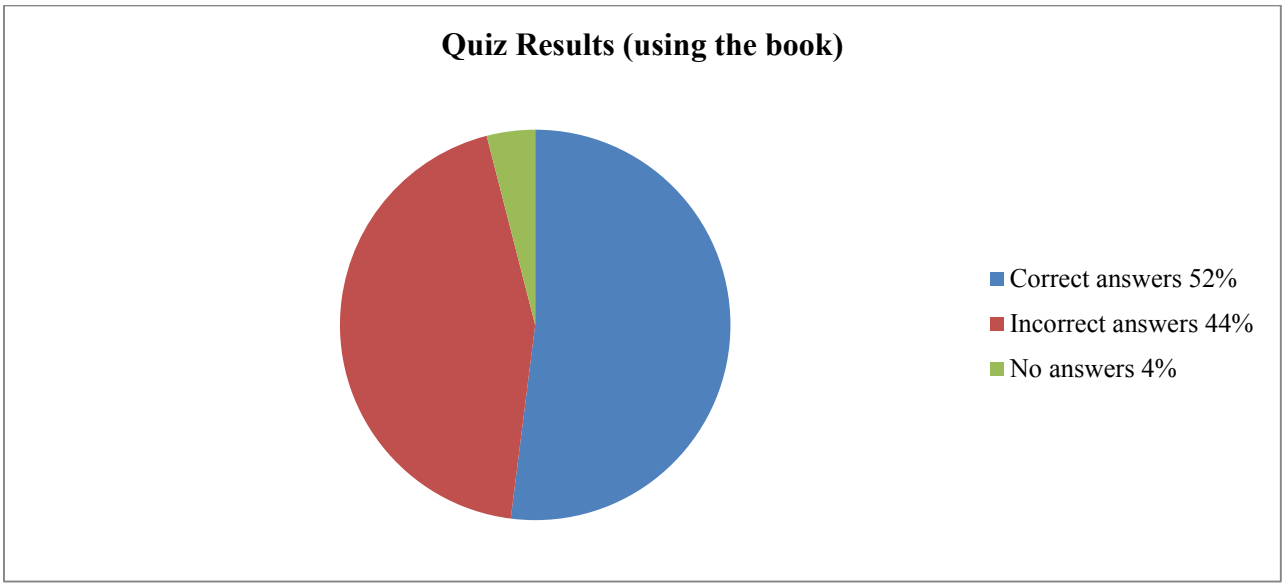
3rd research question: Can technology improve the acquisition of the new vocabulary?

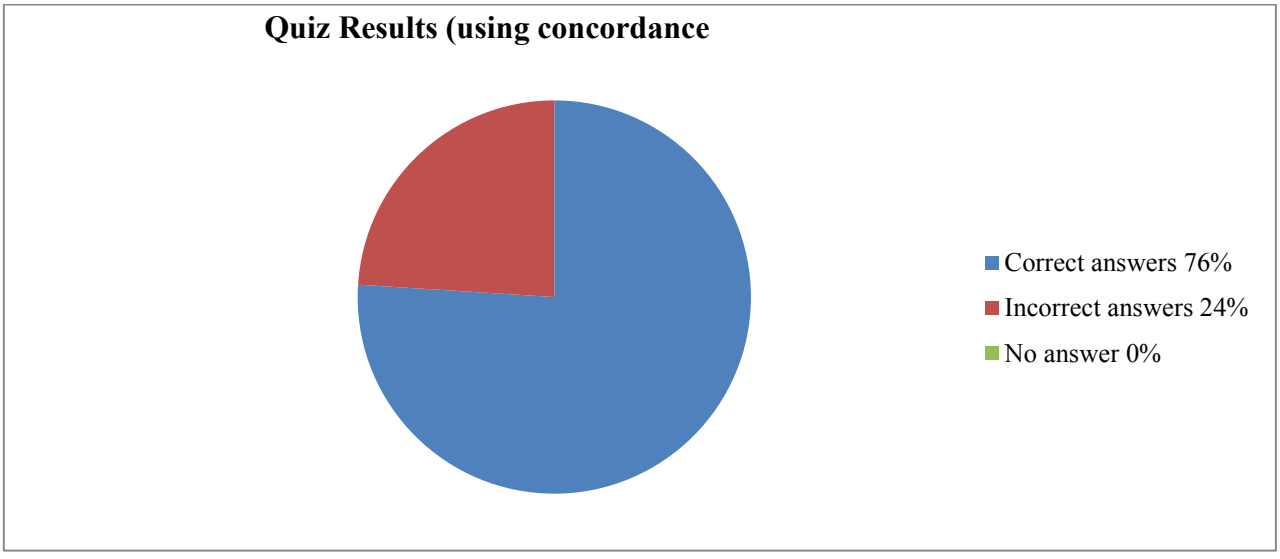
The survey results showed that words presented by the use of concordance were recalled and defined more easily. However, the common danger of classroom computers remains: students might be tempted to use the social networking sites such as Facebook, myspace, twitter. To avoid this, the teacher needs to monitor each student separately and focus their attention on the given task.

