FORESIGHT-STUDIES IN INSTITUTIONS OF HIGHER EDUCATION

O. O. Nalyvaiko
V. N. Karazin Kharkiv National University
4 Svobody Sq., Kharkiv, Ukraine, 61022
nalyvaiko@karazin.ua, http://orcid.org/ 0000-0002-7094-1047

The article defined the role of Foresight-studies in the current conditions of higher education system development. Different types of Foresight-studies in different countries and their application for educational purposes are analyzed. Methods of conducting foresight research are revealed on the basis of which the most common among them are: Delphi method, SWOT analysis, Information flow analysis, Focus Group Technique, Expert Panels, Scenario Planning, Highlight Key Technologies, Technology Mapping, Development of Roadmaps, Source Scanning, "Analysis of Global Trends", "PEST Analysis", "Reverse Scenarios" etc. It is stated that the foresight can be called a technology of constructive attitude towards the future. It involves the development of a system of private forecasts in the most important areas of scientific and technological progress and a comprehensive forecast of scientific and technological development. The article gives examples of university Foresight-studies and their role in forming a modern specialist with forecasting skills. The focus of the study is pay special attention on the Foresight-study conducted at the School of Foreign Languages of V. N. Kharkiv National University entitled "Strategy for the Development of Education at The School of Foreign Languages". The study was carried out using the Delphi method and included an online survey (digital questionnaire) created in Google forms and included two stages. The first stage was aimed at revealing the general direction of the development of the educational process, and the second stage was aimed at specifying teaching strategies that could be used in the future by the School of Foreign Languages. The survey was attended by 105 people who work or study at the university. It is established that the priority directions of development of educational process at the School of Foreign Languages may be: introduction of the latest digital technologies into the educational process; increase of teaching efficiency and distribution of time between participants of educational process (transformation of the role of the lecturer); communicative aspect through improvement of teaching methods at the School of Foreign Languages, namely the involvement of foreign language speakers in teaching and practice, conducting more foreign language activities, changing the criteria for assessing students' success by foreign models.

Key words: students, University, Foresight-study, Delphi method, education process, predictive ability, development strategies.

О. О. Наливайко
Харківський національний університет імені В. Н. Каразіна, майдан Свободи, 4, Харків, Україна, 61022

ФОРСАЙТ-ДОСЛІДЖЕННЯ В ЗАКЛАДАХ ВИЩОЇ ОСВІТИ

У статті визначено роль форсайт-досліджень у сучасних умовах розвитку системи вищої освіти. Проаналізовано види форсайт-досліджень у різних країнах та їх застосування в освітніх цілях. Розкрито основні методи проведення форсайт-досліджень, найпоширенішими серед них є: метод Дельфі, SWOT-аналіз, аналіз інформаційного потоку, техніка фокус-груп, експертні панелі, планування сценаріїв, основні ключові технології, картографування технологій, розробка дорожніх карт, сканування джерел, «аналіз глобальних тенденцій», «PEST Аналіз», «Зворотні сценарії» тощо. Констатовано, що форсайт можна назвати технологією конструктивного ставлення до майбутнього, що передбачає розробку системи приватних прогнозів у найважливіших галузях науково-технічного прогресу та комплексний прогноз науково-технічного розвитку. У статті наведено приклади університетських форсайт-досліджень та їх роль у формуванні сучасного фахівця з навичками прогнозування. Увага дослідження фокусується на прогностичному дослідженні, яке проводилося на факультеті іноземних мов Харківського національного університету імені В. Н. Каразіна під назвою «Стратегії розвитку освіти на факультеті іноземних мов». Дослідження проводилося за методом Дельфі за допомогою

цифрового опитувальника, створеного у гугл-формі та включало два етапи. Перший етап ставив за мету виявити загальну спрямованості розвитку освітнього процесу, а другий етап був спрямований на конкретизацію стратегій навчання, які в майбутньому можуть бути використані на факультеті іноземних мов. В опитуванні приймало участь 105 осіб, які працюють чи навчаються в університеті. Установлено, що пріоритетними напрямки розвитку освітнього процесу на факультеті іноземних мов можуть стати: впровадження новітніх цифрових технологій в навчальний процес; підвищення ефективності викладання та розподіл часу між учасниками освітнього процесу (трансформація ролі викладача); комунікативний аспект через покращення методів викладання на факультеті іноземних мов, а саме: залучення носіїв іноземної мови під час навчання та практики, проведення більшої кількості заходів іноземною мовою, зміна критеріїв оцінювання успішності студентів за іноземними зразками.

