

## THE CONCEPT OF INTERACTIVE MODELS IN UNIVERSITY TEACHING

UDC: 378.026(497.7)  
(Original scientific paper)

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### **Abstract**

*The issue of improving the quality of the teaching in higher education presents an open and contemporary problem, which can and should be studied from several scientific aspects. With the introduction of the credit transfer system in higher education in the Republic of Macedonia, which entails a higher level of students' participation in the realization of the teaching, constant monitoring and a contemporary means of evaluation, the efficiency and quality of the teaching have significantly improved, but it seems that the process of realization still comes second, at least from the aspect of its interest to be improved. The subject of this research is designing interactive models for learning in the academic teaching as well as developing didactic competences for future teachers. Studying the problem is done by action research of a participative, interpretative and descriptive character. The essence of such a way of research is that it consists of a sequence of action steps, with the help of which action is immediately put into practice, and simultaneous monitoring of the action itself (participation), the activities of the subjects included in the process, as well as revision in stages after each action, ending in the final reconstruction, is being done. The relevant data in the research are received through formative and summative examination of the views and opinions of the students regarding the interactive models of realization of the teaching, and through examining the abilities and skills of the students regarding the application of interactive models in practical teaching. The conclusions point to the need for increased participation of the separate didactics in the study programs, as the most applicable subject programs that are mostly connected to the students' practical work. From the received results of the research, it can be stated that the students' views regarding the interactive work are visibly positive, since the teaching is dynamic and interesting, while the acquired knowledge and developed skills complement the development of their competences for practical work. Due to the universality of the basic didactic concept, which is applied in this research, one of its main aims is for them to become generators, i.e. original examples (samples) for support of the interaction in higher education when developing a variety of profiles. It firstly refers to the category of students who in the future will choose to work as teachers in different levels of education.*

**Key words:** *interactive models, higher education, didactics of higher education, students*

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### **Introduction**

*Interaction as a modern educational strategy*

“... The industrial revolution, neoliberal economic reforms and the movement of behavioral objectivism, in their mutual time and theoretical interweaving, form an education aimed at the development of competences, which in contemporary theory and practice have more general meaning ...” (Despotović, 2008: 35-49). The genesis of the development of the goals and tasks of university teaching and learning is always in the context of the educational tradition of specific educational systems. They can be placed between two different conceptual solutions: traditional teaching or progressive teaching. Thus goals and tasks are oriented either towards content and knowledge or towards the student. The first option directs the teaching towards learning the content, which leads to the creation of a general profile of an expert, the second option puts the emphasis on the individual, on individual qualities and social behavior. This creates an expert who is able to do research, i.e. he/she knows how to think methodologically, he/she has developed communication skills and is capable of teamwork. These are the capabilities that are necessary for life in a

civil society. The second model of learning is generally accepted today. In the broadest sense, education focused on the development of competences can be defined as an educational theory or concept, which explains the interdependence of education and economic development, or, more precisely, the promotion of economic development through education. According to this, “competency-based education is an instrument of economic reform or micro-technology of human capital theory” (Anderson, 2008: 24).

Regardless of which model is applied, different definitions and categories can be found in the theoretical and research learning studies to determine the diversity of the learning process. What this refers to, above all, is the learning styles, the approach to learning and the different types of intelligence. For example, Howard Gardner develops the theory of multiple intelligence and, accordingly, on the different bases of the learning process. According to Gardner, “there are seven types of intelligence: verbal (linguistic), logical-mathematical, visual (spatial), music, interpersonal (social), intrapersonal (personal), and bodily-kinesthetic” (Gardner, 1991: 28). The way of thinking, priorities and needs are different for different types of intelligence. Kolb starts from the “differences in approach to the learning process: practical experience, reflective observation, active experimentation, abstract conceptualization” (Kolb, 1985: 95).

Therefore, the use of the interactive concept in higher education should correspond to the different needs and predispositions of the students. The implications of this approach of interactive teaching are: use of different interactive models that correspond to different learning styles, development of the same topic through the use of different methods, and individualization of the learning process which takes into account the learning capacities.

For adults, the process of learning involves multiple activities, and an integral, conceptual and phased process. The multiplicity of learning means that learning is a process that integrates the emotional, social, cognitive and affective dimensions. The phased process of learning involves procedurality and passing through certain stages that do not have to be successive, which are: motivation, acquiring information and knowledge, perceiving their meaning, practicing and applying the learned, and its planning and implementation.

The process of integrated learning is based on and it complements the past, the current and the future experience. Contextuality of the learning process involves learning through interaction in a certain physical and social context and through exchange and collaboration. The benefits of the understanding of this learning are activities with different functions that: motivate, stimulate, relax, let the students get to know each other, create an atmosphere of trust, and so on. They are integral parts of the interaction, the procedurality in the development of sub-topics, the content and methods that provide a phased formation and application of knowledge; technical and organizational support of the process of interactive teaching with which contextual variables, such as physical space and social context, are specified according to the initial basics of interactive teaching; enabling and encouraging various forms of group work, exchange between stakeholders and cooperative activities, as well as development of monitoring and support strategies.

