

## STUDY MODULE „PROJECT WEEK“: THROUGH THE EYES OF STUDENTS

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### ABSTRACT

Competition in the educational field today brought awareness of the need of change in the manner of teaching and knowledge acquisition. It is clear that the university, as an educational and scientific institution, should follow and answer the demands of society for highly qualified and self-confident young professionals. The University of Forestry in Sofia introduced a new study module, called Project Week, in the regular curriculum for Engineering Design Bachelor Program. The module aims at increasing the skills and competence of students and preparing them for their future professional career. The paper presents the results of our experience from the past two years from the students' point of view. Inquiries were held with the participants, students of 3<sup>rd</sup> year of study. The authors of this paper put the accent on the expectations and results of this new form of teaching.

The final results are an indicator of work done and give us the guidelines for future development towards improving the manner and conditions of work.

**Key words:** study module, new form of teaching, intensive training, team work.

### INTRODUCTION

The basic reason for conducting the research among students was to give answers to certain major issues considering the organization and implementation of Project Week Study Module from the point of view of improving teaching quality.

The general aim of the research was to improve work quality and competence level of participating teachers, as well as to give new opportunities of deepening knowledge and skills of participating students by data processing of questionnaire results/answers. The present paper has put forward the following tasks:

1. By implementing a detailed research to collect and summarize information of participants' satisfaction.
2. To draw and analyze information from all respondents with the aim of: developing practical working documents to be used; outlining

basic themes for organizing and implementing discussions and proposals for innovative practices introduction.

3. Analyzing collected data with the aim of establishing good practice to be used for improving the management of current activities and developing new skills for competitive professionals.

Methods Used: Research of student opinion by means of the questionnaire method, processing and analyzing of collected data.

Limiting Conditions: For the purpose of this research, a questionnaire was used, compiled of closed-ended and open-ended question types.

## EXPOSE

### 1. ORGANIZATION AND IMPLEMENTATION OF THE SURVEY. COMPILING THE SURVEY QUESTIONNAIRE

The idea of the study event called ‘workshop’ or Team Project-Based Learning (TPBL) (Dym, C. L. et al., 2004, 2005) is to stimulate participants for team work. The survey research was conducted among students of 3<sup>rd</sup> year of Engineering Design Bachelor Program in 2012 and 2013 at the University of Forestry in Sofia. They participated in the Project Week study module. The students, divided into teams of 5 to 7 people, were assigned to develop conceptual designs for a product (piece of furniture) in order to answer functional requirements for work ambience in the year 2020. The authors have focused in the present paper on the response of students to this educational module, since they have already published a paper on how the module functions (Raycheva et al., 2013). One of the most common quantitative data collecting method was used for information of the subjective world and behaviour of respondents, researched by means of a written questionnaire.

The survey constitutes a research method used to gather data by means of a series of questions to the respondent, limited to a certain extent. The choice of a written questionnaire offers a number of advantages for collection of data: this form of survey is cheap, because a number of respondents can be questioned simultaneously; the probability of influencing results of written surveys is lower in comparison to a spoken interview; a written questionnaire is better structured and prepared than a spoken interview; anonymity of respondents guarantees and

positively improve objectivity and reliability of results (Iarossi 2006).

The present paper presents the responses of the survey, implemented by the authors, putting the accent on: expected changes; receiving feedback for project implementation; forms and models for development of the study module; the skills and competences of participants; basic problem formulation and challenges before the development of this type of practical training; the benefit of project implementation.

The compiled questionnaire had to answer important questions and to define requirements for the location, the number of accompanying activities; the competences and knowledge of teaching staff; conclusions of study module expediency.

The presented results are on the basis of collected data of processed questionnaires of students, participating in the above mentioned Study Module in 2012 and 2013 at the University of Forestry.

After analysis of advantages, shortcomings and opportunities, the method of specifically developed survey questionnaire was chosen. It consists of 14 questions, chosen in such a way as to answer the questions in the best possible way:

1. Are you satisfied by the conducted Project Week Study Module?
2. What is your overall estimation for the implemented Project Week?
3. How do you evaluate the skills that you have acquired during this Project Week?
4. Which aspects do you value highly during the conducted Project Week?
5. How do you evaluate the presentations demonstrated during the Project Week?
6. Do you think that your participation in such study module will have

- a positive effect on your professional career?
7. What is your evaluation of the help and advice of the Teacher Team?
  8. What are the more serious problems in Team Work that you encountered?
  9. In your opinion, can the Project Week implementation be improved? How?
  10. How do you rate the location for conducting the Project Week?
  11. What advice would you give to your fellow-students, who will participate in future?
  12. Do you think you should have more study modules of this type in your program?
  13. Could you describe this Project Week not only as useful, but emotionally positive as well?
  14. Other commentary.