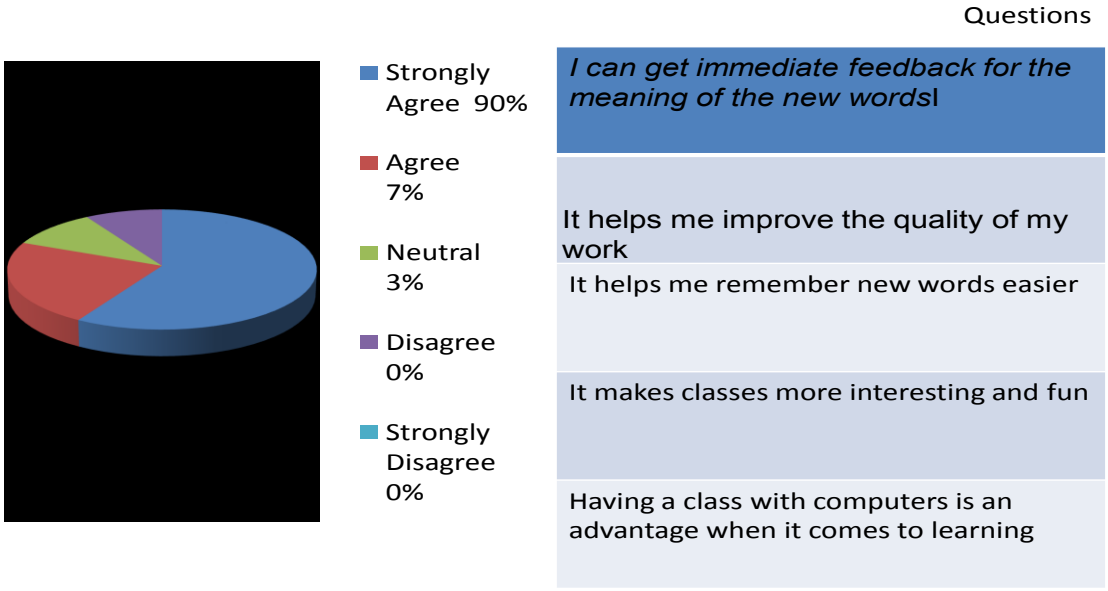


Q6. It helps me remember new words more easily

The following graphs show the results from the quizzes. One quiz after the activities from the book was used to introduce the vocabulary, and the quiz after the concordance was used to introduce the vocabulary items.







The concordance-based method used in our research turned out to be very useful for teaching abstract words and professional terminology. This is so because the vocabulary used was strictly related to the field of computer sciences, and the quiz results showed that the students did much better after the vocabulary presented using the concordance.

Conclusions

The conclusions drawn from the analysis of the data gathered from the students' questionnaire and quizzes are the following:

Vocabulary requires special attention when being taught, so that it is absorbed by the students, can be used in different contexts not only during the class, but later during the course and outside the classroom in everyday communication. The sites and the activities can be easily accessed outside the classroom as well, which gives the opportunity to students to practice the language whenever they need it. In our research, we tested which method worked best in order to evaluate and make sure that our students benefit the most from the classes where we teach vocabulary.

The concordance-based method proved to be more effective than the conventional teaching method in teaching vocabulary to the students in the study. It was also shown to be very efficient in maximizing students' vocabulary gains as well as retention rates.

The limitations of this study were that there was only a small sample of students; only 25 students were involved in the study. This may not be applicable to other groups of students, as for instance BSE (Basic Skills English) students. Basic English skills students should have been included, to see whether this method works for them as well. Finally, since this study was carried out with students of the department of Contemporary Sciences and Technologies, it is assumed that these students are already competent IT users. Therefore, in future research, a bigger sample of students should be involved in the study, including students attending Basic English skills classes so that we can see whether this method is useful in teaching low-proficiency students. In addition, another study should be conducted with students from other departments, besides the CST students for comparability.

In conclusion, technology enables students to be actively engaged with language in an authentic context and challenges them to construct meanings and patterns through analysis of the output, which at the same time makes them become autonomous learners. Making students autonomous learners is one of the aims of teachers; this method assisted autonomous learning in the process of teaching and acquiring vocabulary. The teacher in this case was only leading and assisting the students; they did the activities and exercises themselves.

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APPENDIX 1

STUDENTS QUESTIONNAIRE

		Agree	Strongly Agree	Neutral	Disagree	Strongly Agree
1	I prefer computers to a textbook in ESP classes					
2	I can get immediate feedback for the meaning of the new words					
3	It helps me become an independent learner					
4	It helps me improve the quality of my work					
5	Having a class with computers is an advantage when it comes to learning					
6	It helps me remember new words easier					
7	It distracts when I try to study					
8	It makes classes more interesting and fun					
9	I can do more exercises related to the lesson at home independently					
10	I prefer classes without technology					

STUDENT INCLUSION IN THE LEARNING PROCESS: GROUP WORK AND STUDY TEAMS

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Maja Pandilova, Vesna Korunoska-Stevkovska, University Dental Clinical Centre "Sveti Pantelejmon" –Skopje

Introduction

Students learn best when they are actively involved in the learning process. Theoreticians have common views and opinions about the implementation of educational processes and the different ways of transferring knowledge. Fiechtner and Davis (1992), for example, express the view that no matter the subject and regardless of the study program, student small group work encourages them to learn more about what is being taught. In their opinion, these small groups allow students to learn the material much better than when the same content is presented using other instructional methods.

Bernabe, Icaza, Delgado-Angulo (2006) point out that students take a much longer time learning new material when the classical form for delivering theoretical and practical teaching is applied. They also emphasise that students in stomatology are more satisfied with the study process when group work is applied in the learning process. Clark - Burg (2009) state that the concept of cooperative work, group work, pair work in the professional pedagogical literature is being studied, supported and applied in order to accomplish common, academic goals.

According to Beckman (1990:129), the term *collaborative learning* applies to the teaching model by which students with different levels of knowledge work and study together in small groups striving to accomplish the assigned project tasks.

A frequently used and mentioned definition that clearly describes studying through cooperation is the definition of Johnson, Johnson and Smith (1991:1) according to whom: "Collaborative education is the active experience of studying through institutional, professional and historical boundaries".

In the published literature for utilizing this kind of teaching, several terms and definitions are mentioned. For example, Johnson, Johnson and Smith (1991:2) suggest several terms that can be found which relate to this methodology: "synonyms for collaborative learning which may be used are – cooperative learning, learning through cooperation, collective learning, learning in communities, peer teaching, reciprocal learning, learning teams, study circles, study groups and working groups".

