

## CHANGES IN UNIVERSITY TEACHING – THE ROAD FROM KNOWLEDGE TO COMPETENCIES

**Sladana Anđelković**  
*University of Belgrade*

**Zorica Stanisavljević Petrović**  
*University of Nis*

**Abstract.** This paper examines changes in university teaching that occurred with reform of the universities by introducing the Bologna study model. The central issue in the work relates to the consideration of changes in university teaching in terms of improving the pedagogical and methodological-didactic competencies of teachers and the changing role and students in the teaching process. Although the Bologna model is student oriented model of study, a model in which teaching is directed towards the student, experience shows that the role of students in the teaching is mainly passive, reduced to listening and the “note taking“, and that the knowledge that students gain is mostly at the receptive, reactive and reproductive level. Significant contribution comes from the organization of teaching, which is still mostly traditional, with traditional lectures and exercises of reproductive character. Innovation of the university teaching created the conditions for the implementation of reform changes in accordance with the Bologna model. However, experience shows that to achieve the expected changes in the university teaching process it is necessary to create preconditions, primarily in terms of adequate material base, availability of space, better equipment and means of modern information technology, which didn't received due care in the process of change in university teaching.

**Keywords:** activity of students, competence of professors, changes, university teaching

### Introduction

Changes in the social context become part of everyday life of individuals, his work and creativity, which significantly affect the profiling of different lifestyles and changing of their lives quality. In such a complex social constellation development of new individual needs is occurring, also with needs of society as a whole. The modern organization of society is based on lifelong learning, which becomes the basic needs of a learning society. The creation of knowledge and learning society is the primary task of any society that aspires to the promotion and development.

Seen in historical perspective, all progressive societies were in their own way focused on learning and knowledge, but knowledge was the privilege of individuals or groups, and its main characteristic was permanence in the way of learning and use of knowledge. In the epoch of the Enlightenment emphasized the idea that promote universal access to knowledge is emphasized, the idea of equality in the process of acquiring and using knowledge, ideas that today are the starting point for creating a learning society - a society of knowledge. Important role in building the knowledge society has higher education, specifically teaching in universities that is driving the new circumstances of progressive change.

In the democratically oriented societies which are in accordance with human orientation, knowledge is a public good that is accessible to all, and the right to education is guaranteed to all individuals, regardless of whether it is formal or informal education. In the context defined this way the topical issues of exercise care and education at all levels, especially at higher education level. The changes today are an integral part of the educational reality. Changing of the university education, as a subsystem of the global social system, is caused by changes in the general social context. Respond to the creation of a learning society imposes the need for redefining the traditional, strictly academic role of universities and teaching which they organize. In the process of reform changes, redefining of the existing goals and objectives is occurring as well as changing forms and methods and development of the new strategies in education at the university level. It is expected that the changes that take place in the University terms go to meet the current needs of individuals and society.

### **Changes on the way from knowledge to competence**

Higher education in Serbia in recent years is facing major challenges which are conditioned by the inclusion of our universities in a unique European educational space that promotes the Bologna Process. By signing the Bologna Declaration in September 2003 years, our country has joined the group of European countries which coordinate their policies in higher education area. Law on Higher Education which came into force in 2005 provided the essential provisions of the implementation of the Bologna Declaration as part of reforms of higher education. Acceptance of the Bologna model study led to significant changes in the University education, both at the structural level, and the level of implementation of the teaching process.

From a historical perspective, the university has always had the title of an academic institution that acquired the academic skills that are widely theoretically placed within certain fields of study. According to the European tradition, learning in the classroom was based on encyclopedism, as the basis for the development of logical and systematic thinking. In accordance with a deep humanistic orientation, values of the European orientation of the Humboldtian universities gave a special touch to European culture and traditions for centuries, and varied in relation to higher

education in North America and England, which is more colored of utilitarianism and pragmatism. In accordance with the documents of the Bologna Declaration, the orientation of the university today is closer to the second orientation, which is primarily focused on developing functional, practical knowledge. In this sense, universities are facing a unique challenge, which require re-orientation in the direction of developing such study courses in which are represented theoretical knowledge and functional skills, which in turn are expression of the labor market and employment.