The above questions were compiled in view of the specific target group (3<sup>rd</sup> year students) and its typical cultural models in such a way as to avoid undesired questions that direct respondents to insincere or untrue answers and in this way compromise the results, thus rendering spent time and efforts pointless. To this end, a half-standardized questionnaire was devised, consisting of closed-ended and open-ended questions. With closed-ended questions, which are nine in number, pre-formulated varieties are proposed as possible answers, with the option for only one answer. Six of them are evaluating – the answer is scaled according to Likert Scale (1-poor, 2-satisfactory, 3-average, 4-good, 5-very good), three of them are using a rating scale (yes, no, I cannot answer). Closed-ended questions are the preferred type, because they do not take much time; but a certain limitation exists in the frame of the enumerated answer options.

The last five questions in the survey are open-ended to give the respondent the freedom to formulate the answer as he/she wishes. These questions bring higher quality information, but are hard to process and require more time for answering.

In order to receive responses nearest to the actual opinion, the questionnaire construction followed these rules: question formulation was clear and specific; questions and answers do not contain suggestions (that can in one way or another lead respondents to certain answers); every question and its answers were formulated in equity; questions are simplified to the largest extent, thus facilitating both the answer and the processing of collected information; only the most important questions were included that yield the information, necessary for this research; questions that would provoke reluctance to answer were avoided. The questionnaire was compiled as a system comprising questions and answers of different structure and type with the aim to achieve objectivity of information and predispose respondents to overcome reluctance to giving answers, thus securing the required information. The questions of the survey were specially selected in order to incorporate maximum relevant information in minimum volume of questions, having in mind long questionnaires are likely to bore respondents (especially when they are of a younger generation). Another advantage of surveys of shorter body of questions is easier data processing and formulating separate themes to analyze.

Data are processed so as to achieve useful research information in view of the steps teaching staff undertakes and the point of view of students. Summarized information is analyzed in order to outline tendencies and patterns of basic facts on researched matter.

**2. SPECIFIC SURVEY RESULTS AND COMMENTARY**

Here we are going to quote the results of surveys conducted in 2012 and 2013 academic years during implemented Project Week Study Module with 3<sup>rd</sup> year students of the Engineering Design Bachelor Program. Following the Teacher Team decision, the survey was conducted after the final project presentation, when the participants were in a more relaxed state and were able to concentrate on the evaluation of the concluded event. The survey was anonymous. Number of student respondents was 50 to 60 (each year), i.e. this was the number of students in the respective cohort. It is important to note that the respondent students participate in such a module for the first time.

**2.1. Study Module Project Week, III<sup>rd</sup> Year Engineering Design Bachelor Program, Theme: “Work Ambience 2020”, Theme: “Learning Ambience of Future Generations”, Time of implementation: 05-09.11.2012 and 18-22.11.2013**

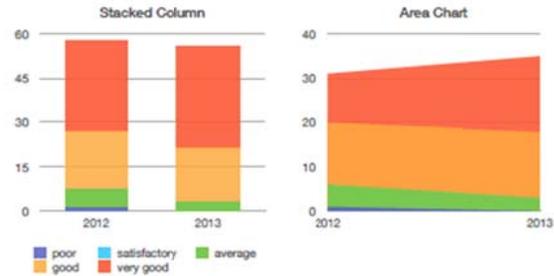
*Question 1. Are you satisfied by the conducted Project Week Study Module?*



**Figure 1: Results of Question 1: Are you satisfied by the conducted Project Week Study Module?**

*Commentary:* It is clear that the level of maximum satisfaction increases in 2013

*Question 2. What is your overall estimation for the implemented Project Week?*



**Figure 2: Results of Question 2. What is your overall estimation for the implemented Project Week?**

*Commentary:* An increase in number of higher rating in 2013 is clearly observed against lower rating in 2012.

*Question 3. How do you evaluate the skills that you have acquired during this Project Week?*



**Figure 3: Results of Question 3. How do you evaluate the skills that you have acquired during this Project Week?**

*Commentary:* Again lower rating clearly diminished and overall rating is changed towards ‘good’ and ‘very good’.

