1.2 NEEDS AND REALITIES OF INNOVATIVE FORMS
OF LEARNING IN HIGHER EDUCATION

This study is dedicated to the needs and realities of innovative forms of learning in higher education. The aim of the study is to identify the discrepancies between the needs of innovative forms in the educational process in higher education and their actual use. This goal is achieved through the implementation of three main stages. The first stage involves analysis of the development and understanding of the term "innovation", "innovation in the process of education" and the needs to implement innovative forms in the educational process in higher education. The second stage involves gathering information from students and teachers for the desired and used innovative forms in the educational process in higher education. The third stage involves analyzing the results and drawing conclusions. There are two main hypotheses of the study.

The first one is that there is a discrepancy between the desired and the used innovative forms of learning in higher education.

The second hypothesis is that the first year students of bachelor's degree will have greater requirements to the implementation of innovative forms of learning in higher education than the others.

Limitations of the study: The study was conducted among students (200 in total, by 40 students from first, second, third and fourth year of Bachelor's degree, resp. and 40 of Master's degree) and 30 teachers from state higher education institutions in Bulgaria in the field of economics and management.

The study sample does not claim to be representative, but the use of induction method assists drawing certain generalized conclusions. The survey intended for teachers contains 21 questions. The survey for students contains 11 questions. In order to carry out cross analysis of the responses, some of the questions in both surveys are the same.

We find a retrospective analysis of the concept of "innovation" in the study of Benoît Godin [16, p. 26]. According to his research, the first theory of innovation comes from the French sociologist Gabriel Tarde in the late nineteenth century (Tarde, 1890; 1895; 1898; 1902). Tarde made widespread use of the term innovation (and novation) as novelty, but with no explicit definition. In fact, he used a whole cluster of terms to discuss social changes: invention, ingenuity, novelty, creation, originality, imagination, discovery and initiative. In his analysis Benoît Godin [16, p. 24] found that the term "innovation" was also used in 1513, in the work of Machiavelli (The Prince, 1513) and F. Bacon (Of Innovations, 1625). Benoît Godin [16, p. 24] showed that the attitudes towards innovation goes through different periods. Particularly negative is the attitude and the opposition to innovation during the 18th and 20th centuries. This is the time during which innovations are rejected, they are considered heresy. The term "innovation" is more and more widely used between 1930 and 1970. (Hart, 1931; Nimkoff, 1957), and theories dedicated to innovation are increasingly developing (Rogers, 1962).

According to management guru Peter Drucker the criterion for innovation is "its impact on the environment" [9, p. 582]. According to Peter Drucker, "the most direct way to define new knowledge, technology is to clarify the need of significant change for the user" [9, p. 583].

The understanding of Robert Kaplan and David Norton also deserves attention. According to them, companies that "compete on the market of dynamically developing technologies need to develop to perfection their ability to anticipate the future preferences and needs of their customers by offering them a wide range of new products and services and operationally introduce new technologies in the production of goods and provision of services" [10, p. 7].

Michel Syrett and Jean Lammininan make a very important conclusion in relation to the ideas that are a prerequisite for development of the innovations. According to them "everyone
is sitting on a volcano of ideas" but in most cases these ideas are suppressed in the bud by criticism or skepticism of colleagues and managers" [11, p. 167].

Clarifying the nature of innovations is made also in the research at national level. What strikes in the national research is that the clarification of the nature of innovation is not limited only to technology or organizational processes. The culture of innovations, the innovations and their impact on the internal audit, the innovative methods in the study of human resources in public administration, the innovative approaches to recruitment and selection of staff and many others are also studied. These include definitions of innovations by Ianita Dimitrova, who defines innovations as "the generation and implementation of new business processes, business practices, products, systems, knowledge, findings in the organization" [7, p. 366]. Valeria Dineva examines innovations in two aspects: "innovations as subject of internal audit and innovations as a means of internal auditing" [8, p. 674]. According to her "innovations in the organizations provoke the internal audit by setting specific requirements for it, boost its development and add their perspective in shaping its modern image" [8, p. 669]. Valentin Vassilev and Stefan Novoselski focus their attention on innovative methods on the study of human resources management in the public administration, with particular attention turned to "good practices (benchmarking)", learning action "to form a project group (a team), distance learning, e-discussions and forums and other" [13, p. 2].