For violation of basic values of European humboldtovski universities, the Bologna model of study is open to criticism in recent years. Critics of the Bologna model emphasize the well-known Viennese university professor Konard Lizman, who has expressed criticism of the reform, in his Theory of lack of education: Misconceptions of the knowledge society (Liessman, 2008). Considering the European Policy of Education and Culture provides a kind of criticism on changes in higher education, with special emphasis on the process of „bolognaism“. Work is emphasizing the current failure of education reform and the decline in the quality of primary and secondary education. Similarly, some authors argue that today's university oriented toward practical knowledge acquisition component is facing the „end of knowledge“ (Barnett & Hallam, 1999).

The current reviews of the Bologna study model impose many issues and dilemmas facing today's universities: how to achieve the necessary efficiency and flexibility, and preserve the tradition of good practice; how to be part of a single European area of higher education, and keep the elements of national culture and traditions; how to find the right measure of knowledge that is offered to students and that is functional, while still being grounded in theory? However, acceptance of the Bologna model of study, particularly its legal foundation through the Law on Higher Education (2005), there is little room for questions, reflections and dilemmas. One thing was certain; from university education is expected to improve the quality of student learning and development of specific competencies. In that work certainly undeniable importance has an implementation of university teaching, the introduction of changes and innovations to contribute to the reform processes in the university. Today, six years after the implementation of the Bologna study model there are still present concerns and issues as well as real problems that have come to the fore in the implementation process. Bearing in mind that the key changes expected in university teaching, this paper discusses the process of introducing changes with two aspects:

- In terms of the position of students in the teaching and
- In terms of changes in the competencies of university professors.

### **Changes in University teaching: Expectations and reality**

Changes in the teaching-scientific process form the basis for any reform of higher education. For this aspect of the reform, unlike the others that include other

stakeholders, largely depends on the universities themselves. The essence of this part of the reform consists in raising the quality level of study. In order to achieve a higher level of quality in the study it is necessary to provide some assumptions (Brankovic et al., 2005: 9):

- Identify the principles that underpin quality and efficient education;
- Define clear criteria of quality of studies;
- Training teachers for organizing and conducting quality studies;
- Providing greater mobility of students and professors;
- Increase the material basis of scientific and teaching career at the university.

One of the main tasks of the changes in university teaching is intended to improve the quality of the educational process in which center is a student. In order to achieve a higher level of quality in the study changes in the teaching process that require greater application of cooperative learning and self-learning are expected, as opposed to traditional pedagogical strategy in which the central role has the former-cathedra teaching. This orientation is in line with the Bologna process, which requires the transition from university education, which is primarily oriented towards the content, to university education which is student-oriented. In line with this orientation significant changes in organization and realization of the teaching process are expected. Given that the Bologna model is student oriented model of study, it was expected that teaching continue to be geared towards students and that students become equal partners in the process of university teaching. The concept based on learning outcomes and competencies become dominant in the development of new curricula. In higher education competencies are defined separately for each level of study program. This causes major changes in the way that universities work with the aim to intensify research and project work of students, increasing the share of mentoring, student participation in multidisciplinary and interdisciplinary exchanges and projects, increasing the share of field work, develop cooperation and team spirit with students. Learning outcomes are very important, ie. expectations of what students should know, understand or be able to do at the end of the initial process. Professional framework is the starting point for defining the curriculum based on study competencies that are formed for the profession:

- The objectives of teaching at the study level and each individual program of study are defined as learning outcomes.
- Learning outcomes are described as competencies that the student receives after responding to the current study obligations.
- The learning outcomes and acquired competences should be identifiable and objectively quantifiable.
- The learning outcomes are associated with student load in hours and ECTS scores.