On the other hand, we should point to Smith's statement (2010:4) in which the following is emphasized: "Although in the literature all these terms for learning through cooperation are applied, nevertheless there are essential differences among them".

In all these terms, there are three general ways of including students in the process of education through the formation of groups. These are non-formal learning groups, formal learning groups and study teams. It is important to point out that, for us, these groups are

- different in their composition and
- distinct from the group of students in the current semester of the academic year.

According to Connery (1988), application of the acquired experiences and active and cooperative learning of students are very important, even essential in laying the foundation for the educational process. This author stresses that in different educational stages, we often encounter the notion of learning through creativity, which is another name for and equal to collaborative education.

In this field, in the last few decades, the authors Dowson and McInerney (2003) have published important and interesting data about reforms in the education of students in stomatology. The common aim of these changes in the education process in our study programs in stomatology was to provide a quality cadre in accordance with the rapid world changes of the twenty first century. In this regard, among many changes in the curricula in the stomatology study programs, Problem Based Learning (PBL) has been implemented. The organization of education on the basis on PBL for pre-clinical and clinical courses in stomatology studies requires specific techniques of learning in groups. This can be achieved with the formation of small groups in "pre-session", in advance of any kind of pre-clinical and clinical activities that are envisaged in the contents of professional courses.

According to Fincham and Shuler (2001), the formation of small groups is relevant in order to determine students' readiness to continue to a following phase such as the research phase, during the completion of the phases for clinical procedures. For realization of this aim, students are required to discuss the aim of the clinical check-up of patients and procedures within the therapy and professional communication with patients.

Aim

The aim of this study was to show the effect of this teaching process in different students and study group. The specific aim was to show the development of collaborative education, that is, the inclusion of students in the education process as a contemporary teaching method in the first cycle of studies in two study programs: academic studies in stomatology and professional studies for professional dental technician-prosthodontist.

Material and methods

For the realization of the aim, a total of 190 students from the first, second and third study years from two study programs were included from the Faculty of Medical Sciences, at the University "Goce Delcev", Stip in the academic year 2011/2012. From the study program General Stomatology, 130 students were included in the study, whereas from dental technician – prosthodontics there were 60 students.

Respondents were grouped according to three types of students. These groups in their composition were distinct from the student clinical groups of the current semesters of the academic year.

Designing working groups –Principle of work

Informal learning groups - ad hoc temporary groups of students within a single class session. Informal learning groups were realized as follows: the student would turn to his neighbour –student and spend two minutes in discussion regarding the question posed by the teacher. Informal groups were formed. In accordance to the attitudes of Johnson, Johnson and Smith (1991) and Smith (2010) these groups consisted of different numbers of students. During theoretical teaching **Informal learning groups** (often three groups with two students – randomly) were asked two to three questions from the lesson at the end of the class. For example, one student read the question aloud, a second student answered and the other students from the class gave their opinion about the correctness of the answer by raising their hands.

Formal learning groups - teams established to complete a specific task, usually the preparation of the laboratory experiment with writing a report, the realization of a project or the compilation of the application. Students work together until the task is finished and graded. These groups may finish the task during one session or over several working weeks. **Formal learning groups** were assigned project tasks that included preparation of certain topics using the Smith method (2010) which requires short, clear presentations of the key issues.

Study teams are long-term groups (usually existing over the course of a semester or inside the groups) with stable membership whose primary responsibility was to secure support, encouragement and help in preparation of the needed tasks. Study teams also informed their members about lectures and tasks that somebody missed in one session. For such groups, it was important to point out that the larger the class and the more complex the subject matter, the more valuable study teams can be. This view is supported by the findings of Johnson, Johnson and Smith (1991) and Smith (2010).

Study groups were groups formed inside the groups for clinical and practical teaching. Students knew the given task in advance and they had enough time available in order to be theoretically prepared for the envisaged aim. During the realization of the project task, they had the basic aim of implementing and presenting manual skills in accordance with the theoretical knowledge for certain stomatological or dental technical work envisaged according to the program of practical clinics.

The findings were noted and they are shown in the following tables.

Results

In **Table 1,** from the survey conducted, the effectiveness of the application of different ways of acquiring content knowledge during theoretical and practical teaching is shown. As well as the effectiveness of different types of learning, the results from student acceptance of this way of learning by students expressed in percentage terms from every examined group. These results were gathered by questioning students immediately after the conducted task, as to whether the selected method helped them in preparation of the given task.

Table 1. Summary of the results from non-formal, formal learning and study teams

Study program	Sem	Course	Groups with Informal learning		Groups with formal learning		Study teams	
			Effi-ciency	Accep tance	Effi-ciency	Accep tance	Effi-ciency	Accep tance
General stomatology	I	Anatomy of the jaws and dental morphology	70%	70%	90%	90%	98%	85 %
	II	Stomatological materials	75%	75%	90%	95%	85%	85%
	III	Oral Health	80%	80%	98%	85 %	85%	85%
	IV	Profilax of oral disease	95%	95%	85%	85%	85%	85%
	VI	Clinical cariology 1	85%	85%	90%	95%	95%	95%
	VI	Stomatological radiology	95%	95%	95%	98%	85 %	85%
	VI	Clinical prosthesis	75%	85 %	85%	85%	90%	98%
Professional studies for dental technician – prosthodontist	I	Stomatological materials 1	95%	95%	95%	95%	90%	90%
	II	Stomatological materials 2	85%	85%	95%	100%	95%	95%
	VI	Oral surgery	90%	95%	95%	95%	90%	95%
	V	Dental implantology	95%	95%	90%	95%	95%	100%
	VI	Dental therapy	90%	95%	95%	95%	90%	95%

The results demonstrate the value of Collaborative Learning. This is in line with the research literature where it is a widely recognized term that is related to different educational approaches that include common intellectual effort by the student or students and teachers together (Chickering and Gamson, 1991).