Ключові слова: студенти, університет, форсайт-дослідження, метод Дельфі, навчальний процес, прогностична здатність, стратегії розвитку.

А. А. Наливайко
Харьковский национальный университет имени В. Н. Каразина, площадь Свободы, 4, Харьков, Украина, 61022

ФОРСАЙТ-ИССЛЕДОВАНИЯ В УЧРЕЖДЕНИЯХ ВЫСШЕГО ОБРАЗОВАНИЯ

В статье определены роль форсайт-исследований в современных условиях развития системы высшего образования. Проанализированы виды форсайт-исследований в разных странах и их применение в образовательных целях. Раскрыты основе методы проведения форсайт-исследований, самыми распространенными среди них являются: метод Дельфи, SWOT-анализ, анализ информационного потока, техника фокус-групп, экспертные панели, планирование сценариев, основные ключевые технологии, картографирование технологий, разработка дорожных карт, сканирования источников, «анализ глобальных тенденций», «PEST анализ», «Обратные сценарии» и другие. Констатировано, что форсайт можно назвать технологией конструктивного отношения к будущему, предусматривающая разработку системы частных прогнозов в важнейших отраслях научно-технического прогресса и комплексный прогноз научно-технического развития. В статье приведены примеры университетских форсайт-исследований и их роль в формировании современного специалиста с навыками прогнозирования. Внимание исследования фокусируется на прогностическом исследовании, которое проводилось на факультете иностранных языков Харьковского национального университета имени В. Н. Каразина под названием «Стратегии развития образования на факультете иностранных языков». Исследование проводилось методом Дельфи при помощи цифрового опросника, созданного в гугл-форме и включало два этапа. Первый этап ставил целью выявить общую направленность развития образовательного процесса, а второй этап был направлен на конкретизацию стратегий обучения, которые в будущем могут быть использованы на факультете иностранных языков. В опросе принимало участие 105 лиц, работающих или учащихся в университете. Установлено, что приоритетными направления развития образовательного процесса на факультете иностранных языков могут стать: внедрение новейших цифровых технологий в учебный процесс; повышение эффективности преподавания и распределение времени между участниками образовательного процесса (трансформация роли преподавателя); коммуникативный аспект через улучшение методов преподавания на факультете иностранных языков, а именно: привлечение носителей иностранного языка во время обучения и практики, проведение большего количества мероприятий на иностранном языке, изменение критериев оценки успеваемости студентов по иностранным образцам.

Ключевые слова: студенты, университет, форсайт-исследования, метод Дельфи, учебный процесс, прогностическая способность, стратегии развития.

Introduction. In the modern world, with its extremely complicated processes of interaction in society, more and more efforts must be made to track and understand the surrounding reality. Education is no exception, although the processes of transformation of relations are not as lively as in other areas of public life, but if the student seeks to remain at the "forefront" of the global transformation processes in society, he must begin to predict further development from the moment he begins his educational path, both their individual activities and taking into account global challenges and changes that will certainly await him in the future. Man has always been interested in the future. Obviously, confidence in future is a prerequisite for effective activity at the present time. The modern development of strategic planning, forecasting, applied forecasting, various forms of scientific foresight laid the foundations for today's understanding of the future. In this context, Foresight-studies (FS) has emerged as a leading tool in scientific forecasting, which has acquired, in the course of its evolution, qualitatively new features for a more effective study of future social processes [3; 5]. As a concrete example of FS, we can cite

the Draft National Strategy for the Development of Education in Ukraine for 2012–2021, which states that: "the modernization and development of education and science should become forward-looking and more continuous ... It is necessary to predict trends in the development of the education system using mathematical and statistical methods for flexible response to all processes taking place in the world and in Ukraine " [6].

Analysis of recent research and publications. General provisions for conducting foresight-studies in various spheres of public relations were explored by A. Braun, C. Cagnin, J. Ejdys, A. Havas, A. Gudanowska, M. Keenan, B. Poteralska, S. Rijkers-Defrasne, J. Smith, P. Van der Duin, V. Van der Steen, A. Zweck. Definition of strategies and methods in Foresight-studies was studied by A. Sokolov, Delphi method in Yu. Smirnova, international experience in conducting Foresight-studies T. Belyaeva. The use of information and digital educational technologies in higher education V. Bykov, M. Shishkina. Foresight project planning were studied by T. Belyaeva, I. Kozeva. However, today the use of Foresight-studies in the educational process of institutions of higher education does not have sufficient scientific representation.

Objective. The purpose of this article is to explore the use of Foresight-studies (FS) in the educational process of higher education institutions.