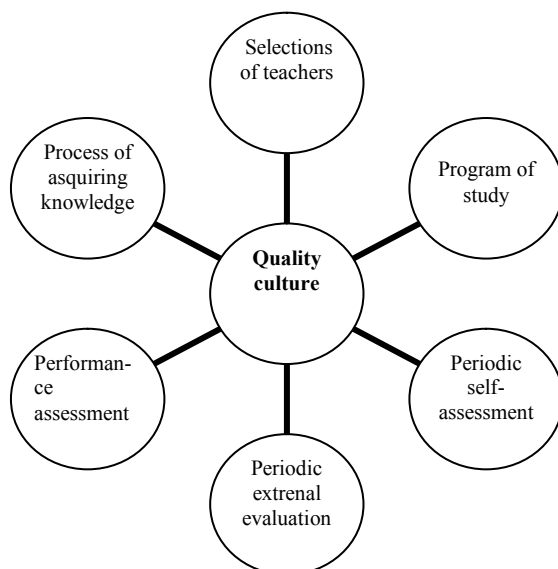
– Determining the burden and learning outcomes represent the basis for the development of teaching strategies, learning and learning review (ECTS Guidebook, 2005).

It is increasingly common in the world, instead of job descriptions, to emphasize employees competence needed for an employment. Accordingly, you should change the curriculum and study programs and work on improving and expanding range of pedagogical skills of university professors whose work must be based on listening to the needs of practice and the wider community (Andjelkovic, 2009). Changes in the position of students are conditional for a change in the work of university professors. The quality of teaching - scientific process at the university is considerably dependent on the professional, and educational and methodical-didactic competence of university teachers and associates. In the context of the problem of improving the quality of teaching staff at the International Conference on Education, under the auspices of UNESCO and International Bureau of Education (1996) the following educational and methodical-didactic competence of pedagogical workers are determined (Markovic & Maksimovic, 1997):

- Ability to work in a team,
- Understanding and respecting the values and differences of other cultures,
- Having a sense of communication,
- Openness to change, vocational training to assist in the development of pupils (students),
- Having a professional autonomy,
- Level of awareness for the continuing professional development throughout their working life,
- Fostering partnerships with children students, parents and colleagues,
- Openness to new information technologies, etc.

Professors from the dominant role of teachers and evaluators should pay far more attention (Ivic et al., 2001) to organization role, the role of teachers as partners in educational communication, the role of motivator, cognitively diagnostic role, the regulator of social relationships, a partner in affective communication. To achieve these requirements continuous professional development of higher education teachers and assistants involved in the process of teacher is needed; as much as the introduction of external and internal mechanisms for quality assurance of study programs.

According to (Kopas & Andjelkovic, 2005: 351) „pedagogical and didactic-methodological competence of professors is one of the elements of a quality culture. Those define professors as promoters of science and research, educators who continuously improves the acquired knowledge and didactic skills of their own. These competencies in different ways affect the quality of education. Expertise, ability and affinity of professors must be the measure of his choice to work with students, which significantly affect the program concept of studies, the process of acquiring and evaluating students' knowledge, as well as periodic self-assessment and external evaluation of his work.“



**Scheme 1:** Factors for building the quality management system

Quality of work of university professors includes their constructive engagement in teaching and scientific research, with the continuous development and improvement. Within the project (APA) of academic and professional development of all those who implement the educational work in 2002 year, Program for improving academic assistants skills in the field of social sciences and humanities was made, with a view to supporting their professional development. In accordance with the needs of society, education system and the individual, the goal of this program was that the participants „strengthen“ their basic skills for teaching and research (Pekic et al., 2005). Starting from this objective, the agricultural faculty in Belgrade, Education Forum and the Institute of Psychology did the project named Improve teaching academic skills and research in agricultural sciences. The results show that there is a need for improvement of pedagogical and didactic-methodological competence in teachers and teaching assistants. They need to work interactively with the students aiming for development of:

- Motivate students to participate actively in the learning process,
- The habit of learning during the teaching process,
- Critical and self-critical thinking,
- The ability to apply acquired knowledge and skills,
- The ability for team work,
- The ability to solve problems and make decisions,
- Ability to argued dialogue (Pekic et al, 2005).