According to Cooper et al., (1990:1) most usually in the application of collaborative learning students work in groups of two or more students, where: “In the learning process of students in a group, they mutually seek and develop the following activities: appropriate communication, dialogue, understanding, finding solutions, determining the meaning or create final works".

Activities involving collaborative learning have always varied in their scope**.** However, it is important to emphasize that the most important is the research by the students for the application of the content. The advantage of this way of learning is that it goes beyond the traditional way of teaching with the teacher and his presentation or her explication.

According to Slavin (2001), collaborative learning represents significant change and is different from the typical teaching method or teaching in lecture halls. In collaborative lectures, the following processes can completely disappear: lecturing, listening, taking notes. These activities merge with all other learning processes, which are based on the discussion of students and their active work with the subject content and material. Teachers who have used approaches and methods of collaborative learning reduced their self-importance in the classroom. This applies in terms of the way teachers approach the teaching content with students, as experts- lecturers of knowledge to students, and even more as expert designers of intellectual experiences for students.

Learning through cooperation and collaborative learning in general are significantly different from traditional teaching approaches because students work together, unlike the classic way of teaching, in which students learn and compete individually, each for themselves, or against each other.

Chickering and Gamson (1991) point out that collaborative learning can be done at any time when students work together, for example, when they help each other out during the preparation of the project tasks.

Different groups of collaborative learning are designed differently and have different goals and tendencies. McKeachie, Pintrich, Lin and Smith (1986) advocate an in-depth consideration of the formation of the group of students such as what kind of group will be formed for that subject and what the structure will be. They emphasize that these considerations are very important, and only the teacher who actually organizes this process and this way of acquiring knowledge is responsible for them.

Johnson, Johnson and Smith (1991) and Smith (2010) are in favor of informal groups, as they can be organized at any time in a generation and in any size in order to check whether students understand the

material. Most groupings give students the opportunity to apply what they learn, or even to implement change (deceleration or acceleration) in the dynamics of learning.

The same authors, in relation with formal learning in groups suggest that these groups usually perform their task in one session or over several weeks. It is typical of this type of group that students work together until they complete a certain task or until their project is being assessed.

Smith (2010) gives special importance to the study teams, which in principle are long-term groups with stable membership whose primary purpose is to provide support, encouragement and assistance in the preparation of project tasks. The larger the group, he suggests, and more complex the subject, the greater is the importance of planning and the establishment of the study teams.

Cooperative learning usually takes place when students work together on a project in a small group and in the same place. According to Tiberius (1990), the creation of mixed groups is particularly helpful to students, especially for the development of their social skills.

Skills needed to work together in groups are quite different from the skills that are used to succeed in writing or at the end of most project tasks. Cooperative learning is a very useful and relevant tool in education, especially in a world where a team player is often a key part of business success.

Researchers Chickering and Gamson (1991:6) suggest that cooperation and collaborative learning bring positive results such as: "... a deeper understanding of content, increased overall achievement in the evaluation, improved confidence and higher motivation in managing during the completion process of the tasks." Cooperative learning helps students to be actively and constructively involved in content and improves teamwork skills. This way of education and acquisition of new knowledge through the process of collaboration is a very important moment in preparing students and building their professional image. They are future dentists and a large part of their professional success will depend on the potential for collaboration and communication.

As far as the realization of our research is concerned, new methods were implemented to aquire knowledge through repetition of the learning content in the academic year 2011/2012 in the Faculty of Medical Sciences in Stip.

We need to emphasize that the applied methodology was designed on the basis of the following principles:

1. **Creation of group tasks that require independence.** Students in the group perceived that they would "sink or swim" together, that each member was obliged to and dependent on one another, and that no one succeeded if anyone in the group failed. This principle is consistent with the methods proposed by Kohn (1986:7) and Smith (2010:6), according to which: "Realizing that peers rely on each other is a powerful tool in education and it is a very powerful motivator for group work ".
2. **To make the work relevant to the group.** Students must communicate group tasks, as an integral part of the whole. It is necessary to create tasks that fit and match the skills and abilities of the students. In the beginning of the study, students were given relatively easy tasks. As students learned more, the level of difficulty of the tasks continued to increase. These principles are consistent with Tiberius (1990:10), according to which: "At the establishment of formal learning groups, project tasks that allow for a fair division of labor need to be assigned ". This principle guided the formation of the groups and thus proved successful in terms of the structure of tasks, so that each member of the group could make a balanced and equal contribution to the work.
3. **Create "competition" between the groups.** Each group member had a specific part of the project task synchronized so that despite their individual work, it was necessary to align all contributions in order to achieve a whole that could be compared to other projects of other groups with formal learning.
4. **Computer-supported collaborative learning (CSCL).** Computer supported collaborative learning is one of the most promising innovations to improve teaching and learning with the help of modern information and communication technology. Collaborative groups had instructional methods whereby students themselves were encouraged or required to work together in learning tasks using this technology. The best results were achieved with the Computer-Supported Collaborative Learning which at the University is called e-learning 2.0.

Conclusion and recommendations

1. Collaborative learning in groups as a teaching method is designed to encourage students to work together.
2. It is necessary to distinguish collaborative learning from the traditional model "direct transfer", in which the professor believes that he/she should be the main pillar and distributor of knowledge and skills. When implemented in the best possible way, collaborative classes stimulate both students and teachers.
3. At its most effective, common models of collaborative learning involve students in asking, learning and understanding in coordination with each other. Joint learning requires responsibility, persistence and sensitivity, so that the result will be achieving a common purpose, for which each student is welcome to join, participate and achieve.
4. Acquiring an education in dentistry and attaining new knowledge and skills in the field of dental medicine should be based on the process of collaboration. This represents a significant link to the creation of the professional image of the future dentist.
5. In this way, based on the development potential for collaboration and communication with fellow students, fellow dentists, and primarily with patients, student dentists in building a professional prospective, are able to start with collaborative involvement during the teaching process. This prepares them for collaborative inclusion in the health care system in the future.
6. Computer supported collaborative learning (CSCL) is a most promising tool for improving teaching and learning with the help of modern information and communication technology.