Methods. For the solution of the tasks and achievement of the research purpose, the following research methods will be used in the complex: *theoretical*: analysis of pedagogical and psychological works, the systematization of the views and achievements of scientists (to identify the state of development of the problem, to define the essence of the basic concepts of research, to develop methodological principles. *Experimental*: questionnaires, observations, analysis of the products of educational activities of participants in the educational process

Results. In modern conditions of competition, when globalization processes are developing at a significant pace, prognostic support for the long-term development of the country, regions and individual areas of life, in particular the educational sphere, becomes extremely popular. In the context of reforming the educational sphere of public relations in our country, we need to clearly understand what prospects await the participants of the educational process in the future. The use of FS can be an effective solution to this complex problem [1; 4].

Let's take a closer look at what FS (design) is. Foresight as a model for forecasting has proven itself to be the most effective tool for prioritizing sci-

ence and technology, and subsequently for a broader range of socio-economic development issues [5]. As a result of foresight projects, large-scale national and international research programs are being formulated, in particular the Sixth and Seventh EU Framework Programs for Research and Technological Development [14]. B. Martin views foresight as a result of the development of various forms of scientific foresight such as strategic planning, prognosis, futurology etc. [11].

Foresight can be called a technology of constructive attitude towards the future. It involves the development of a system of private forecasts in the most important areas of scientific and technological progress and a comprehensive forecast of scientific and technological development. The specifics of the FS methodology is the combination and integrated of well-known techniques and tools that are used, including to achieve other goals and results. The most famous among them are: Delphi method, SWOT analysis, Information flow analysis, Focus Group Technique, Expert Panels, Scenario Planning, Highlight Key Technologies, Technology Mapping, Development of Roadmaps, Source Scanning, "Analysis of Global Trends", "PEST Analysis", "Reverse Scenarios" etc. [7].

It is important to note that modern foresight studies and the use of innovative data collection and processing methods are not possible without a high level of digital literacy and competence [4; 15]. T. Belyaeva, I. Kozyeva define foresight as a unique technology that actually reduces the uncertainty of the prediction period and, based on the collective efforts of process participants, allows us to create a target image of the future. The authors point out that the characteristic features of foresight design include: integration of stakeholders to achieve the goals and related tasks; increasing the likelihood of desired events; strengthening of positive tendencies where stakeholders prevent negative effects of possible adverse events and phenomena on future processes [8]. Also, T. Belyaeva, I. Kozyeva consider the most effective methods of conducting FS and operate on such a concept as a "foresight polygon" (see Figure 1.).

Besides, T. Belyaeva, I. Kozyeva insist that, «substantiation» should be enhanced through simulation modelling techniques, games technology, and verification methods. Bibliometrics, literature review, text mining are a prerequisite for Foresight project development, since they are related to the use of the totality of methods in most cases [8].
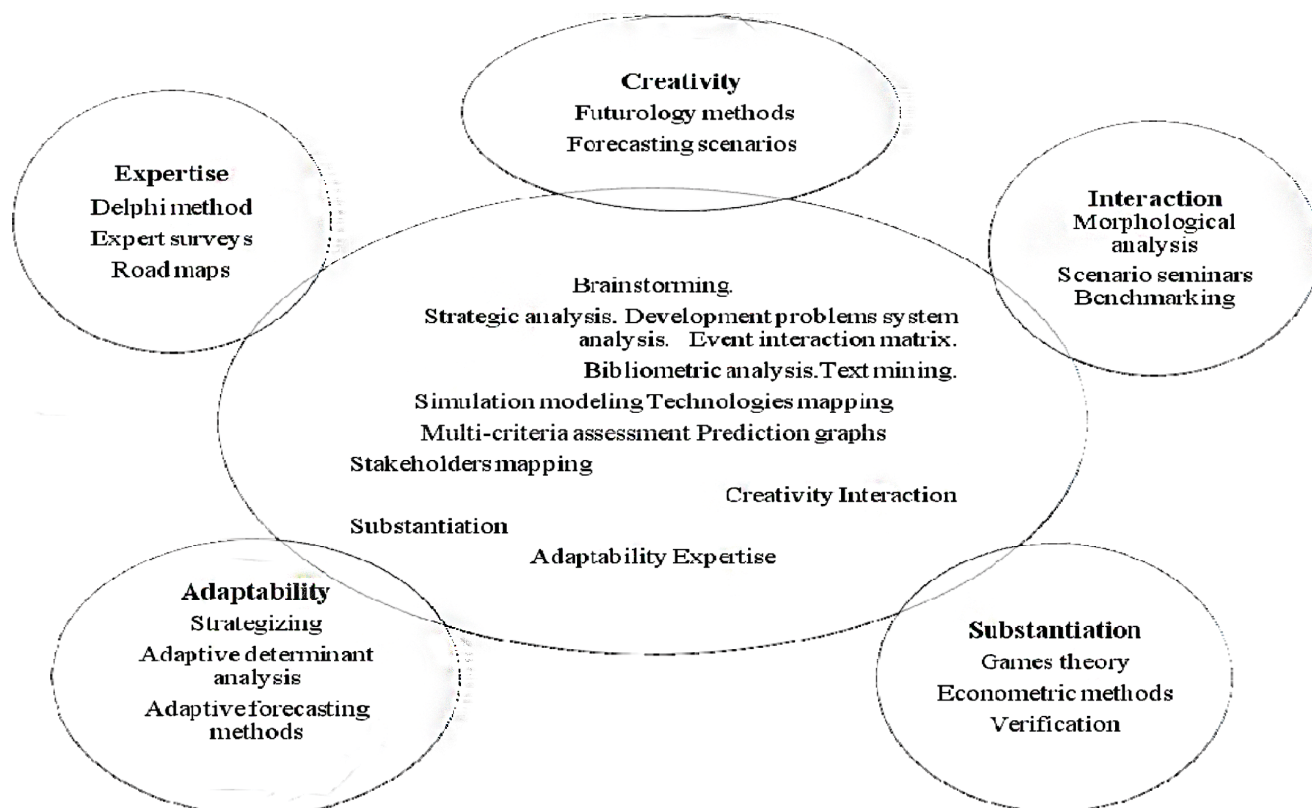
Fig. 1. Geometric interpretation and methodical content of Foresight polygon [8]