A teacher, who is actively involved in the development of their scientific discipline and continually improving the professional, educational and scientific competence, contributes to improving the quality of teaching. However, from the very beginning outdated program structure has caused a number of other side effects, which are primarily related to the organization and teaching methods used in teaching. In the university teaching the traditional approach still prevails with dominant ex-cathedra lectures. In general, lectures are still the dominant form of work at the universities, except that there was no innovation in university teaching according to newspapers in educational science. Namely, the classical teaching with dominant teachers lectures are not in function of achieving competence, but their main task is teaching. Recent understanding of research is seeing university teaching as an introduction to the series of content-related exposure in order to transfer scientific knowledge and research methods that will develop student's problem-awareness, critical thinking, attention and comprehensive knowledge. Research, university teaching in accordance with Appeal understanding (Appeal, 2003), consists of three interrelated and conditioned components:

- The purpose of university teaching is to transfer scientific knowledge and research methods, where the essence is not in the transmission of knowledge, but in presentation of research methods;
- Dimensions of the modern university lectures are development of problem-awareness and critical thinking about content;
- Specificity of university teaching is to develop specific personality traits of students, and the development of interest in scientific knowledge and research methods as important features of future experts.
- In addition to traditional university teaching procedures (lecture, explanation, interpretation) should be enriched with the exercises, group work, discussions and presentations of students, as well as other forms of active participation in the process of student teaching;
- University lecture should include a component of modern information technologies – presentations via CD, online lectures, virtual lectures, remote lectures, etc.

According to Brankovic in accordance with these characteristics it is possible to identify the quality of teaching. The essential characteristics of good teaching are the user-friendliness, simplicity, articulation of content, brevity and succinctness, using examples that encourage students to understanding, memorizing, thinking and critical evaluation. As viewed by the author the pedagogical knowledge of the contemporary university teaching point to the possibility of increasing the intelligibility using complementary work in plenary and in small groups, where it is good to combine teaching and learning in group, as it „provides a more complete realization of the main objectives of university education“ (Brankovic et al., 2005: 38). Although the recent literature is about the need of innovation and suggests the

possibility of changes in the university teaching, practice shows that in this part there are no major developments. It seems that in practice is still dominated by classical lectures (introductory, informative, improvised, encyclopedic, academic), which lead students in a passive position. Great importance for the development of student competence in university teaching is organization and implementation of exercise classes. The programs of teaching and scientific disciplines or subjects are planning exercises for students as an integral, constituent part. Innovative exercises are based on the respect of the following principles:

- The principle of selectivity and examples;
- The principle of transferability;
- The principle of hierarchical and cyclical structuring;
- The principle of differentiation;
- The principle processuality (Brankovic et al. 2005: 48).

An important condition for the innovation of exercise for students is to standardize the education of students of undergraduate and graduate education students, not only within the general, general vocational and technical fields-rope expert professional training, but also within each educational and scientific disciplines or subjects. According to Ilic practices in university teaching can be classified in different ways. As the criteria for classification are: a position and paper styles features of the holders of exercise (student and leaders), their relationships, intentions, contents and the effects of exercise facilities, and material-technical basis of working. In accordance with these criteria models of exercise can be divided into two main groups:

- Traditional models of exercise in university teaching and
- Innovative models of exercise in university teaching.

The innovative models of university teaching exercises include: exploratory-investigatory exercise, problem exercise, differentiated practice, exemplary practices, creative exercises, partner exercises, group exercises, debates, puzzle, merry-go-round, simulation, role play, workshop practice, responsibility exercise etc. (Brankovic et al., 2005: 57). Given that the university should continue to develop and promote innovative creative student participation it is highly desirable to continue the process using an innovative model of lectures and exercises. Innovative models have much more educational and creative value, compared to the classic forms of work in university teaching, and they exercise a positive influence on general education and professional development of student. However, experience shows that the majority of university teaching is organized in the traditional manner, usually in the form of more or less traditional, monologue formed, professor's theoretical lectures and reproductive assistant's exercises. In rare cases, the practice of professional excursions and visits, analysis of published and term papers, original documents are conducted, and student forums and other forms of active and creative expression of students are also rare. In fact, university teaching is still characterized



by one way theoretical information and communication, authoritarian teachers, and back in the passive position of students, promotion of scientific outdated facilities, historicism, encyclopedism, dogmatism and conformity, and pattern routine approach, saving, formalism, verbalism (Brankovic et al., 2005). By maintaining such a state of teaching in the universities the execution of one of the main goals of university teaching is brought into question: the development of critical thinking, as it is necessary to use appropriate strategies to stimulate critical thinking, in which students are actively positioned, and which have proven effective for certain types of activity (Crawford et al., 2005).