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EFL INSTRUCTION AND PORTFOLIO ASSESSMENT

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Research Background

Assessment has been part of the curriculum since educational institutions have existed. Over the years, various tests have been used to assess students understanding but at the same time, tests have been a mirror of how well teachers have done their job. Constantly, teachers and scholars have introduced new methods of teaching and among those new methods of teaching, new methods of assessing have been developed also.

Assessing students' knowledge is a very sensitive subject, because unconscious mistakes in assessing students' knowledge can lead to unwanted consequences, such as de-motivation, demoralization, and perhaps losing interest in the target subject. McNamara (2000: pg 23) describes the significance of compiling new tests in this way: "Designing and introducing a new test is a little like getting a new car on the road. It involves a design stage, a construction stage, and a try-out stage before the test is finally operational."

The Study

Portfolio assessment is one of the most important methods of evaluating students' performance over time. Portfolio assessment is considered by many scholars to be an effective method of evaluation; therefore, it would be interesting to investigate this technique at both Universities that are part of this research. Furthermore, students use portfolios during the course in order to develop their learning. When the students complete their work, the teacher collects their Portfolios and assesses them. Thus, the students are aware of their strengths and weaknesses for their particular work.

The general aim of this research is to explore teachers' attitudes towards portfolio assessment at SEEU and the State University of Tetovo. At the same time, the research will examine the students' beliefs about using portfolio assessment. This study aims to encourage teachers and raise their awareness to start and look for new alternatives when it comes in assessing students' work.

The major objectives of this study are:

- To identify the possibilities of using portfolio assessment at SEEU and the State University of Tetovo.
- To analyze the students' opinions towards portfolio assessment;
- To compare the usage of portfolio assessment in SEEU and the State University of Tetovo;
- To recommend the most appropriate methods of how to use portfolio assessment and motivate teachers and students to be part of it.

Definitions of Portfolio Assessment

"Portfolios provide an opportunity for students to participate actively in their learning by selecting materials for their portfolio and engaging in self-assessment" *(Mullin* 1998). Many scholars have been studying the possibility of using this method in schools in several western countries and they have come to some very interesting conclusions that are listed below. In the table below are scholarly definitions of Portfolio Assessment:

Author	Year	Short definition
Short	1993	A collection of work that is designed to show students work over a period, is a Portfolio Assessment.
Hancock	1994	Portfolio is a file that students create during the course and at the end they are assessed for it. Students are assessed for the activities that have taken place inside the classroom, or outside of it.
Sharif Q. Alabdelwahab	2002	Portfolio Assessment is a achievement of students work and a representation of its learning expressed at the end of the semester or a particular session.

Different definitions concerning portfolio assessment

Purpose of the Study

The whole purpose of education is to turn mirrors into windows (Sydney J. Harris)

To study the results of students' opinions of portfolio assessment and teachers' attitudes towards this area at South East European University and the State University of Tetovo is the interest of this essay. The results obtained from the study instruments at both Universities, SUT and SEEU will be compared. The study uses two different instruments: students' questionnaire and teachers' questionnaire. These methods will be used in order to examine the students' opinions and teachers' attitudes regarding portfolio assessment. The study will answer the research questions and validate the hypotheses.

The three research questions for this survey are:

Q1: What are the teachers' attitudes and students' opinions of the usefulness of portfolio assessment?

Q2: Do students believe that portfolio assessment helps them gain better results?

Q3: What are the differences between teachers at a Private-Public and State University in using portfolio assessment?

The three research hypotheses for this survey are:

H1. Raising students' awareness of using portfolio assessment will help them improve their overall level of understanding.

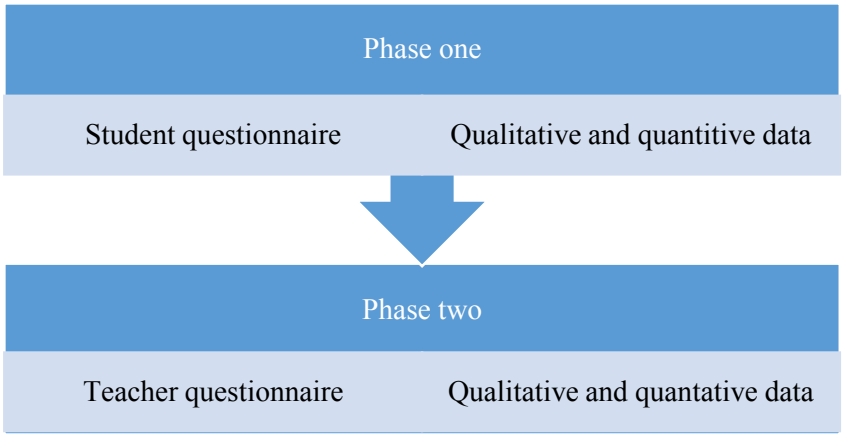
H2. If teachers use portfolios appropriately when evaluating their students, then students will achieve effective learning.

H3. Students prefer traditional methods rather than portfolio assessment.

The design of the study

This research was carried out in two universities in Tetovo, the State Univeristy of Tetovo, and South East European University during the Academic Year 2010/2011. The total number of the students was 100, as well as 10 teachers. The study used a student questionnaire and a teacher questionnaire.

As will be seen, the accent of this survey falls on the teachers. This is because they are the ones that manage the class, and it is their opinions and beliefs towards Portfolio Assessment that is most concerning.



