Gorozhankina Oksana

INNOVATIVE TEACHING METHODS IN THE SYSTEM OF ISRAELI HIGHER EDUCATION

Ushynsky University,
Odesa, Ukraine

Abstract. *The article focuses on innovative methods of teaching students in higher educational institutions of Israel, it emphasizes the importance of using and implementing interactive teaching methods, among which a special role is given to the project method as one of the innovative pedagogical technologies.*
Keywords: *higher education, innovations, interactive teaching methods, project method.*

Reformation of Ukrainian educational system against the backdrop of political, social and economic transformation requires solving new urgent tasks faced by the national high school, searching for new ways of improving the level of higher education and taking into account the best examples of other countries'educational system. Special attention should be paid to the system of higher education in Israel, since today this country has advanced achievements in many fields of life, especially in the field of computer technologies, medicine, life safety, cybersecurity, therefore, much attention is paid to the problem of training highly skilled specialists for the country.

Various issues concerning the educational system in Israel were discussed in the works of V. Beizerov, Ye. Demyda, H. Hallih, Z. Helman, V. Hromovyi, O. Karpenko, V. Lavi, L. Lokhvytskyi, V. Syrkin et al. Educational processes of higher education in Israel were studied by M. Buber, N. Davydovych, N. Derevianko, M. Dreierman, A. Epstein, O. Hluzman, Ts. Kurtswail, Yu. Rudenko, T. Semchenko et al.

The aim of the article is to analyze the main innovative methods of teaching students in higher educational institutions of Israel.

The term "innovation" (in English "innovation" – implementing something new) was introduced into scientific use by the Austrian scientist and economist Joseph Alois Schumpeter (1883-1950) in the first half of the XX century. According to J. Schumpeter, innovation is the realization of a scientific discovery, a technical invention in a new technology or a new type of product, it is a new combination of production factors, motivated by entrepreneurial spirit [14].

Theoretical and practical principles of innovative activity were investigated by I. Ansoff, N. Avsiannikov, F. Bezdudnyi, N. Chukhrai, P. Druker, O.

Fihovskyi, K. Friman, E. Hardahon, M. Hershman, M. Khuchek, M. Porter, B. Santo, J. Schumpeter, N. Tymochko, B. Twiss, N. Volynkina, P. Zavlin et al.

Analyzing the concept of "innovation", scientists came to the conclusion that any activity is a process of changing something (obtaining something new), which always leads to a certain result. Since innovation is primarily a result of innovative activity, it is reasonable to define it both as a result and a process [15].

Educational innovations are the key factor of the educational process efficiency in higher educational institutions. The issues of innovations in education first appeared at the end of the XIX – beginning of the XX century and were related to the period of the experimental pedagogy appearing. Attention to the personality of each child, the proclamation of the priority of their creative development required the search for the new forms of the content of education and upbringing of children and youth. Well-known representatives of experimental pedagogy A. Lai, E. Meiman (Germany), A. Bine, S. French (France), O. Dekroli (Belgium), E. Clapared (Switzerland), E. Torndaik (USA) tried to determine precisely through psychic research the peculiarities of pedagogical influence, to justify the pedagogical principle of individual's self-development in the course of theoretical and practical activity. The main goal of innovation in education at the beginning of the XXI century is seen by scientists in "the need to respond to the challenge of globalization transformations, environmental problems, and multicultural tendencies in the world. The characteristic of our strengthening of the priority of education innovative development on the basis of modernization of all components of the system (content, training of pedagogical staff, management, financing, etc.)" [9, p. 339].

The problems of innovative changes in education are highlighted in the works of V. Andrushchenko, V. Beizerov, N. Davydovych, Z. Helman, V. Hromovyi, O. Komar, O. Kovalenko, N. Sharata, N. Tverezovska, Ye. Yevtukh et al.

Science in Israel plays a very important role. As scientists claim, Israel ranks third in the world (after the USA and Canada) according to the educational level of the population: workers with university degrees make up almost a quarter of all workers; according to the number of scientists (145 people per 10,000 of population), Israel largely outranks Japan (70 people) and even the United States (85 people) [3, p.177]. Some researchers see this as a positive effect of migration to Israel from the territory of the former Soviet Union [2, p. 149].

Higher education in Israel plays a crucial role in the scientific, social, industrial achievements of the country. Universities are the basis for higher education and they are oriented to research and development work. According

to N. Davydovych, the development of higher education in Israel was influenced by three major models: German, American and British [1, p.78].