*Question 4. Which aspects do you value highly during the conducted Project Week?*

Summarized and rated are the following frequently met answers: the opportunity of team work, the work in real competitive situation; development of presentation skills; acquired experience and knowledge; opportunity of creative thinking and idea development; to be able to be motivated and successful even in creative crisis; opportunity to improve communication between students (outside one’s friend circle); securing a close contact and non-formal communication with teaching staff; sharing experience of successful professionals; limited time for assignments (work under stress); competitive element; support and pleasant time together.

*Question 5. How do you evaluate the presentations demonstrated during the Project Week?*

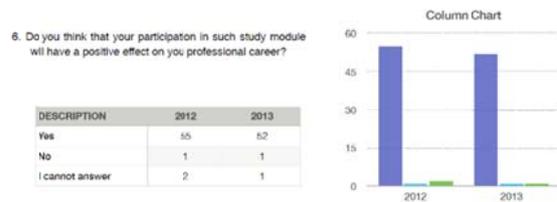


**Figure 4: Results of Question 5. How do you evaluate the presentations demonstrated during the Project Week?**

*Commentary:* Here again we see demonstrated the tendency of lower number

of negative evaluations. It is important to note that the question does not specify which type of presentation is envisaged – student presentations or professional presentations? In open-ended questions, the last type is qualified as very useful and interesting.

*Question 6. Do you think that your participation in such study module will have a positive effect on your professional career?*



**Figure 5: Results of Question 6. Do you think that your participation in such study module will have a positive effect on your professional career?**

*Question 7. What is your evaluation of the help and advice of the Teacher Team?*



**Figure 6: Results of Question 7. What is your evaluation of the help and advice of the Teacher Team?**

*Commentary:* When the project theme is clearly formulated the level of satisfaction from teacher team advice is higher.

*Question 8. What are the more serious problems in Team Work that you encountered?*

The results of this question, asked in both years of survey at the Project Week are strikingly similar. One of the most frequent answers (51.1 % of respondents) is: difficult communication and organization inside the student team (different points of view, arguments on whose idea should be developed and presented). 29 % of the respondents state that they had no problems. The rest 20 % are equally distributed between the following answers: the assignment was not understood, lack of concentration and ideas, poor knowledge of 3D graphic visualizing products, different people with different ideas; lack of sufficient time; lack of sufficient advice from teachers.

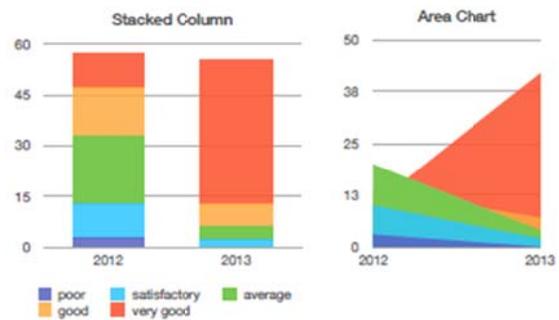
*Question 9. In your opinion, can the Project Week implementation be improved? How?*

Answers: nothing should be changed – it is perfect (20.60 %); more advice from teacher team (17.65 % of respondents); longer time for conducting the Project Week (17.65 %); Project Weeks should be organized more often (11.76 %); more presentations by established professionals in the area (9 % of the respondents). The rest 23.34 % are distributed between the following answers: themes should be more specific; the event should be held in Yundola (University Mountain Unit); more accompanying events outside the Module; the Library Staff should be cooperative with Xerox copying; a certain limitation of assignment theme should be made; more information should be given; more stationary material is needed; teachers should spend more time consulting student teams; more specific requirements for the assignment.

In 2012 prevail answers for more time (22 respondents); separate room for each

team (30 people); one mentor should be provided for each team; the study module should be organized more frequently; the student teams should have less participants; more contacts with teachers during work (10 respondents); interim presentation should be removed; more meetings with professionals of this branch; the study module should be conducted later in the education program so that students have more knowledge; to notice and motivate committed students.

*Question 10. How do you rate the location for conducting the Project Week?*



**Figure 7: Results of Question 10. How do you rate the location for conducting the Project Week?**

*Commentary:* Low rating received in 2012 reflects the fact that in this year the students did not work in enough comfortable and warm study rooms (this due to the fact that the Department in charge did not dispose of such rooms). Some of the student teams had to move from one place to another. In 2013, after the renovation of the Library, part of the student teams worked there, which brought improvement of work comfort.