The analysis of the scientific theory shows that innovations occupy an increasingly important place in the process of education. According to Orlova and Gaponenko [14, p. 79] innovations in education are a reflection of the relationship between business and universities, research centres, libraries, innovation centres, professional federations.

A study [17, p. 13], conducted in leading global organizations shows that in the future the online learning (62 percent will offer it), the joint learning (62%) and the webinars (55%) will take some central place in their teaching.

Results from another study [18, p. 6] show that "Technology has had-and will continue to have a significant impact on higher education. Nearly two-thirds (63%) of survey respondents from both the public and private sectors say that technological innovation will have a major influence on teaching methodologies over the next five years. In fact, technology will become a core differentiator in attracting students and corporate partners".

In this study we used the survey method of gathering information. We developed questionnaires, some of which contained the same questions to students and teachers for the purpose of cross analysis of the results. The questionnaire for the students contained 11 questions, and that for the teachers were 21.

We used the results of the presented analysis of the scientific theory and practice in the field of innovations to shape the content of the questionnaires and formulate the specific questions. The analysis made led us to seven sets of questions that we put in the questionnaire for the students and the teachers.

- Nature of innovations in the process of education;
- Type of innovative forms currently used in the process of education;
- Attractiveness of e-learning;
- Choice between on-line and conventional training;
- Disadvantages of traditional training;
- Attitudes towards the quality of e-learning;
- The need to change the traditional training.

We asked the teachers some other questions aiming to establish:
- The motivation of the teachers to create online training and develop electronic textbooks;
- Advantages and disadvantages of electronic textbooks.

The results from the questionnaires for the students concerning the nature of the innovative forms of education are presented in Figure 1.2.1.
**Figure 1.2.1: Results from the questionnaires for the students concerning the nature of the innovative forms of education**

*Source: created by authors*

More interesting results from this question are related to the fact that 68% of the students indicated “maintaining online relationships with teachers” as the nature of the innovative training. The highest is the percentage of the first year students of Bachelor’s degree (74%) and those of Master’s (77%).

Next, the surveyed students (60%) indicate that by innovative forms of education they understand “getting the opportunity to learn from electronic textbooks”.

On the third place the surveyed students (51%) indicate that by innovative forms of education they understand “case studies”. The highest percentage in this group are the masters who apparently prefer training to be mostly practical oriented.

Same is the percentage of the surveyed students (42%) who indicate that by innovative forms of education they understand the “use of presentations in the process of education” and the ability to choose subjects which are entirely electronic. The desire is to choose subjects which are entirely electronic prevails among the first and second year students of Bachelor’s degree and the Masters.

The answer of first year students to this question is interesting as by innovative forms of education they understand the “joint developments with teachers”. The results from the answers of the teachers to the question concerning the nature of the innovative forms of education are presented in Figure 1.2.2.

**Figure 1.2.2: Results from the answers of the teachers to the question concerning the nature of the innovative forms of education**

*Source: created by authors*
100% of the surveyed teachers indicate that they accept the usage of presentations and online-based courses as innovative forms in the educational process. 60% indicate also the maintaining of online contact with students and offering electronic textbooks.

Students’ results in connection with the actual use of innovative forms in the process of education are presented in the following figures.

![Figure 1.2.3: Results from the answers of the surveyed students to the question concerning if their lecturers use PowerPoint presentations in their lessons](image1.png)

*Source: created by authors*

60% of all of the surveyed students indicate the use of PowerPoint presentations in the educational process. The results of the teachers concerning the actual use of innovative educational forms are presented.

![Figure 1.2.4: Results from the answers of the teachers to the question concerning the use of PPP in the educational process](image2.png)

*Source: created by authors*

80% of the teachers indicate that they make use of Power Point presentations.

![Figure 1.2.5: Results from the answers of the surveyed students to the question concerning if their lecturers make use of animation in their presentation](image3.png)

*Source: created by authors*
49% of all of the surveyed students indicate answer "no" and 54% of the surveyed students indicate that only 30% of the teachers make use of animations in their presentations.

Figure 1.2.6: Results from the answers of the teachers to the question concerning the use of animation in presentations

Source: created by authors

40% of the teachers indicate that they do not make use of animations in their Power Point presentations and the same percentage indicate that they make use of animations.

Figure 1.2.7: Results from the answers of the surveyed students to the question concerning carrying out discussions related to specific case studies

Source: created by authors

57% of the surveyed students indicate that this happens very rarely.