Data Analysis and Discussions

This chapter discusses and makes analysis of the results of both the students and the teachers from the two Universities that took part in this research. The results of the findings are the focus of the discussion as well as their relation with the research questions and research hypotheses.

SEEU Student Questionnaire vs. SUT Student Questionnaire (SEE APPENDIX 1)

The questionnaires have two parts, A and B. The first two questions are open-ended question where students are asked to express their creativity on the up mentioned field. The second part is a simple one where students have to circle one of the following answers: A: Agree, DA: Disagree, and N: Neutral. The table below shows the background of the student participants from SEEU, while the following one describes the SUT students. In the following pages, some of the results will be analyzed comparatively.

Gender	Number of Ss	Average Age	Level of English
Male	22 Ss (44%)	The average age of the participants was	Most of the Ss were graduated Ss, so they were in Advanced Level on English
Female	28 Ss (56%)	from 21 to 22 years	

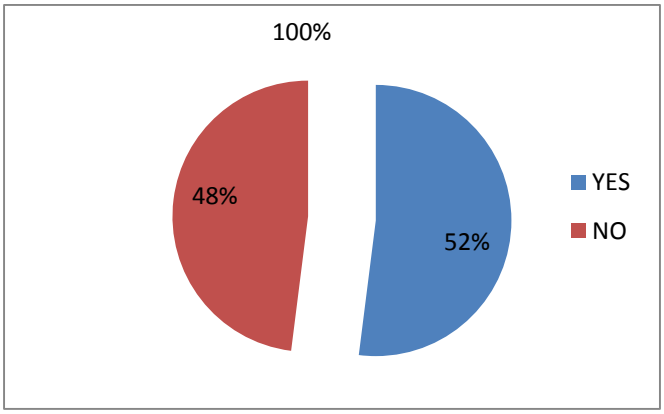
SEEU Participants' background

Gender	Number of Ss	Average Age	Level of English
Male	19 Ss (38%)	The average age of the participants was	Most of the Ss were in Advanced Level on English
Female	31 Ss (62%)	from 21 to 22 years	

SUT Participants' background

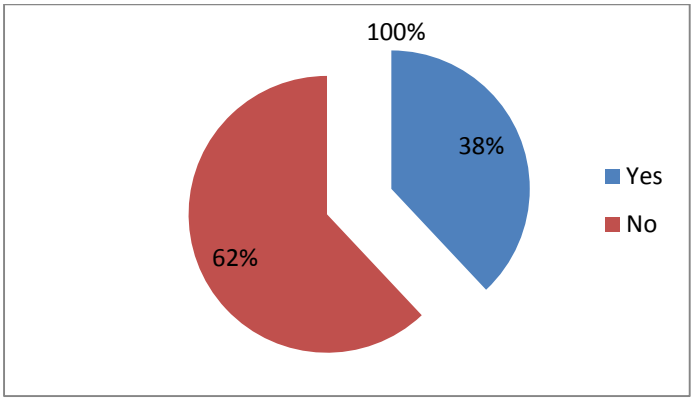
5. *Have you ever been assessed throughout Portfolio Assessment?*

The result from SEEU shows that 52% of the participants used portfolio assessment during their studies. In number, this is 26 students out of 50 that took the survey. The other 48% of the participants did not use portfolio assessment in their studies. In numbers, this is 24students out of 50 that took part in the survey. This result may be affected because there were two groups that participated in the research. One of the groups was 3rd year students, sixth semester, and the other was 2nd year students, fourth semester and they will probably have the chance to compile a portfolio in their last two semesters.



SEEU Students' Participation in Portfolio Assessment

(SUT) The outcome of the result shows that good number of the participants have not been assessed throughout a portfolio. In fact, 62% of the participants answered that they have not been assessed with a portfolio, and 38% of them answered that they have been assessed throughout a portfolio. Nevertheless, this should not mean that they will not have that chance to be assessed with portfolios, since most of the participants who gave negative answer are 2nd year students and they might have such method of assessment in their last 4 semesters.



SUT Students' Participation in Portfolio Assessment

Part B of the survey was a more direct one for the students where they had to show their knowledge of portfolio assessment in general. Students were given three optional answers, which were Agree, Disagree, and Neutral, and their job was to circle one of them.

PART B Results						
Questions	**SUT A**	**SUT N**	**SUT D**	**SEEU A**	**SEEU N**	**SEEU D**
Compiling a portfolio requires a clear organizing concept.	60%	26%	14%	50%	36%	14%
I feel the appearance of the portfolio (including its cover and design) is important.	56%	40%	4%	54%	28%	18%
I feel the content of the portfolio (including its organization and details) is important. .	80%	10%	10%	58%	36%	6%
Preparing a portfolio requires good computer skills and artistic talent.	72%	10%	18%	26%	68%	6%
I think reflection and self-evaluation is the most important part of the portfolio.	66%	30%	4%	38%	56%	6%
Portfolio sharing can increase classmates' cooperative learning and growth in English.	60%	30%	10%	58%	30%	12%
It takes a lot of time to compile a portfolio.	66%	28%	6%	46%	48%	6%
The portfolio increases the burden of the study.	42%	38%	20%	26%	60%	14%
The portfolio increased my willingness to learn actively.	56%	30%	14%	32%	34%	34%
The portfolio helped me understand my strengths and weakness in English.	80%	14%	6%	54%	32%	14%
Some practices (like listening or speaking) can't be easily presented in the portfolio.	58%	18%	24%	56%	32%	12%
I feel the portfolio can present my learning results.	68%	20%	12%	56%	30%	14%
Portfolios can show my efforts learning English outside of the classroom.	40%	50%	10%	46%	54%	0%
I feel a portfolio is not helpful to my learning.	12%	18%	70%	16%	36%	48%
I prefer to be evaluated by portfolios.	34%	48%	18%	20%	70%	10%
Portfolio Assessment focuses on the process of learning.	78%	20%	2%	40%	42%	18%
Portfolio Assessment focuses on the product of student's work.	70%	24%	6%	70%	30%	0%
I feel that feedback can be very helpful for compiling a portfolio.	70%	24%	6%	62%	28%	10%
The best thing about Portfolios is that I learn from my mistakes.	86%	10%	4%	66%	24%	10%

Teacher Questionnaire (SEE APPENDIX 2)

In this phase of the study, five teachers at SEEU and five others who teach at SUT completed the survey. This questionnaire is of high importance since the focus of this research is the teachers rather than the students. Teachers are the ones that prepare the classroom curriculum, so it is in their hands to choose which method of assessment they are going to use. It is their choice whether that will be a traditional method, or the teacher might use a continuous assessment method such as portfolios.