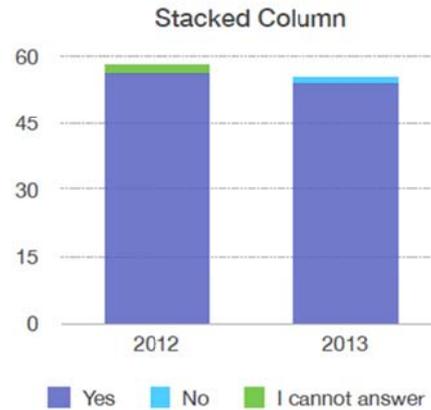
*Question 11. What advice would you give to your fellow-students, who will par-*

*ticipate in future? Option for more than one answer.*

In 2012 the following answers prevail (37 % of the respondents): do not limit your ideas; respect each opinion; arrive on time; everyone should make compromises; people should commit themselves wholly; they should listen to the teachers. 24.5 % think that it is important to present attractively; to see things from their other side; to be creative; to work in a team; to be prepared psychically to speak before public; not to be worried of not having the best idea, because this is not shameful. The rest of the answers are equally distributed around the following directions: Observe and be creative! Pay attention even to the smallest thing! Be calm, the Project Jury will not bite you!

In 2013, student answers are almost identical: have fun (34.35 % of the respondents), make compromises and take into consideration the opinions of the rest of the team (24.45 %); be organized and work faster (28.90 %). The rest of the answers: make better presentations; be creative and learn to use graphic products; be more resisting to critics; be motivated; be totally committed; participate actively; be real; be relaxed.

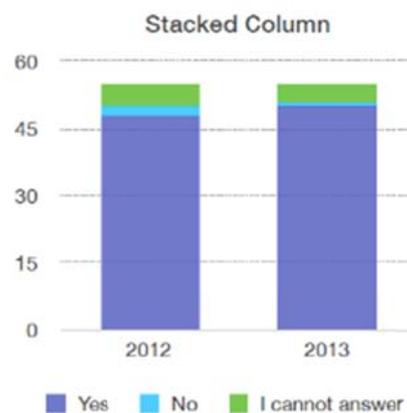
*Question 12. Do you think you should have more study modules of this type in your program?*



**Figure 8: Results of Question 12. Do you think you should have more study modules of this type in your program?**

*Commentary:* In both years of survey conducting during Project Week, the absolute approval of this type of learning experience is clearly demonstrated.

*Question 13. Could you describe this Project Week not only as useful, but emotionally positive as well?*



DESCRIPTION	2012	2013
Yes	48	50
No	2	1
I cannot answer	5	4

**Figure 9: Results of Question 13. Could you describe this Project Week not only as useful, but emotionally positive as well?**

*Question 14. Other commentary.*

In 2012, 24 respondents out of 55 gave following commentary: it was super motivating (24 respondents); 10 respondents thank teachers; 8 respondents say this is the best way to learn and develop.

In 2013, 14 students out of 55 gave following commentaries: don't worry, be happy (1); extremely useful for development of students in their field (2); it was a unique experience (3); more such weeks (4); we want to have more (5); we want more (6); I could give a rating of 5 to question No 7, but teachers gave contradictory opinions (7); please do not laugh at us – it doesn't do us any good (8); for me this project week was one of the most useful, inspiring and interesting things that I experienced (9); PLEASE make the greater part of education in this form. It makes HUGE difference (10); we need more such modules, because they are extremely interesting and useful, I even think we need one or two semesters that should be totally organized in this way. Thank you! (11); This was very interesting and fun. Thank you (12); although it was great fun, it was also very tiring (13); it was all super. The Project Week should be conducted in the same way in the future! Thank you! (14).

### CONCLUSION

The conducted research is indicative and clearly demonstrates the positive attitude of students, as well as their desire for similar modules in their study program. Since the surveyed respondents were students of 3<sup>rd</sup> year, they are confronted with such type of teaching for the first time. The answers reveal both the enthusiasm and the difficulties in its conducting. The survey

demonstrates that students are satisfied with their participation; it is clear that the number of positive evaluation is growing in the second year. Team work is well rated; the opportunity to communicate with fellow-students outside their immediate circle is valued. The dynamics of work and limitations of time they describe as work under stress, but at the same time see it as exciting and an opportunity to contact freely with their teachers and acquire new skills. Problems are described basically as difficulties within the student teams by more than half of the respondents, only one third of them state they had no problems with team work. A general view is that more time and more teacher support would improve the project week.

To sum up, the Project Week, seen through the students' eyes, is a positive, exciting and memorable event that must continue and remain an important educational element in the program.

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