It is important to note that FS specialists are usually focused on methodology development and research and do not affect the implementation of their results. Foresight project sponsors (public or private institutions) rarely conclude contracts for further research aimed at implementing the results, for example, the National Foresight Program «Poland 2020» or the Foresight Research complex of the Government Office for Science of the UK Government. However, some FS (projects) ended with the practical application of their results, that is, to formulate national and regional policies in the field of innovation and planning (for example, in Japan and South Africa), launching new research programs at the national or regional level (for example, Great Britain, Czech Republic, Poland). In addition, the forecasting results were used to introduce changes to existing project financing mechanisms, for example, in Germany and France [13].

Regarding the educational foresight projects, it is possible to note here the national study of the preparation of proposals for priority directions of scientific and technological development of Ukraine for 2021-2030. Proposals will be prepared through foresight studies, where experts should answer the questionnaires, which will be further summarized, evaluated and submitted to the working group to select development priorities. In the future, the tasks of the Sustainable Development Goals for Ukraine are based on the decisions of the working group as a basis for future priority directions of scientific and technological development in Ukraine.

A good example of conducting FS in higher education is the Polish experience in this field [12; 13]. Case in point foresight research of The Ministry of Science and Higher Education of Poland, incorporating such key issues:
- development of the national educational system;
- highlights the deterioration of the demographic situation;
- the need to introduce new technologies;
- international competition among universities for funding research and development current;
- attraction of foreign students;

To overcome these problems, in 2015, the Ministerial Program for the Development of Higher Education and Science for the Years 2015-2030 was approved. The desire to ensure a more efficient use of the potential of universities and science in the interests of the socio-economic development of the country and to help Polish universities take strong positions in the international arena is noted in it as the basis for the planned reforms [9; 12].

Other examples of Educational Foresights can be University Foresight Programs (UFP). These university programs are aimed at training future

professional researchers in the Foresight area by instilling certain competencies of the forecaster in different areas of science and technology. To such UFP we can be attributed: Professional Development Course "The Art of Foresight & Horizon Scanning: Anticipating", Recommending and Transforming Research and Innovation Futures', PhD (University of Manchester), Master of Design in Strategic Foresight and Innovation (Ontario College of Art and Design), Managing the Future. Foresight and Strategic Planning (Collegium Civitas), Cultures of Prediction: How Scientists See the Future and Shape Society (Aarhus University) and many others [10].

The experience of conducting FS at Karazin University is very diverse and aimed to solving many important problems of university life, but we focus our attention on the research conducted at the School of Foreign Languages and aimed at identifying important trends in improving the quality of education and called "Strategy for the Development of Education at The School of Foreign Languages" [2; 3; 5]. The purpose of the study was to identify strategies for the development of education at the School of Foreign Languages; identifying major problems and shortcomings of the education system and outlining methods and remedies to improve the quality of the educational process in the future.