Figure 1.2.8: Results from the answers of the teachers to the question concerning carrying out case studies to practical topics

Source: created by authors

60% of the teachers indicate that they rarely conduct discussions on specific case studies.
Figure 1.2.9: Results from the answers of the surveyed students to the question concerning ever studying online programs

Source: created by authors

Of the total surveyed 200 students, 89% respond that they have not studied subjects electronically.

The responses of teachers to the question whether they have developed online courses in subjects they teach are presented in Figure 1.2.10.

Figure 1.2.10: Results from the answers of the teachers to the question concerning teaching online courses in educational program

Source: created by authors

80% of the teachers indicate that they do not offer online courses in subjects they teach. The causes that make attractive e-learning results are shown in Figure 1.2.11.

Figure 1.2.11: Results from the answers of the surveyed students to the question concerning the possibility to study on-line

Source: created by authors

74% of the surveyed students indicate that the advantage of e-learning is the opportunity to study at a time convenient for them (they can interrupt the course when they want to and go back to it later at their convenience). 66% of the surveyed students indicate as advantage of e-learning the possibility to work.

In connection with the choice between electronic and traditional training the results are presented in Figure 1.2.12.
57% of the surveyed students would choose a combined version between the two types of training - traditional and online. The cost of the education does not affect their choice in deciding on one or another type of training. The largest is the number of first year students who would like to have a choice and to choose both traditional and e-learning - 74%. The largest number of preference for e-learning has the Masters - 38%.

The results in connection with the disadvantages of the traditional form of education are presented in Figure 1.2.13.

The mandatory attendance in the case of the traditional form of education worries 46% of the respondents. The highest is the percentage of students of first (57%), second (55%), third year (50%) of Bachelor's degree and masters (54%). 38% of the total number of the surveyed students indicates that the traditional form of education is boring. The largest number of students who indicate that answer is that of second year (73%) of bachelor's degree. The responses of teachers to this question are presented in Figure 1.2.14.
Figure 1.2.14: Results from the answers of the teachers to the question concerning the reason of disliking traditional education

Source: created by authors

80% of the teachers think that the students are bored. The same percentage of respondents noted a disadvantage of the traditional education the fact that the teachers are the active part in the process and the students are the passive one. The results concerning the attitude towards the e-learning are presented in Figure 1.2.15.

Figure 1.2.15: Results from the answers of the surveyed students to the question concerning the quality of online education

Source: created by authors

48% of the surveyed students believe that the quality of e-learning is as high as the traditional is. The responses of the teachers concerning the quality of e-learning are presented in Figure 1.2.16.

Figure 1.2.16: Results from the answers of the teachers to the question concerning the quality of online education

Source: created by authors

40% of the teachers believe that the quality is high, but the same percentage answer that the quality is low. The results in connection with the need for a change at present in the traditional education are presented in Figure 1.2.17.
The biggest part (76%) of the surveyed students indicate that there should be more case studies, 48% indicate that there should be electronic platforms in relation to the educational process, 42% require videos in the educational process, 40% indicate that electronic textbooks should be offered.

Teachers were asked some additional questions related to the motivation of the teachers to develop electronic textbooks, the reasons for the preference for electronic textbooks, their weak points, the disadvantages of online training.

80% of the surveyed teachers respond that they would be motivated to develop electronic textbooks, if the intellectual product has reliable protection. 100% of the surveyed teachers indicate that electronic textbooks are updated more easily. 80% of the surveyed teachers indicate that what they dislike about the electronic textbooks is that their intellectual property is not protected. 100% of the surveyed teachers indicate that a major advantage of online learning is that students learn at a time convenient for them and that it is accessible to disadvantaged students. 80% of the surveyed teachers indicate that the major disadvantage of the online learning is that when one develop a course the intellectual property of the teacher is not protected, and every teacher can use their work. 100% of the surveyed teachers believe that offering online courses will attract more students. 100% of the surveyed teachers hold online consultations with the students and answer their questions.

**Conclusions from the retrospective analysis of the term "innovation" in national and foreign scientific literature** can be drawn as a result of the retrospective analysis of the term "innovation".

**First conclusion:** The fact is that innovations have always had and will have supporters as well as opponents. One of the reasons for this is that innovations often have bilateral manifestation, they help ones but are obstacle for others. For example, the growth of labor productivity as a result of a new method of work organisation will help the employer to achieve higher profits, but this may be at the expense of staff reduction. The wealth of the employer will grow but what will happen to the income of the dismissed worker. How will they survive? Or, there is a novel method for the treatment of severe disease in children. But this method is expensive. The child of the rich will be saved and what about the poor?