In accordance with the Bologna model, positioning students actively in the learning process provides continuous implementation in accordance with the requirements of interactive learning. Interactivity in university teaching is expressed in the interdependence and interaction between the leading actors of the teaching process: teachers and students. The process of interactive teaching is dominated by an active student learning that can be concretized through reactive pedagogical activities: separation of the important and unimportant, generalization of the important factors, active replay of learned content, etc. In the process of innovation of university teaching interactive learning that is used in university teaching is based on co-operative relations. Cooperation in essence means cooperation and social interaction of teachers and students aimed at achieving common goals of learning.

For the realization of cooperative relationships in the learning process it is necessary for the student's ability to foster teamwork, which can be developed through work in groups or pairs. In the process of university education cooperation is manifested in a willingness to work with others, willingness to establish reciprocal relations and peer relations, and on trust and mutual tolerance of all those involved in the learning process. In terms of cooperative learning, student learning can not be reduced to listening and to the "note taking", but is a pedagogical situation in which dialogue is possible and engage all participants in the teaching process. In terms of mutual cooperation opportunities for the establishment and development of partnership between teachers and students are created, which is one of the main objectives of the Bologna model study. In the university teaching cooperative learning can be developed by organizing work in small groups, followed by debate, discussion and group presentation of student. However, this does not mean that university education should be limited only to the use of interactive methods because teaching has its advantages, which are certainly very important for teaching. Most authors recommend a combination of university lectures and interactive teaching methods, depending on the theme and content to be implemented in the teaching process. The manner in which the teacher will implement a university lecture depends on many factors: the program goals and objectives, content, available literature, etc. Selection methods which will be used in teaching, depends among

other things, of „his competence to assess their effectiveness in providing the results of the expected learning“ (Miovska Spaseva, 2010: 40).

For the application of innovative methods and forms of teaching, beside good methodological preparation of teachers, we need the right conditions. Specifically, interactive methods, include working in small groups (with up to 30 students), requires a larger space, more teachers, which certainly requires improvement of the material basis of faculty. Otherwise, attempts to apply innovation in university teaching in inadequate conditions can lead to improvisation, which is not permissible in teaching at universities. For serious change in the process of teaching greater financial investments are needed, which is not taken into account in the introduction of the Bologna model, and that raises serious questions about innovation in teaching at universities.

### **Conclusion**

Changes in the social context are creating new educational needs of individuals and society as a whole. The modern organization of society is based on the idea of lifelong learning, and creating a knowledge society is one of the primary tasks. Higher education has an important role in the creation of a knowledge society, primarily teaching in universities, which in new circumstances driving social change. However, for university education to provide adequate responses to new needs of society and individuals, it is necessary to change itself. Changes in the level of university education are conditioned by turning our universities into a unified European educational space that promotes the Bologna model of study. In accordance with the Bologna Declaration, there was a change in the reform of universities. The basic direction of change is the realignment of traditional European humboltovski university to university which is based on the theory of utilitarianism, pragmatism and the need to acquire functional knowledge.

Changes in university education are directed to structuring of such courses in which students will acquire competencies, practical knowledge and skills in line with market needs and employment. In line with this orientation it is expected that the reform of university education is accompanied by changes in teaching, which is certainly one of the most important activities in the work of the universities. In accordance with the student-centric orientation of the Bologna model study, it is expected that: teaching is directed to students and that students become equal partners in the teaching. However, experience shows that in the process of university teaching traditional approach prevails, in which the ex-cathedra lectures represent dominant form of work. Although in line with the overall change an innovation in educational science occurred, it did not have an important impact on innovation of teaching in universities: In fact, it seems that the practice is still dominated by traditional forms of lectures and exercises, while far below that are present innovative forms of interactive teaching methods. This

situation suggests that the idea was not realized on the active role of students in the teaching process, as well as expected with the reorientation of teaching which is directed towards the teacher, to teaching which is focused on student. Therefore, one can rightly assume that teaching is based more on teaching than on learning and student self-study, which is inconsistent with basic principles of the Bologna model of study.