Israel has eight institutions of higher education. The two most outstanding are the Hebrew University (founded in 1918) in Jerusalem and the Israel Institute of Technology (Technion, founded in 1912) in Haifa, both of which receive government subsidies of about 50% of their total budgets; the remaining funds are largely collected abroad. The Tel Aviv University was formed in 1956. Other institutions include the Bar-Ilan University in Ramat-Gan, opened in 1955 under religious auspices; the Weizmann Institute of Science at Rehovot, notable for its research into specific technical, industrial, and scientific problems; Haifa University; and Ben-Gurion University of the Negev in Beersheba. An Open University, promoting adult education largely through home study, was established and patterned on the British model. In 1996, universities and equivalent institutions enrolled 198,766 students. Adult illiteracy rates for the year 2000 were estimated at 3.9% (males, 2.1%; females, 5.7%). As far as year 1999 is concerned, public expenditure on education was estimated at 7.7% of GDP [5].

There are three academic dimensions in Israel's higher education system: the first is a Bachelor (BA, BSC), the second one is a Master (MA, Mse, etc.) and the third one is a Doctor (PHD).

It should be noted that the overwhelming majority of Israeli students begin their study at universities after completing compulsory military service in the Israeli Defense Forces. These are young people who already have some kind of life experience, motivation to study and consciously perceive the educational process at the university. After graduation, students do not get compulsory referrals to work, they seek it according to their requirements and opportunities. Companies interested in future specialists maintain constant contact with the faculties and agree with graduates in advance about their work [11].

One of the tasks of the Israeli Higher School is training highly skilled specialists who can raise the prestige of their country to the world level. For this purpose, students are attracted to active learning activities, they use effective innovative teaching methods that involve the use of multimedia technologies, include an interactive interface and other management mechanisms and are implemented on the basis of the system and activity teaching approach. A kind of innovative teaching methods are interactive methods.

Pedagogical science defines methods of teaching as a way of the teacher and students' joint activity aimed at achieving their educational goals [10, p. 417]; as structured by certain principles system of intentional sequential actions of learning subjects over a consciously defined subject of activity with the employment of appropriate means which results in expected learning outcomes [7, p. 35].

Interactive teaching methods are defined as ways of organizing active interaction of students and teachers in the educational process in order to achieve certain didactic outcomes. The word "interactive" originates from the English *inter* – mutual and *act* – to act. So, interactive stands for "capable of interaction, dialogue". Interactive learning is a specific form of organizing cognitive activity, which has a purposive goal – to create comfortable learning conditions, in which each student feels successful and intelligent [9].

According to Yu. Fokin, interactive teaching methods are oriented to the broader interaction of students not only with the teacher, but also with each other and to the dominance of students' activity in the learning process [4, p. 83]. Passive teaching methods assume that the student must learn the learning material with the help of a teacher or a textbook. Active methods stimulate cognitive activity and students' independence and include creative and problem tasks, independent work, students' questions to the teacher and vice versa, which develops their creative thinking [15, p. 238].

Israel's higher educational institutions provide both interactive practical (seminar) lessons and lectures. Today, the following interactive forms and methods are used to solve educational tasks of high school pedagogy: the use of case-technologies; video conferencing; lectures-visualizations, "round tables"; "brain storming"; joint seminar (joint work with students from other countries); debates; focus groups (group interviews organized in the form of a conversation of several respondents, usually 6-12 people, on a given by interviewer and moderator topic); business and role-play games; case-study (analysis of specific, practical situations); learning group discussions; project method, trainings.

In the course of lecturing, teachers of Israeli universities actively employ lectures-visualizations that involve the transmission of information through structural and logical schemes, drawings, diagrams, supporting notes, computer technologies (slides, videos, interactive whiteboard). This form of lectures serves as the basis for students' future self-educational activities, it demonstrates examples of work with information in comparison with traditionally accepted forms, promotes successful mastering of educational material, activates students' mental activity and forms their professional thinking through systematization and emphasis of more essential elements of the teaching content. Any form of visual information contains elements of problem. Therefore, a lecture-visualization also contributes to creating a problem situation, where the solution of issues occurs on the basis of analysis, synthesis, generalization, compressing or deploying of information, that is, with the inclusion of active mental activity. The teacher's task is to use such forms of visualization, which would not only supplement the verbal information, but which would be per se the carriers of information. The greater problem character visual information has, the higher the degree of student's mental activity becomes.

It is the project method which is used actively in Israel's higher education system. The project method arose for the first time as an educational technology in the 20s of XX c. in the USA [10]. The project is a combination of theory and practice, the formulation of a certain mental task and its practical implementation. This method was studied in detail by K. Bakhanov, I. Bem, I. Chechel, O. Iliasheva, A. Kasperskyi, V. Kopylova, Yu. Krasnov, T. Kruchynina, N. Pakhomova, O. Piekhota, Ye. Polat, H. Selevka, J. Schneider et al.