SEEU Teachers in comparison with SUT Teachers

Here are some interesting results from the general teacher survey.

1. *Do you feel that the portfolio assessment has been helpful when you assess your students?*
   I don't know No, not at all, Yes, to a certain extent, Yes, absolutely

The SEEU teachers responded like this: two of the teachers said they did not know the answer since they never used this method, two of them said that portfolios are helpful to a certain extent, and only one teacher said that portfolios are absolutely helpful. One comment that should be mentioned is that the teacher found this method useful because students had to design a course, including lesson plans and course design and she kept track of students' progress at any time.

The SUT results were surprising, since all of the participants crossed *YES, absolutely*. Some of the comments that should be included were that they could see if students were participating in an active manner or not during the course. Another teacher claimed that he/she has many students, and that portfolios help him/her to remember everything when students prosper or not; while another teacher claimed that they were helpful because portfolio assessment is a part of "grading" and certainly helps with assessment.

2. *Has the Portfolio Assessment influenced you to change your teaching in any way?*

Almost all the teachers at SEEU (4 teachers) said that it has influenced their teaching methods, while only 1 wrote a negative answer.

There are some comments in terms of the previous question and here are the arguments:

One teacher claimed that students learn better, when they are in charge of creating and carrying out the activity. The teacher said that he has found it more productive to allow them to figure out in groups how to complete the exercises, rather than just lecturing about it. Another teacher claimed that she can spot students' weaknesses and set up new learning goals and objectives, while another teacher said that this fact depends on the students themselves.

SUT staff all said that in some way portfolios had forced them to change their teaching method and their comments are outlined below.

One of the comments was that portfolios had made him/her change the teaching methodology not because s/he did not think he/she was a good teacher, but because the teacher wanted to try new ways of teaching in order to help the students learn more and have greater success. Other teachers said that portfolios had made him/her change the teaching methodology to some extent. Another teacher claimed that if his/her students did not do well in a particular point, then the teacher tried to change the method which had used before and tried to do better with the new method.

Part B of the teacher survey contains the following analysis:

Teachers PART B						
Questions	**SUT A**	**SUT N**	**SUT D**	**SEEU A**	**SEEU N**	**SEEU D**
Students are motivated to collect material for their Portfolios.	**3**	**2**	/	/	**5**	/
Portfolio Assessment is the best tool for showing Students' Language competences.	**1**	**3**	**1**	**2**	**1**	**2**
Students have to be more active in their language learning process.	**3**	**2**	/	**5**	/	/
Students think about learning styles and difficulties.	**3**	**2**	/	/	**5**	/
Students learn peer evaluation.	**4**	**1**	/	**3**	**2**	/
Students get more experience of working in groups.	**3**	**2**	/	**5**	/	/
Students get more experience in presenting and comparing their assignments.	**5**	/	/	**5**	/	/
Portfolio Assessment helps teachers help students understand their learning process.	**3**	**2**	/	**3**	**2**	/
Students can benefit only if Portfolio Assessment is used for a long period	**2**	**3**	/	/	**4**	**1**
Students learn self-assessment.	**5**	/	/	**4**	**1**	/
Students become more involved and the studies become more personal for each student.	**1**	**4**	/	**4**	**1**	/
Self-assessment results eliminate negative emotions for students.	**1**	**4**	/	**1**	**4**	/
Students are given more responsibility.	**3**	**2**	/	**5**	/	/
Portfolio Assessment brings more autonomy, students become more independent.	**1**	**4**	/	**4**	**1**	/

Comparison of Results

At the beginning, it was stated that this study intended to investigate students' opinions about portfolio assessment at South East European University and the State University of Tetovo as well as teachers' attitudes towards their work with portfolio assessment so that they can be compared with each other.

Overall, the results showed that SEEU students are more familiar with this method than SUT students. The fact that 52% of SEEU students said that they have already been assessed with this method in comparison with 38% from SUT students proves that SEEU students should know more of this assessment method.

Regarding the issues of Portfolio Assessment and whether it increases the extent of their study or not, the result leaves us to understand that SUT students have more ambition in working with portfolios. This is so because 60% of SEEU students are neutral in this subject, compared with SUT students, where only 38% of the participants are neutral and 42% of the students agreed that portfolio assessment help them learn better.

Another point worth mentioning is the determination students have toward portfolio assessment. The results are surprising as they show that not all students are ready to take risks and ask their teachers to evaluate their knowledge with Portfolios. In fact, 70% of SEEU students are neutral when it comes to evaluation with Portfolio Assessment, while 48% of SUT students are neutral too. Not to forget the fact that 52% of SEEU students have already been assessed with Portfolios as compared to 38% from SUT, and yet, the SUT students

show more interest in working with this method.

Findings

The study aimed to investigate the usage of Portfolio Assessment in our universities and the enthusiasm to use this method in the future. Furthermore, the study involved two universities for the research, one Private-Public and one State, so that in the end a comparison can be made to see which universities invest more in this area. In order to investigate this, the study proposed several research questions and hypotheses. The research questions will be explained below with the data records as they came out of the survey.