After seven years of implementation of the Bologna model, the part of the implementation of the teaching process did not yield the significant changes. The application of innovative forms and methods in teaching work is partially the result of more ambitious teacher's effort, enthusiasts, and not the consequence of organized process. Although declared in the documents referred to actively positioning the student in accordance with the existing teaching, student learning is still mainly reactive, receptive and reproductive level. It is obvious that there are many doubts and concerns in the implementation of the Bologna model of study, as well as open questions and problems, so there is an urgent need for critical reflection and review of changes in university education, particularly in the area of organization and implementation.

This article is a result of the project *Models of evaluation and strategies for improvement of education quality in Serbia, No 179060 (2011–2014), and Tradition, modernization and national identity in Serbia and the Balkans in the European integration process (179074)* financially supported by the Ministry of Education and Science, Republic of Serbia.

## REFERENCES

- Anđelković, S. (2009). Prema celoživotnom učenju i društvu znanja – savremene kompetencije nastavnika geografije. *Zbornik radova Geografskog fakulteta*. 57 (1), 285–298.
- Apel, H. J. (2003). *Predavanje – uvod u akademski oblik poučavanja*. Zagreb: Educa.
- Branković, D. et al. (2005). *Inovacije u univerziteskoj nastavi*. Banja Luka: Filozofski fakultet.
- Barnett, R., & Hallam. S. (1999). Teaching for supercomplexity: Pedagogy for higher education U: Mortimore, P., And (Chair) *Understanding Pedagogy and Its Impact on Learning*. London: Paul Chapman.
- Crawford, A., Saul, W., Mathews, S., Makinster, J.( 2005). *Teaching and Learning Strategies for the Thinking Classroom*. New York: The International Debate education Association.
- Ivić, I., Pešikan, A., Antić, S. (2001). *Aktivno učenje*. Beograd: Institut za psihologiju.
- Kopas-Vukašinović, E. Anđelković, S. (2006). Kvalitet rada univerzitetskih profesora, *Pedagogija*, 3, 349–357.

- Liessman, K.P. (2008). *Teorija neobrazovanosti: zablude društva znanja*. Zagreb: Jesenski I Turk.
- Marković, M., & Maksimović, I. (1997). Kakav vaspitač treba savremenoj predškolskoj ustanovi. *Nastava i vaspitanje* XLVI, 5, 683–701.
- Miovska Spaseva, S. (2010). Kako do efikasnog univerziteskog obrazovanja – analiza ciljeva, metoda i organizacija učenja i nastave. *Godišnjak za pedagogiju*, 1, 35–48.
- Miljak, A. (2007). *Teorijski okvir sukonstrukcije kurikulumu ranog odgoja*. Zagreb: Zavod za pedagogiju Filozofskog fakulteta Sveučilišta u Zagrebu.
- Pekić i sar. (2005). Prvi koraci u poboljšanju akademskih vještina na Poljoprivrednom fakultetu univerziteta u Beogradu, „Zbornik – Visoko obrazovanje u Srbiji na putu ka Evropi – četiri godine kasnije“ (pp. 121–129). Beograd: UNESCO, AAOM.
- Popova-Koskareva, R. (2007). Kompetenciji na nastavnika – uslov za kvalitet. U *Zbornik radova sa konferencije Savremeni tendencije u formiranju na nastavnika kadar za predučilišnu vaspitanje i odelenska nastava*, (pp. 313–318). Skoplje: Pedagoški fakultet Sv. Kliment Ohridski.

**Sladana Anđelković (PhD), Assist. Professor**

✉ University of Belgrade, Faculty of Geography  
Studentski trg 3/3, Beograd, 11000, Serbia  
E-mail: slandjelkovic@gmail.com

**Zorica Stanisavljević Petrović (PhD), Assist. Professor**

✉ University of Niš, Faculty of Philosophy  
Department of Pedagogy  
Ćirila I Metodija 2, Niš, 18000, Serbia  
E-mail: zokapet@filfak.ni.ac.rs