**Second conclusion:** The fact is that the only constant in today's world is the change. "Change or die". In this 21st century the slogan of the counselling guru Michael Potter "Innovation or death, the choice is yours" is relevant as never before [15, p. 251]. This means that the resistance to innovations and their denying is a suicide.

If we try to combine the two drawn conclusions we will find that they have something in common. It is that no one can and should not stop this "new" that saves lives, facilitates
workflows, and creates better living conditions. But! The guiding principle for the practical application of this "new" must be social fairness. For as Joseph Stiglitz says [12, p. 402] it "is important not only the growth, but also the nature of the growth. Growth, in which the situation of most people is deteriorating, where our environment is suffering, where people are subjected to anxiety and alienation, is not that growth to which we should strive".

Conclusions from the analysis of various national and foreign scientific research related to the needs of innovations in the educational process in higher education allow us to draw two main conclusions in support of the thesis of the ever-growing role of innovations in the educational process in higher education.

First conclusion: The younger generation has specific characteristics that universities should take into account when offering various forms of training. The current generation is characterized by the need to make choices among more available options. And the more choices, the more satisfied is this need. Also in this regard, unlike the older generation, the younger generation loves technologies and is not afraid of them. On the contrary, is looking for them because they are his supportive partner since childhood. A fact which should also find its place in the form of training offered in higher education.

Second conclusion: The problems faced by the universities already have a global character. Decrease in the number of students, rising costs of universities, respectively high fees that lead to non-competitiveness. These are facts that universities should also consider in the introduction of innovations in the process of education.

Conclusions from the survey conducted with students on innovative forms in the educational process could be drawn from the survey conducted with students in conjunction with the innovative forms in the educational process.

First conclusion: First year students and Masters have the greatest desire to maintain online contacts with teachers and make joint research with them.

Second conclusion: The price does not affect the choice of form of education: traditional or innovative (online training). What is important for the students is to have a choice. This is particularly important for the first and second year students of Bachelor's degree.

Third conclusion: Main advantages of online training according to the students is the opportunity to study at a convenient time and to have the possibility to work.

Conclusions of a survey conducted with teachers in conjunction with the innovative forms in the educational process can be drawn from the survey conducted with teachers in conjunction with the innovative forms in the educational process.

First conclusion: Teachers are not sufficiently convinced in the quality of online training.

Second conclusion: Teachers understand very well the disadvantages of the traditional teaching and why students prefer online training and the use of electronic textbooks.

Third conclusion: Teachers realize the usefulness of electronic textbooks, but are not motivated to develop them. The reason is the lack of security in terms of job retention and the lack of protection of their intellectual work.

Key findings from the cross analysis indicating discrepancies between needs and realities of innovative forms of learning in higher education are:

- Understanding of innovative forms in the learning process. Students identify joint scientific research between teachers and students as an innovative form in the process of training. Minimum number of the surveyed teachers indicate that answer.
- Online courses in the subjects: Students prefer to have a choice and are offered traditional forms of training as well as online courses in the subjects. At present in the organizations in which the study was conducted, students have not the possibility of such a choice.
- Electronic textbooks: Students prefer electronic textbooks in the learning process. The surveyed teachers indicate that they are not motivated to develop electronic textbooks.
• **Use of case studies:** Students believe that the use of case studies will enhance the usefulness of the training. The surveyed teachers say that they very rarely use case studies.

The survey results confirm the first hypothesis that there is a discrepancy between the desired and used innovative forms of learning in higher education. Of course, there are matches, but in future it is better to work on removing the inconsistencies because they could lead to risks of loss of interest in the educational process by the younger generation.

The survey results confirm partially the second hypothesis of the study that first year students of bachelor's degree will have greater requirements to the implementation of innovative forms of learning in higher education compared to the other students. The hypothesis is confirmed for some of the innovative forms, for example, the use of videos in the learning process, or maintaining online contact with teachers. But this group was joined also by the second year students and the masters. The presented results can be used in making decisions about:

• Development and improvement of different forms of learning in higher education;
• Development of motivational systems for teachers;
• Development and improvement of educational programs in various disciplines.
• Organization and planning of scientific research.
• Development of media plans to promote online learning among teachers.

REFERENCES