The hypothesis of the study was that students and lecturers of the School of Foreign Languages have an idea of the imperfection and to some extent obsolete methods of teaching material in different disciplines, so it is necessary to identify and predict strategies for the development of education at the faculty in order to improve its learning process. In order to obtain reliable information on possible problems and ways to solve them, a questionnaire was prepared, in which students and lecturers expressed their opinions about the existing shortcomings of the educational process and the need for its modernization and gave examples of ways of developing education in the School of Foreign Languages in the future. The research methods included: a survey (electronic questionnaire), Delphi method, digital processing of the results. For the FS of possible strategies for the development of education at the School of Foreign Languages, a questionnaire was developed in the form of a survey, which involved 105 people (working or studying at the Faculty) aged from 19 to 50 years. We used Google Forms (see Figure 2.) and the Excel computer program to process the data; the answers were calculated using the following formula: $C = (S / N) \times 100\%$, where S is the number of answers, N is the number of respondents. Having analyzed the results of the questionnaire, we came to the conclusion about the attitude of people to the new proposed strategies for the development of education at the faculty and the possibility of their introduction in the future in the educational process.

Fig. 2. An example of some pages of an electronic questionnaire of a Foresight-study in Google Forms.

With the development of modern technologies, their role and use in the field of education is increasing. In modern education, in our opinion, technology plays a significant role in the education system, and especially in the study of foreign languages. In the context of the subject of our research, particular interest is the introduction of modern technologies in order to improve teaching at the School of Foreign Languages. All the questions in the digital questionnaire were divided into three big blocks: Technologies, Timetable and Communication. This division contributed to a certain structuring of development strategies, which made it possible to trace clearly the direction of development for students and lecturers. It is important to note that the FS was conducted in two stages to consolidate the views of experts.

Thus, the FS "Strategy for the Development of Education at The School of Foreign Languages" was carried out using an effective tool for forming priorities, that is, a strategic forecasting technique - foresight. The survey was designed for students and lecturers of V. N. Kharkiv National University and took place in two stages. The First stage was aimed at identifying the general orientation of the development of the educational process, and the Second stage was aimed at concretizing the learning strategies that can be used in the future at The School of Foreign Languages.

Discussion and conclusions. The results of the FS revealed the following priority areas of the educational process, that is, the basic principles on which teaching at the School of Foreign Languages should be based.

First component, the new digital technology. All respondents agreed that technologies should be used in learning foreign languages, which would facilitate more effective memorization through visualized and game content. Students also endorse the idea that digital data should be replaced by paper (textbooks, abstracts) in the future, but the most important thing for educators is to increase digital competence, that is, to introduce such subjects that will help students of the School of Foreign Languages and after graduation from university in their profession [4].

Another component is the effective teaching and allocation of time for the participants in the educational process. When answering the questions of this block, the educators were more oriented towards changing the role of the teacher in the educational process. Stu-

dents support the allocation of more time to self-study and self-improvement, physical development, so classes should be held in the morning to relieve the learning process. Also, students would also like to increase their hours of study in compulsory vocational subjects and reduce (or provide some freedom of choice) in the study of minor subjects. And the teachers emphasized the large amount of teaching load and the inability to devote time to extra-curricular work with educational applicants.

And the last third component of the foresight of the study is the communicative aspect. Interviewees support the improvement of teaching methods at the School of Foreign Languages: involvement of native speakers in teaching and practice, conducting more foreign language activities, changing the criteria for assessing students' success by foreign models. The educational process should become more diverse and interesting, and this will be facilitated by the results of the survey: conducting special trainings for lecturers, visiting which lecturers will be able to use interactive tools for the latest teaching methods.

Particularly approvingly were accepted by respondents for volunteer practices for students abroad, especially the expansion of the boundaries of language learning, that is, the use at the faculty of more training programs for traveling to other countries. It is such innovations that will increase the motivation for learning among students. Lecturers see the development of the communicative component of the educational process at the faculty in the future as reducing bureaucracy during internships and foreign business trips and increasing awareness of relevant continuing education programs abroad.

Thus, this FS indicates that education reform, particularly in foreign language teaching strategies, is needed. The results that received from this FS will help to the development paths to improve the educational process in V. N. Kharkiv National University and will be translated into reality in the near future. In addition, it is important to note that foresight research contributes to the development of many professional competencies of education recipients, among which digital and communicative is particularly distinguished. Working for FS allows future professionals to develop: teamwork skills (with a clear division of responsibilities), predictive ability, analytical approach to dealing with large amounts of information, general logical skills. We plan to continue scientific research in this area.

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