The project method implies achievement of didactic goal by means of the detailed elabration of the problem (technology), which should lead to a complete real, tangible practical result, performed in any way; it is a set of students' techniques, actions in their certain sequence for achieving the goal set – the solution of the problem, personally significant for students and performed in the form of a certain final product. The main aim of the project method is to provide students with the opportunity to independently acquire knowledge when solving practical problems or problems requiring integration of knowledge from various subject areas. As Ye. Polat argues, the project method involves a set of educational and cognitive methods, which allow to solve a certain problem during independent actions with obligatory presentation of the results. If we talk about the project method as a pedagogical technology, then this technology assumes a set of research, search, problem methods which are creative in their nature. The teacher in the framework of project is given the role of developer, coordinator, expert, consultant [12, p.42].

The project method is a system of learning where students acquire knowledge, and skills are gradually complicating in the course of self-guided planning and implementation of practical tasks and projects. The project is a complex of search, research, calculation, graphical and other types of work that students perform independently, but under the teacher's supervision, aimed at practical or theoretical solution of a significant problem. The project can be divided into several stages: preparation, planning, research, results (conclusions), report (presentation), evaluation of project results [8, p. 199].

When preparing presentation, students most often use the Power Point program – the most popular software product for creating and displaying multimedia presentations, which is a combination of computer animation, graphics, video and music organized in a single environment. Students also use the Google Docs program, which allows to edit, organize folders and publish text documents, spreadsheets and presentations. This program is integrated with gmail, which allows students to collaborate on the project. The Flash Slideshow Maker enables students to create dynamic slideshows using digital images, add music support, and Adobe Flash Professional program provides quick work with Flash technology and has advanced tools for video and animation

processing, it allows to create interactive websites, advertisements with various multimedia opportunities, presentations, games and much more.

An important positive factor in the system of Israeli university education is involevement of other countries' specialists into work at universities (both for conducting joint scientific research and lectures, seminars with students); organization of students' creative trips to other countries for carrying out scientific research in the chosen specialty, where students are able to get new knowledge and experience that will be useful in their future professional activity.

Conclusions. University education is the basis for Israel's higher education system. An important component of Israeli university education is the conduct of research and student training. The effectiveness of the learning process in a high school largely depends on the imlementation of innovative learning methods into the learning process, such as: the use of case-technologies; video conferencing; lectures-visualizations, "round tables"; "brain storming"; joint seminar (joint work with students from other countries); debates; focus groups; business and role-play games; case-study (analysis of specific, practical situations); learning group discussions; project method, trainings. The most popular teaching method in the higher education system of Israel is the project method, which includes a set of educational and cognitive techniques that allow to solve a certain problem when performing independent actions with the obligatory presentation of the results.

References translated and transliterated

1. Davydovych, N. (2010). Rol urovnia prepodavaniia i nauchnykh issledovanii v sisteme visshego obrazovaniia [The role of teaching and scientific studies in the higher education system]. *Vestnik Moskovskogo universiteta. Seriia 20. Pedagogicheskoie obrazovaniie – Bulletin of Moscow university. Series 20. Pedagogical education, 3,* 78-89 [in Russian].

2. Derevianko, N. V. (2012). Vissheie obrazovaniie v Izraele kak element innovatsionnogo razvitiia [Higher education in Israel as an element of innovative development]. *Vestnik Tomskogo gosudarstvennogo universiteta. Istoriia – Bulletin of Tomsk state university. History, 2,* 148-151 [in Russian].

3. Figovskii, O. L. (2014). Innovatsionnaia sistema Izrailia: uroki dlia Rossii [Innovative system of Israel: Lessons for Russia*]*. *Innovatsionnyi menedzhment – Innovative management, 2,* 176-189 [in Russian].

4. Fokin, Yu. G. (2002). *Prepodavaniie i vospitaniie v vysshei shkole: Metodologiia, tseli i soderzhaniie, tvorchestvo [Teaching and educating in high school: Methodology, aims and contents, creativity]*. Moscow: Izdatelskii tsentr "Akademiia" [in Russian].