When presenting the basic characteristics of these two opposing models, we begin from the analysis of the indicators: the placement of the two models, the types of activities used in them, and the articulation components of the teaching. The traditional model is based on the understanding of the learning as a transmission i.e. one - way transfer of knowledge in the direction of teacher - student, without obtaining feedback on the level of acquired knowledge and developed skills. Within this model, the learning is same for all students. It is a uniform process that does not respect individual differences and does not meet the different needs of the one who is being taught. At the same time, the learning process is understood as a “pure and isolated” cognitive process and as an individual activity – “everyone learns for themselves” and “is responsible” for the results of their own learning.

## Discussions

The basics of interactive teaching, according to Kolb, are grounded in the notions that “learning is an active construction of knowledge, which is constantly being upgraded through an active two-way mode” (Kolb, 1985: 25). Yet, the different styles of learning and individual differences and learning abilities are appreciated, and learning is a “multiple activity” (Gardner, 1991: 34), an integral and contextual process. Cooperative forms of learning are used and partnership relations are developed.

And the different types of activities used in both models are diametrically different in nature. Thus, while the traditional model uses uniform types of activities according to their function and a limited number of methods, interactive classes develop activities that differ in their function and with a number of different

methods. And the articulation sections of the teaching - preparation, realization and monitoring - are different in both models.

In the traditional model of teaching in the preparatory part, the attention is directed towards the teacher, the teaching programs set goals that are primarily related to the teaching contents, and efforts are not made to develop a learning environment. In interactive teaching, the attention is focused on the students, the context of the content, the procedures and the teacher. Objectives are set to be achieved by the students, the teaching process and the teaching content. The existence of material and technical logistics is obvious. During the realization of the traditional model, the attention is focused on the results, and in the interactive model the attention is focused on the process, the relations between the subjects and the results. In the first model, linear interaction is used, and in the second multiple interaction.

The role of the teacher is visibly different, instead of a mediator he is a facilitator in the traditional model. In the interactive teaching, there is a diagnostic, formative and summative evaluation. Evaluation in the traditional model is usually not planned and does not come down to examination of the acquired knowledge. The analysis of the last articulation element shows the absence of *monitoring* in the traditional model, while in the second model there are developed monitoring strategies as a support process.

The initial teacher education is a basic requirement for practical introduction in the teaching profession. For K. Kamberski, initial education of teachers is “a system of knowledge, abilities and expertise (skills) that future teachers acquire during their studies, which enable the professional execution of the teaching activity. These are basic (initial) competences, abilities and skills without which the teaching profession cannot be imagined, and with which it is further upgraded through the system of continuous education (professional development)” (Kamberski, 2000: 114). According to the same author, “initial teacher education is an initial certified education for acquiring the right to work in a particular subsystem” (Kamberski, 2000: 115). Initial education as an initial professional preparation of teachers in primary and secondary education in the Republic of Macedonia is conducted with a different approach, depending on whether it comes down to a class or subject teacher in general, arts or vocational subjects or practical classes.

So, the teacher needs to perform very specific tasks. In addition to the common functions and roles that define the term - teacher, the teaching work in the first three cycles of primary education has specificities that arise, primarily, from the developmental characteristics of the students. They are manifested through the professional obligations, requirements and tasks that are placed before the teacher. The first three cycles of primary education are the basic level i.e. a kind of entry into education. Teaching in the early grades is the first contact with an organized educational activity.

“Their characteristics can be identified in the documents of the Bologna Declaration and other documents relating to the Bologna Process, which are the basis of the reforms in higher education in Europe” (Miovaska-Spaseva, Achkovska-Leshkovska, 2010: 10-15). On the other hand, when speaking more specifically about the initial education of teachers, the analyzes made in many European countries of the OECD distinguish two basic models that form the teaching (and any other) profession. All this puts forward the issue of the effectiveness of the academic production of teachers and the involvement in the contemporary requirements of the “Bologna Process”, in regards to the issue of the quality of the initiation in the education of teachers, as well as the quality of the realization itself, which is partially selective, especially in our case.

In this way the issue which is only one part of the theoretical elaboration will be absolved, as far as possible, at the level of a paper of this kind, and will briefly draw on the analysis of the policy of educational reforms and their reflection on education, primarily on the initial education of teachers in the first and second education cycle in the nine-year primary education.

Speaking about the educational policy in higher education in general, the full acceptance of a more comprehensive European model is evident. Our country is one of the signatories of the Bologna Declaration, and is in the process of developing the realization of the goals arising from the Bologna Process.

The transition from the traditional to the contemporary is a feature of the time of work of the higher education institutions in our country, including the faculties that educate future teachers. The recommendations of the Bologna Declaration, which are the initiators of most of the changes in higher education, are incorporated as basic components for the development of education in the Republic of Macedonia by 2015. The full results of the integration of the Bologna requirements into our education, which can be defined in the most general way as a process, changing and opening up education towards

European practices, can be measured at the end of this educational transition, i.e. within the time limit provided for it (2015).