The first research question "What are the teachers' attitudes and students' opinions of the usefulness of portfolio assessment?"

The results differ from one University to the other. The students that have not been assessed by Portfolios were anxious to try this way of assessing, while the ones that have already tried it were neutral in this subject. Probably the lack of proper management and organization has to do with this negative outcome. When it comes to teachers' opinions concerning this issue, both parties say that working with Portfolios is helpful for them and for the students too, but it is hard to apply it in some courses, especially the ones that have to do with grammar.

The second research question *"Do students believe that portfolio assessment helps them gain better results"?*

The results differ from one University to the other. Even though over 50% SEEU students have tried Portfolio Assessment during their studies, yet, they seemed not to be happy on working with this method. In fact, 60% of these students are neutral when it comes to the question whether they believe that Portfolio Assessment helps them achieve better results. On the other hand, SUT students are more enthusiastic in this area since 42% of the participants believe that Portfolio Assessment helps them gain better results and only 38% are neutral in this statement.

The third research question "***What are the differences between teachers at a Private-Public and a State University in using portfolio assessment?"***

The outcome for the result showed that SEEU, as a Private-Public institution has invested more in this area, and from time to time the institution has organized workshops and presentations in terms of advancing the teaching learning process. On the other hand, the state institution showed less interest in this area. The State University of Tetovo has applied this method, but the institution should organize more training groups and workshops where teachers will be trained properly before they apply this method in action. The findings revealed that the Questionnaires and the Interviews met the expectations. Their analysis and the comparison made after showed and successfully answered the results of the Research Questions. Furthermore, the Questionnaires and the Interviews successfully concluded that the three Hypotheses are valid.

Conclusion

The insight for the research questions revealed that South East European University as a private-state institution has done more when it comes to this area than the State University of Tetovo, as a state Institution. However, the results showed that SUT students are more interested to work with Portfolios than SEEU students are.

Furthermore, another inference that can be drawn from the surveys is that the Ministry of Education should start to apply Portfolio Assessment method in some courses in High Schools. This way, students will become more responsible for what they do, and they will be better prepared for future challenges. In fact, Portfolios will help students decide what they want to do and who they want to be in the future. In the Republic of Macedonia, over 90% of High School students apply to one of the Universities of this country, but do you think they all make the right choice in the field they are applying in? Not really, but if they work with Portfolios in High School, then that will help them see where their future belongs or perhaps the teacher will suggest the best option for the student.

Nevertheless, this research should be an encouragement and an indication for teachers to try to use Portfolios in their classrooms. In addition, this paper aims to push educators to publish their data, in case they have some, and help writers to write papers that are more specific on Portfolio Assessment. Yes, there is lack of material concerning this issue in our country, but there is a huge possibility for young educators to change that, since after all it is their responsibility.

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APPENDIX 1

Student Questionnaire

Please take few minutes and answer the following questions. The aim of this questionnaire is to find out your thoughts on how you would like to be assessed. Mainly, the questionnaire will have to do with Portfolio Assessment in terms of how you percept it and what is your opinion about it.

Part A

University_____

Age____

Gender____

What is your preferred method of assessment? (please explain in a short paragraph)

_____
_____
_____

How do you explain Portfolio Assessment? (please explain in a short paragraph)

_____
_____
_____

Have you ever been assessed throughout Portfolio Assessment?

YES b. NO

Part B

Questions	**Agree**	**Neutral**	**Disagree**
Compiling a portfolio requires a clear organizing concept.			
I feel the appearance of the portfolio (including its cover and design) is important.			
I feel the content of the portfolio (including its organization and derails) is important.			
Preparing a portfolio requires good computer skills and artistic talent.			
I think reflection and self-evaluation is the most important part of the portfolio.			
Portfolio sharing can increase classmates' cooperative learning and growth in English.			
It takes a lot of time to compile a portfolio.			
The portfolio increases the burden of the study.			
The portfolio increased my willingness to learn actively.			
The portfolio helped me understand my strengths and weakness in English.			
Some practices (like listening or speaking) can't be easily presented in the portfolio.			
I feel the portfolio can present my learning results.			
Portfolios can show my efforts learning English outside of the classroom.			
I feel portfolio is not helpful to my learning.			
I prefer to be evaluated by portfolios.			
Portfolio Assessment focuses on the process of learning.			
Portfolio Assessment focuses on the product of student's work.			
I feel that feedback can be very helpful for compiling a portfolio.			
The best thing about Portfolios is that I learn from my mistakes.			

APPENDIX 2

Teachers Questionnaire

Part A

1. Have you used the Portfolio Assessment with your students?

☐ Yes ☐ No

2. Do you feel that the Portfolio Assessment has been helpful when you assess your students?

Do not know	No, not at all	Yes, to a certain extent	Yes, absolutely
☐	☐	☐	☐

3. Do you think the *Portfolio Assessment* has:

a) made it easier for your students to understand what they still need to learn in their language studies? ☐ Yes ☐ No

b) made the students more aware of their strengths and weaknesses in English? ☐ Yes ☐ No

c) helped the students identify and set new learning goals? ☐ Yes ☐ No

Part B

Questions	**Agree**	**Neutral**	**Disagree**
Students are motivated to collect material to their Portfolios.			
Portfolio Assessment is the best tool for showing Students Language competences.			
Students have to be more active in their language learning process.			
Students think about learning styles and difficulties.			
Students learn peer evaluation.			
Students get more experience of working in groups.			
Students get more experience in presenting and comparing their assignments.			
Portfolio Assessment helps teachers help students understand their learning process.			
Students can benefit only if Portfolio Assessment is used for long period.			
Students learn self-assessment.			
Students become more involved and the studies become more personal for each student.			
Self-assessment results eliminate negative emotions for students.			
Students are given more responsibility.			
Portfolio Assessment brings more autonomy, students become more independent.			