5. Israel – Education Encyclopedia of the Nations. (n.d.). *www.nationsencyclopedia.com.* Retrieved from

http://www.nationsencyclopedia.com/Asia-and-Oceania/Israel-EDUCATION [in English].
6. Kostryba, L. O. (2008). Stvorennia multymediinykh prohramno-pedahohichnykh system navchannia zasobamy PowerPoint [Creating multimedia software and pedagogical learning systems by means of PowerPoint]. *Kompiuter u shkoli ta simii: naukovo-metodychnyi zhurnal – Computer in school and family: scientific and methodical journal, 4,* 33-36 [in Ukrainian].
7. Kozakov, V. A. & Dzvinchuk, D. I. (2003). *Psykholoho-pedahohichna pidhotovka fakhivtsiv u nepedahohichnykh universytetakh [Psychological and pedagogical training of specialists in non-pedagogical universities]*. Kyiv: ZAT "NICHLAVA" [in Ukrainian].
8. Krasnov, Yu. E. (2003). Sovremennyie diskussii po probleme "Metod proektov" (referativnyi obzor istochnikov, vkliuchaia rassmotreniie kontseptsii J. Ravena o razvitii kompetentnostei vysshego urovnia posredstvom proektnogo obucheniia) [Contemporary discussions on the problem of "Project method" (abstract outline of the sources including consideration of J. Raven conception about the development of the highest level competencies by means of project teaching]. *Metod proektov. Seriia "Sovremennyie tekhnologii universitetskogo obrazovaniia" – Project method. Series "Modern technologies of university education", 2,* 197-221 [in Russian].
9. Kremen, V. H. (Eds.). (2009). *Entsyklopediia osvity [Encyclopaedia of education]*. Kyiv: Yurinkom Inter [in Ukrainian].
10. Krivshenko, L. P. & Waindorf-Sysoieva, M. Ye. (2004). *Pedagogika [Pedagogy]*. L.P., Krivshenko (Ed.). Moscow: TK Velbi, Izd-vo Prospekt [in Russian]. 4.
11. Milenina, M. M. Systema osvity Izrailiu. Formy ta metody roboty z obdarovannymy ditmy [System of Israel's education. Forms and methods of work with gifted children]. (n.d.) *www.shkola.ostriv.in.ua.* Retrieved from http:// www. shkola.ostriv.in.ua/publication/code [in Ukrainian].
12. Polat, Ye. S. (2003). Metod proektov [Project Method]. *Metod proektov. Seriia "Sovremennyie tekhnologii universitetskogo obrazovaniia" – Project method. Series "Modern technologies of university education"*, 2, 39-47.
13. Razvitiie innovatsii v Izraele. Kratkii obzor rynka, instituty razvitiia, zakonodatelstvo, programmy podderzhki [Development of innovations in Israel. Brief outline of market, development institutions, law, support programmes]. (n.d.) *www.rosinfocominvest.ru*. Retrieved from http:// rosinfocominvest.ru/upload/iblock/419/pdf [in Russian].
14. Schumpeter, Y. A. (2007). *Teoriia ekonomicheskogo razvitiia. Kapitalism, sotsialism i demokratiia [Theory of economical development. Capitalism, socialism and democracy]*. (Schumpeter, Y. A., Trans.). Moskow: Eksmo [in Russian].

15. Tverezovska, N. T. (2009). Interaktyvni innovatsiini tekhnolohii u systemi vyshchoi osvity [Interactive innovative technologies in the system of higher education]. *Visnyk NTUU "KPI". Filosofiia. Psykholohiia. Pedahohika: zbirnyk naukovykh prats – Bulletin of NTUU "KPI". Philosophy. Psychology. Pedagogy: collection of scientific works,* 3(27), Part 2,236-240 [in Ukrainian].

Gryshkova Raisa

SUCCESSION IN SECONDARY AND HIGHER EDUCATION IN UKRAINE FROM THE VIEWPOINT OF THE "NEW UKRAINIAN SCHOOL" CONCEPT

Petro Mohyla Black Sea National University,
Mykolaiv, Ukraine

Abstract. *The article is devoted to the solution of the problem of preserving the didactic principle of succession in secondary and higher education in Ukraine. The author underlines that adoption of the Law of Ukraine "About Education" will cause significant changes in higher school and proves that certain amendments should be made to the documents which regulate the activity of the system of higher education in our country. Academic process in Ukrainian universities should be more practically oriented. Financing of educational reforms should be strictly regulated by the new law.*
Keywords: *succession in secondary and higher education, adoption of the Law of Ukraine "About Education", changes in higher school, amendments, competence approach to teaching, financing of educational reforms.*

New challenges are in store for the Ukrainian educational system caused by the adoption of the new Law of Ukraine "About Education" which is to be approved by the Verkhovna Rada in autumn 2017. The main changes are concentrated around the concept of the "New Ukrainian school" the draft of which was widely discussed by the Ukrainian society. The first version of the conceptual principles of the reform of secondary education was published by the Ministry of Education and Science of Ukraine in June 2016. This document explains the ideology of changes in education which are put into the basis of the new Law "About Education" (#3491-d from 04.04.2016) [1]. According to this Law the main conceptual principles of the reform of secondary education should be as following:

- from virtual accumulation of knowledge – to real development of skills;
- from punishment for mistakes – to creative research;
- from exhausted learning by heart – to joyful discoveries [2, p.5].