From the modernization of teaching and traditional learning models, in which a large number of students studied in one group, the lack of informational-communication technology and its poor application in the teaching process, the weak didactic competencies of some teachers, the failure to apply the concept of learning outcomes and to make the students competent for independent work, arose the need for a system of new measures. This system consists of the following elements: implementation of the concept of educational output, introduction of informational-communication technologies and training of the teaching staff.

## Results

The weak didactical competencies of some teachers impose the need to improve the teaching staff, from which, in the context of the research, the following would be emphasized: introduction of interactive models in teaching and use of educational modern technology in teaching, which, as present weaknesses, can be overcome in many ways, but above all as an examination of the educational needs of the staff in higher education, who according to previous personal experiences, will point out the need for finding a form for developing high-academy didactic competences.

“The change of the principles and recommendations of the Bologna Process, besides among the teaching, collaborative and administrative staff, caused changes and stirred up the students too” (National Program for the Development of Education in the Republic of Macedonia 2005-2015: 290).

Current issues and problems associated with initial teacher education relate to the need for higher education institutions to promote standards that will apply not only to studies in basic subjects, but also to pedagogical, psychological and methodical skills of teachers for more efficient work in schools. Among other things, there is a need for conceptualization and application of modern programs for permanent professional and pedagogical improvement of the teaching staff in the elementary education. The need for the development of study programs at the faculties of teachers and their revision supported by empirical indicators should also integrate the representation of subjects in the education studies and teaching methodology. The analyzes indicate that with the European standards in the initial teacher education for pedagogical and methodical preparation of future teachers, 25 to 35% of the total number of hours are allocated.

According to the above, in the next revisions of the study programs, as one of the solutions for overcoming the situation, the number of hours within the specific didactic (methodic) has to increase, also subject programs for integrated pedagogical practices need to be introduced. Regarding the permanent training of teachers, the relevant institutions show different level of initiative for improvement. Different forms of professional development are offered by the various relevant institutions.

## Conclusions: Determinants of interaction in higher education

The most significant conclusions are the ones regarding the importance of the general educational didactics for possible successful realization of the special didactics, as well as the fact that during the development of the study program with general pedagogical subjects, modern contemporary tendencies of higher education had been taken into consideration. Following the modern trends in higher education indicate the need for a high percentage of representation of practical instruction.

The use of modern teaching methods, in which students are included as equal partners, requires a high level of activity from their side, that positively reflects on the quality of knowledge, regular attendance, and at the same time it may also be a way to overcome some of the problems which occur when studying under the European Credit Transfer System – which is visualized as a very effective way of studying.

These statements point to the conclusion that interactive teaching significantly influences the quality of the learning process and the obtained results.

The highly active working methods in their fragmented use or in their continuous and complete didactically meaningful use, in the form of ready-made interactive models, which is the case with this research, positively influence the quality of knowledge, especially in a multiplied form, as in this case.

The second reasoning suggests that the proactive way of working, through the use of appropriate interactive models, positively influences the durability of knowledge, the possibility for its application and the development of strong didactic competences.

If one starts from these two considerations as premisses, the conclusion that proactivity in teaching appears as a significant factor in improving the quality of knowledge and the development of skills is inevitably imposed, all the more so that this whole “educational scenario” largely takes place in the sphere of the immediate practical activity. So, contemporary academic teaching should increasingly be developed in the direction of using proactivity in conditions of immediate practice (everywhere and always).

The question of how much and what kind of knowledge will the future pedagogues and teachers need, and where is the boundary between what is considered a productive need and what is really needed to those who “tomorrow” will compete in the market of labor, remains open.

This prompts another question as to how the interactive way of work actually represents a kind of burden for teachers and how much they avoid additional (i.e. only seemingly additional because they are essential) burdens that occur during the interactive teaching. Namely, it is quite clear that teaching *ex catedra* is the easiest for every teacher (but also least productive for every teacher).

The development of interactive models, which ultimately do not have to be programmed at the level of those used in this research, the production of additional materials, continuous monitoring and the creation of conditions for a positive transfer of the theory in the form of its applicability, require greater engagement from the teachers, more time, more energy and effort, and material logistics. This is certainly not due to pedagogical indolence of the teachers, nor to their ignorance of the modes of interaction, but to several actual factors, such as working with large groups of students, performing teaching on many subjects, certain personnel problems, and above all lack of new educational and scientific cadres.

However, the issue on the level of pedagogical competence of teachers in higher education and the development of their didactic abilities, without which, no matter how highly educated they are, effective teaching at this level of education is not possible, still remains open at the university-level. Therefore, one of the outcomes of this research is the establishment of a new concept for the development of high school didactics, which can be developed on two levels, both formally and informally. On the first level, as a systemic solution, a program for didactic training for future teachers in higher education should be made. On the second level, a systematic and programmatic solution should be offered for the professional development of teachers in higher education, which will improve and strengthen their pedagogical and didactic competences.

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